

Detail Of The Leisure Pavilion

NBStech1

FOOD PRODUCTION AND LEISURE

CHALLENGES ADDRESSED

₩ NATURE					\bigcirc
					\bigcirc
HEALTH					\bigcirc
MOBILITY	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
PARTICIPATION					
€ ECONOMY					\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

	I	l
LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM HIGH NA	LOW	MEDIUM	HIGH	NA
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FOOD PRODUCTION AND LEISURE PAVILLON

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DESCRIPTION

The Food Production and Leisure Pavilion is a facility for public and private open spaces that includes both cultivation and leisure areas. The pavilion is designed according to local conditions in order to optimize shading areas and to maximize the solar exposition of the plants both in summer and winter periods. In cold climates the pavilion can be complemented by a protective skin to maintain optimum temperature needed for the growth of the plants and for users' comfort. Vegetables cultivation can be organized in soil or with hydroponic systems, allowing water savings in dry environments. Compared to traditional green houses, the plantation area is higher since it also includes the surface area of the structure.

INNOVATION ASPECT

- The pavilion design relies on algorithms that allow the optimization of the pavilion's shape according to the local climate conditions.
- The pavilion is fabricated with digital manufacturing equipment allowing to reduce the scrap's length and to use the most part of the material.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Where to place it? > Through "walkthrough with citizens / focus groups in situ" it can be decided where the solution will be located within the neighborhood. How to manage the needs and expectations of citizens? > Through motivational interviewing.

What is the agricultural map of the neighborhood? > Through "cultural mapping" the existent agricultural fields in the neighborhood can be identified.

How investigate the perception of technology? > Through cultural mapping.

CO-SELECTION & CO-DESIGN

Which design to give? Through model thinking (Physical and 3D models) / world café.

What materials to use? Through model thinking (Physical and 3D models) / world café.

CO-IMPLEMENTATION

How can people learn to use it (knowledge transfer? Through community workshops.

How to manage it? Through time bank / farmers markets network.

CO-MONITORING

How to monitor the system functioning? Through time

REPLICATION AND SCALABILITY

- The system is modular and therefore it has a high scalability potential.
- The shape and the size can be adapted to any public or private space.
- The plants integrated in the pavilion are chosen according to the local conditions.
- It can be designed both for cold and warm climate

BEST PRACTICES and REFERENCES

LINKS:

A pavilion solution was designed and fabricated in 2015 and installed on the rooftop of IAAC's facilities in Barcelona. More info can be found at the following link: https://iaac.net/project/digital-urban-orchardotf-201516/.

COMPLEMENTAR NBS FROM URBINAT

URBAN MUSHROOM FARM

MOBILE VEGETABLE GARDEN

CULTURAL MAPPING

MOTIVATIONAL INTERVIEWING

TIME BANK

SOLIDARITY

MARKET FOR

CHILDREN

FARMERS MARKETS

NETWORK





3D Printed Ceramic Green Wall



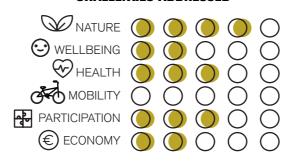
3D Printed Ceramic Green Wall

3D Printed Ceramic Green Wall

NBStech2

CERAMIC GREEN WALL

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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CERAMIC GREEN WALL

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DESCRIPTION

It is a 3D printed ceramic green wall composed by 3D printed ceramic pots that contains soil, plants and a bio photovoltaic system. This system harvests the energy produced by bacteria living near the plants' roots, which is used to activate the irrigation system, making it energy self sufficient. It includes sensors detecting the moisture in the soil, minimizing therefore irrigation. If vegetables are planted in it, it can also be used as a vertical vegetable garden. The green wall can be specifically designed and adapted to different spaces, local needs, and climatic conditions.

It provides several urban ecosystems services, such as: energy production, flood reduction (increasing porous in cities), air quality enhancement, and heat island effect mitigation.

INNOVATION ASPECT

- Extremely flexible thanks to 3D printing (its shape can be adapted to respond to size, climatic and social needs);
- Small amount of energy is produced making it self sufficient:
- Several ecosystem services are delivered in one solution.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

What is the agricultural map of the neighborhood? Through "cultural mapping" the existent agricultural fields in the neighborhood can be identified.

Where to place it? Through "walkthrough with citizens / focus groups in situ" it can be decided where the solution will be located within the neighborhood.

How to manage the needs and expectations of citizens? Through "motivational interviewing".

How investigate the perception of technology? Through "cultural mapping".

CO-SELECTION & CO-DESIGN

Which design to give? Through model thinking (Physical and 3D models) / world café.

What materials to use? Through model thinking (Physical and 3D models) / world café.

CO-IMPLEMENTATION

How can people learn to use it (knowledge transfer)? Through community workshops.

How to manage it? Through time bank / farmers markets network.

CO-MONITORING

How to monitor the system functioning? Through time

REPLICATION AND SCALABILITY BEST PRACT

- Being done with modules that can be applied in public space and buildings, the project has a high scalability potential;
- The project relies on a parametric design program, it has a high replication potential as it can be adapted to different environments. Plants have to be chosen according to the local conditions.

BEST PRACTICES and REFERENCES

COMPLEMENTAR NBS FROM URBINAT

THE GROWING CLASSROOM

GREEN WALL

RENATURA-LIZATION OF BROWNFIELDS BEEHIVE PROVISION AND ADOPTION SOLIDARITY MARKET FOR CHILDREN TIME BANK

FARMERS MARKETS NETWORK

www.urbinat.e







Option 1: Self-standing Mushroom Farm

NBStech3

URBAN MUSHROOM FARM

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

WEDIOW THAT	LOW	MEDIUM	HIGH	NA
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URBAN MUSHROOM FARM

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DESCRIPTION

The urban mushroom farm is a modular system developed to grow edible mushrooms in the urban environment, producing both food and construction materials. The solution is composed by modules that are designed with two main aims: allocating the substrate needed to grow mushrooms and shaping the construction material that can be obtained from it.

The surface of the modules is designed according to the climatic conditions of the installation site (e.g. solar radiation and humidity) to provide the optimal environment for the substrate to grow the mushrooms. With the aim of being as sustainable as possible, the modules can be also fabricated with ecological or recycled materials.

In addition to producing food and construction material, the solution acts as a demonstrator, creating 'culture of caring' for locally produced food and awareness about the potentials of mushroom farming in cities.

INNOVATION ASPECT

- The substrate, once the mushrooms are grown, can be used as a sustainable construction material (e.g. bricks or insulation panels);
- Farming mushrooms in cities is a practice that is still not widespread;
- The solution is also a tool for social inclusivity since it can be maintained by local communities.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

What is the agricultural map of the neighborhood? Through "cultural mapping" the existent agricultural fields in the neighborhood can be identified.

Where to place it? Through "walkthrough with citizens / focus groups in situ" it can be decided where the solution will be located within the neighborhood.

How to manage the needs and expectations of citizens? Through "motivational interviewing".

How investigate the perception of technology? Through "cultural mapping".

CO-SELECTION & CO-DESIGN

Which design to give? Through model thinking (Physical and 3D models) / world café.

What materials to use? Through model thinking (Physical and 3D models) / world café.

CO-IMPLEMENTATION

How can people learn to use it (knowledge transfer? Through community workshops.

How to manage it? Through time bank / farmers markets network.

CO-MONITORING

How to monitor the system functioning? Through time

REPLICATION AND SCALABILITY

- Modules can be anchored to a blind facade or installed on a metal structure in the public space.
- The installation, being modular, is highly replicable and scalable:
- The solution can be replicated in areas where in a certain period of the year there is an external temperature between 15 °C and 20°C.

BEST PRACTICES and REFERENCES

LINKS:

https://creativefoodcycles.org/2019/08/28/myco-

COMPLEMENTAR NBS FROM URBINAT

FOOD **PRODUCTION** AND LEISURE PAVILION

MOBILE VEGETABLE GARDEN

WALKTHROU-**GH / FOCUS GROUPS IN** SITU

MOTIVATIONAL INTERVIEWING

3D MODEL TIME BANK THINKING

FARMERS MARKETS NETWORK









Vertical & Horizontal Pedestrian Corridor

NBStech4 GROW TILE

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

|--|

GROW TILE

Scan me for digital format



URBAN MUSHROOM FARM

THE GROWING CLASSROOM

THINKING

TIME BANK

MARKETS NETWORK

DESCRIPTION

The Grow Tile can be implemented on horizontal or vertical surfaces and depending of the materials used for the surface, it can be walkable. It is targeted at creating optimal environmental conditions for plants to live in an urban environment and it is designed to minimize maintenance operations. The solution brings several environmental benefits, such as (1) flooding prevention by increasing permeable surfaces; (2) heat island alleviation; (3) air quality improvement; (4) water saving increasing. Depending on the plants implemented it can also be used for food production and pollination. The external surface is designed using parametric techniques that allow to adapt the shape to local climate conditions. For instance, in wet climates, the total area of the holes would be higher as more plants can be irrigated thanks to a higher water availability.

INNOVATION ASPECT

- The solution is fabricated using digital manufacturing techniques allowing the creation of not standardized elements that can be codesigned by citizens;
- The use of parametric techniques allows to automatically optimise the shape of the surface to environmental parameters (e.g. rainfall).;
- Moisture sensors to detect soil conditions can be implemented.

REPLICATION AND SCALABILITY

- Design and manufacturing methods give the solution a high replication potential since they allow to adapted it to different environments and users' needs:
- A large variety of plants can be chosen, making the solution adapt to several site conditions.
- Being modular, the solution can cover from small to large surfaces.

CO-DIAGNOSTIC

What is the agricultural map of the neighborhood? Through "cultural mapping" the existent agricultural fields in the neighborhood can be identified.

PARTICIPATION PROCESS

Where to place it? Through "walkthrough with citizens / focus groups in situ" it can be decided where the solution will be located within the neighborhood.

How to manage the needs and expectations of citizens? Through "motivational interviewing".

How investigate the perception of technology? Through "cultural mapping".

CO-SELECTION & CO-DESIGN

Which design to give? Through model thinking (Physical and 3D models) / world café.

What materials to use? Through model thinking (Physical and 3D models) / world café.

CO-IMPLEMENTATION

How can people learn to use it (knowledge transfer)? Through community workshops.

How to manage it? Through time bank / farmers markets network.

CO-MONITORING

How to monitor the system functioning? Through time

BEST PRACTICES and REFERENCES

LINKS:

The Grow Tile has been developed by IAAC and tested at IAAC's facilities in both laboratory and real environment.

COMPLEMENTAR NBS FROM URBINAT

MOBILE VEGE-TABLE GARDEN

3D MODEL

SOLIDARITY

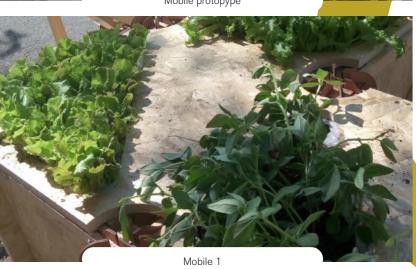
MARKET FOR

CHILDREN

FARMERS





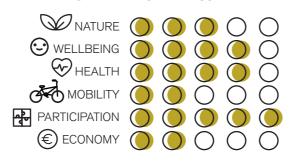




NBStech5

MOBILE VEGETABLE GARDEN

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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MOBILE VEGETABLE GARDEN

Scan me for digital format



FOOD **PRODUCTION** AND LEISURE

to shadows).

CLASSROOM

ADAPTIVE **REUSE OF** URBAN NETWORK SPACE

SITU

MOTIVATIONAL INTERVIEWING

DESCRIPTION

Mobile vegetable garden is a modular and moveable solution for growing food and plants. It can be assembled and moved by users in order to customize open public and private spaces according to their desires. The solution can be complemented with an augmented reality app that citizens can use to get information about the plants species and that can support awareness rising and educational activities.

CO-DIAGNOSTIC

What is the agricultural map of the neighborhood? Through "cultural mapping" the existent agricultural fields in the neighborhood can be identified.

PARTICIPATION PROCESS

Where to place it? Through "walkthrough with citizens / focus groups in situ" it can be decided where the solution will be located within the neighborhood.

How to manage the needs and expectations of citizens? Through "motivational interviewing".

How investigate the perception of technology? Through "cultural mapping".

CO-SELECTION & CO-DESIGN

Which design to give? Through model thinking (Physical and 3D models) / world café.

What materials to use? Through model thinking (Physical and 3D models) / world café.

CO-IMPLEMENTATION

How can people learn to use it (knowledge transfer)? Through community workshops.

How to manage it? Through time bank / farmers markets network.

CO-MONITORING

How to monitor the system functioning? Through time

REPLICATION AND SCALABILITY

INNOVATION ASPECT

Depending on the plants used, it can also be used for food production, improving local food markets and increasing availability and access to healthy local food:

The solution can be customised and assembled

in several configurations according to users'

preferences and space's needs, offering the

opportunity for social interaction in the public

The "moveable" feature allows to change the place

of installation and therefore it creates a dynamic space (e.g. by moving benches from sunny spots

The modularity of the solution allows to cover surfaces of different kind and size.

BEST PRACTICES and REFERENCES

LINKS:

IAAC installed the solution in 2015 during one week in Poble Nou district in Barcelona within the framework of an opening event for the Superilla project. More info can be found at: http://activepublicspace. org/2016/09/26/bcn-superilla-poblejocinstallation-set-up/#more-175

COMPLEMENTAR NBS FROM URBINAT

PAVILION

URBAN MUSHROOM **FARM**

THE GROWING

WALKTHROU-GH / FOCUS GROUPS IN

COMMUNITY WORKSHOPS

PARTICIPATION PROCESS

@UC+IAAC

@UC+IAAC

NBStech6 CYCLING AND PEDESTRIAN PATH

CHALLENGES ADDRESSED

NATURE		\bigcirc	0	\bigcirc
⊕ WELLBEING				
₩ HEALTH				
MOBILITY				
PARTICIPATION				
€ ECONOMY				\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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CYCLING AND PEDESTRIAN PATH

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DESCRIPTION

Luminescent paths NBS is a mesh of designed ways for cycling and pedestrian walking.

For its character, given by the luminophore coated stones, it can be implemented as an enlightened promenade, made of walls, pavements and other luminescent elements.

Built as a resin/cement fixed aggregated stone pavement or a concrete support wall, these luminescent elements include also luminophore coated guartz pebbles, which absorbs the sunlight during the day, and emanate light during the evening.

INNOVATION ASPECT

- The pebbles are covered with a coat material, which doesn't take its intrinsic characteristics, and can transform a common walkable and cycling road, in a safer passage, making safer evening activities, like walking, running or cycling;
- Cycling and walkable paths foster a healthier mobility, promoting walking and sport activities.

very interesting result. Its form and its constructive character are easily adapted and modified in order to answer to the challenges and routes which the stakeholders decide to address.

CO-MONITORING

connectivity.

CO-DIAGNOSTIC

form of the pathways.

CO-IMPLEMENTATION

CO-SELECTION & CO-DESIGN

The ordinariness of the used materials and the simplicity of the constructive process, along with the co-design process, allows a simple and participative implementation.

Through walkthroughs and focus groups, with citizens,

local communities or other stakeholders it can be

chosen the urban zones where this new infra-structure can be placed and implemented. The diagnosis it's the

most important moment to define the size and the

Through collective mapping, photovoice and focus groups, the selection can be made as an innovative

solution with very simple characteristics that can answer urban challenges on mobility and urban

Through model thinking, collective design and other activities as or focus group the NBS can allow a

REPLICATION AND SCALABILITY

- This NBS is a very low cost, flexible and low maintenance solution, and it can be used in various mobility situations and urban connections;
- It can be developed in different cities, with multiple forms and characteristics, and it can be the connection of parts of the healthy corridor and other NBS.

BEST PRACTICES and REFERENCES

LINKS:

. author: TPA Instytut Badan Technicznych, Lidzbark Warminski, Poland (2016)

COMPLEMENTAR NBS FROM URBINAT

MULTIUSE WOOD STRUCTURE

LIGHT MANAGEMENT

WILDLIFE PARK

ADAPTIVE REUSE OF URBAN NETWORK

SPACE

PHOTOVOICE

WALKTHROU-**GH / FOCUS GROUPS IN** SITU







NBStech7 MULTIUSE WOOD STRUCTURE

CHALLENGES ADDRESSED





axonometria formal@UC



@UC

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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MULTIUSE WOOD STRUCTURE

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DESCRIPTION

The wood structure is a multi-use modular pavilion prepared to support several activities in the public space, such as solidarity markets, illuminated storage rooms, winter gardens or just places to hangout.

From simple architectonic ideas and the production of a low-tech constructive module, this rhythmic porticoed construction is adaptable to the wills of the local community and the actual contextual features. These strategical located, flexible and illuminated structures that can help densify low defined vacant public spaces.

Throughout these simple and co-implemented constructions, it can be achieved a sophisticated and porous process of uses and activities with low footprint.

INNOVATION ASPECT

 It's a modular pavilion with multiple uses or purposes; safety light, on low densify space; a warm protected place to sit or just a collective place to compost the agriculture rests from the communitarian vegetables gardens, these structures can exist as landmarks or just flexible and enclosed community spaces.

Through walkthroughs and focus groups, with citizens, local communities or other stakeholders it can be diagnosis challenges that can be addressed by the NBS. The diagnosis it's the most important moment to define the form, the use and the features of the NBS.

PARTICIPATION PROCESS

CO-SELECTION & CO-DESIGN

Through collective mapping, photovoices and focus groups, the selection of this NBS, for its principle and simplicity, can be selected and worked for a wide range of stakeholders and answer to very different challenges.

CO-IMPLEMENTATION

CO-DIAGNOSTIC

Through model thinking, collective design and other collective activities as photovoice or focus group the formal multiplicity of the module can allow a process of co-design that it is evolutive and adapted to the contextual realities.

CO-MONITORING

The ordinariness of the used materials, the traditional techniques and the simplicity of the constructive process, along with the co-design process, allows a simple, participative and fast implementation of the

REPLICATION AND SCALABILITY

- The NBS is a very low budget, flexible and recyclable solution. It can be used in various situations and for a big amount of uses and purposes;
- This capability, of adaptive possibilities, it can be developed in different cities, with multiple forms and characteristics, complemented with many other NBS, and used for a big number of uses.

BEST PRACTICES and REFERENCES

LINKS:

- . Project N10, author: COMOCO, Coimbra, Portugal (2011-2012)
- . Norrehus Project, author: Johansen Skovsted, Copenhagen, Denmark
- . Project white flower arbor, author: APLdw, Toyama, Maezawa garden house, Japan

COMPLEMENTAR NBS FROM URBINAT

PROJECTS

CYCLING AND PEDESTRIAN PATH

GREEN WALL LIVING WALL

FORUM THEATRE COMMUNITY

COMMUNITY-WORKSHOPS -BASED ARTS

SOLIDARITY MARKET FOR CHILDREN





PARTICIPATION PROCESS

Idlife gardens of the Faculty of Sciences, University of Porto. Author: Paulo Farinha Marques

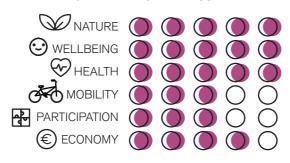
Wildlife gardens of the Faculty of Sciences, Unive sity of Porto. Author: Paulo Farinha Margues

URBINAT

NBSterr1

WILDLIFE PARK

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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WILDLIFE PARK

Scan me for digital format



FOOD **PRODUCTION**

MULTIUSE WOOD STRUCTURE

AUTOCHTHO-NOUS URBAN FOREST

RAINWATER MANAGEMENT AND RECIRCU-LATION

BEEHIVE PROVISION AND **ADOPTION**

DESCRIPTION

Green space designed according to sustainability principles where natural dynamics and ecological succession are a central concept and part of the design. The ecology of the site, its plants and habitats are expected to change over time, a process that can be integrated into the site's planning and design. Special care is given towards the promotion of urban biodiversity, natural regeneration, habitat development and ecological succession, through specific planting design and management. It can be a cost-efficient solution able to provide a deeper connection between recreational uses and nature.

activities.

CO-IMPLEMENTATION

CO-DESIGN

CO-MONITORING Citizens can be part of monitoring activities to

accompany the development of the wildlife garden.

Citizens can help in some planting and maintenance

Citizens can participate in walkthroughs to identify territorial needs and discuss NBS site implementation.

These moments can be important to raise awareness

Citizens can be part of the discussions about selecting

CO-DIAGNOSTIC & CO-SELECTION

on wildlife gardens in urban environment..

vegetation, materials and desired functions.

INNOVATION ASPECT

- The possibility of providing a low cost and low maintenance strategy with significant benefits in terms of biodiversity improvement and human health promotion;
- The garden is expected to act as a biodiversity hotspot and reservoir and the design will also have special consideration towards climate change adaptation strategies.

REPLICATION AND SCALABILITY

- Can be used anywhere, even in the most challenging places, such as polluted brownfields. This is highly related with the low level of intervention required to achieve this NBS, that is mostly based on spontaneous vegetation succession;
- Small scale interventions can have a large-scale impact, thus can be used as an urban acupuncture

BEST PRACTICES and REFERENCES

LINKS:

Wildlife gardens of the Faculty of Sciences, University of Porto. Author: Paulo Farinha Margues

COMPLEMENTAR NBS FROM URBINAT

Jardim Botânico Coimbra, Portugal

NBSterr2

AUTOCHTHONOUS URBAN FOREST

CHALLENGES ADDRESSED

NATURE			
₩ELLBEING			
₩ HEALTH			
MOBILITY			
PARTICIPATION		_	$\overline{}$
€ ECONOMY			\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM HIGH	NA
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AUTOCHTHONOUS URBAN FOREST

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DESCRIPTION

Urban woodland designed and managed according to ecological, aesthetic and economic principles. This NBS relies mostly on plant-based material, particularly on autochthonous vegetation. Plant species and habitat design should be chosen in accordance with local characteristics (climate, soil conditions, pollution levels, spatial needs and management capability). By using native vegetation its adaptation to the site is ensured, just like the performance in terms of water absorption and carbon fixation. Urban woodlands can help to raise social awareness towards ecological benefits of using autochthonous vegetation. At the same time, it contributes to sustainable development goals by promoting urban resilience to climate change and recreational opportunities.

INNOVATION ASPECT

- Cost-effective strategy with major environmental, social and economic value within urban environments based on the plantation of autochthonous vegetation;
- Selection of trees that sequester carbon, reduce air pollutants, maximize water retention, while providing aesthetic delight and increase the perception of greenery in the city.

PARTICIPATION PROCESS

CO-DIAGNOSTIC & CO-SELECTION

Citizens can participate in walkthroughs to identify territorial needs and discuss NBS site implementation. These moments can be important to raise awareness on autochthonous urban forests and to identify remains of ancient urban forests whose past has meaning for local residents.

CO-DESIGN

Citizens can be part of the discussions about selecting vegetation, materials, and desired functions.

CO-IMPLEMENTATION

Citizens can help in some planting and maintenance

CO-MONITORING

Citizens can be part of monitoring activities to accompany the development of the urban forest.

REPLICATION AND SCALABILITY

- Can be replicated in every city;
- Can vary in scale according to each city needs and characteristics. In densely urbanized areas it can be implemented along the streets with one or two alignments of trees planted in pits or trenches, or it can be developed in larger vacant plots, integrating them into the life of the neighbourhood.

BEST PRACTICES and REFERENCES

LINKS:

Rede de Biospots do Porto, Portugal - http:// www.100milarvores.pt/2017/01/rede-de-biospotsdo-porto.html

Parque da Cidade, Porto. Author: Sidónio Pardal Jardim Botânico Coimbra, Portugal

COMPLEMENTAR NBS FROM URBINAT

FOOD **PRODUCTION** AND LEISURE PAVILION

MULTIUSE WOOD **STRUCTURE**

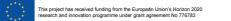
LIGHT MANAGEMENT WATERCOURSE RESTORATION

RENATURA-BEEHIVE LIZATION OF PROVISION AND **BROWNFIELDS**, ADOPTION

WALKTHROU-**GH / FOCUS GROUPS IN** SITU

URBINAT





@SLA/IRSTV-CRNS





NBSterr3

GREEN ROOFS

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

	l	
LOW	MEDIUM	l HIGH

AMORTIZATION PERIOD

7				
SHORT	MEDIUM	LONG	NA	

INVESTMENT

LOW MEDIUM HIGH NA

GREEN ROOFS

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DESCRIPTION

Green roofs serve several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife, increasing benevolence and decreasing stress of the people around the roof by providing a more aesthetically pleasing landscape, and helping to lower urban air temperatures and mitigate the urban heat island effect.

The roof of a building, a parking lot or some other build structure can be covered by vegetation that grows over an impermeabilization membrane and a soil substrate. Intensive green roofs are suitable for human use and flow of people. Extensive green roofs are not suitable for human use but require low maintenance and can have major ecological and economic benefits.

INNOVATION ASPECT

- Integrates build structures in the development of urban green spaces;
- Provides important ecosystem services e.g., rainwater management, heat island mitigation, and increased biodiversity;
- Provides green spaces in dense urban
- Mitigates climate changes by creating better microclimate in dense urban areas.

REPLICATION AND SCALABILITY

- Substrates and base structures are standardized;
- The green roof design is dependent on the underlying load bearing structure. Extensive green roof types are more scalable than intensive because they are lighter;
- Green roofs can be established on both small and large structures.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

CO-SELECTION

Citizens can participate in identifying needs and potential roofs in the district.

CO-DESIGN

Variables such as materials, vegetation and functional programs can be developed in collaboration with citizens, while the base-design of green roofs are quite technical and standardized. The load bearing structure will quite likely be a limiting factor when installing a green roof on an existing structure, and this should be investigated prior to a co-design process to ensure realistic expectations concerning the possibilities.

CO-IMPLEMENTATION

Citizens can help with plantings and plants management.

CO-MONITORING

Plant identification, plant density, substrate moisture, water drainage below the substrate.

BEST PRACTICES and REFERENCES

LINKS:

https://sla.dk/en/projects/amagerbakke https://sla.dk/en/projects/ budolfiplads/?countryoverride=lswitch https://sla.dk/en/projects/sundnaturepark https://sla.dk/en/projects/novo-nordisk https://sla.dk/en/projects/dr-citys-inner-courtyard/?

COMPLEMENTAR NBS FROM URBINAT

GROW TILE

MOBILE VEGETABLE

GARDEN

GREEN ROOF

RAINWATER MANAGEMENT GREEN WALL

countryoverride=Iswitch

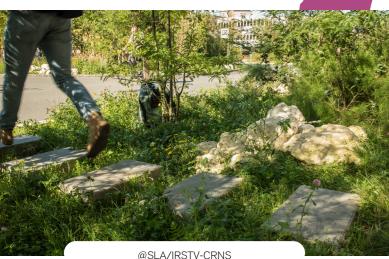
LIVING

BEEHIVE PROVISION AND **ADOPTION**





@SLA/IRSTV-CRNS



@SLA/IRSTV-CRNS

NBSterr4

RAINWATER MANAGEMENT

CHALLENGES ADDRESSED

₩ NATURE				
				\bigcirc
₩ HEALTH		\bigcirc	\bigcirc	\bigcirc
MOBILITY	\bigcirc	\bigcirc	\bigcirc	\bigcirc
PARTICIPATION		_	_	_
€ ECONOMY	\bigcirc	\bigcirc	\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD
'		

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
-----	--------	------

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA	

INVESTMENT

LOW	MEDIUM	HIGH	NA
-----	--------	------	----

RAINWATER MANAGEMENT AND RECIRCULATION

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DESCRIPTION

Traditionally, the management of stormwater has relied on pipes and sewers. Due to limited storage capacity, these systems are susceptible to overflowing during storm events, presenting risks of harmful contamination to the environment, and causing damages on buildings. Nature based rainwater management is designed to collect runoff water and relieve the pressure on sewer systems. This is done by handling the water on the terrain surface and including the hydrological performance of nature. They are based on retention and infiltration principles, which mitigates flood problems, improve quality of water and recharge underground watercourses as well as promoting and improving both biodiversity and the wellbeing of people. These NBS are very flexible and includes various possibilities for site specific adaptation, in terms of scale, technical solution and combination with other programs.

INNOVATION ASPECT

- Changes the main principles of rainwater management by utilizing natures hydrological performance rather than traditional sewers and thereby minimizing the technical installations underground;
- Same cost as, or cheaper than, technical solutions underground, whit the added benefit of providing a recreational nature space for the residents.

REPLICATION AND SCALABILITY

- This NBS is easily scalable and can unfold on a local level or be integrated into a city-wide scheme. In the same way the specific design can be upscaled to provide a wide range of ecosystem services and enhance the quality of green spaces;
- The principles of the NBS are easily replicated but should always be tailored to the specific site.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Due to their multi-functional character, SUDS can be a good tool in the urban planning, to have a more collaborative approach of design, including several actors: rainwater managers, gardeners, green areas conception and maintenance, people interested in biodiversity and microclimate... and citizens living near these systems.

CO-SELECTION

Citizens will have valuable knowledge about where and how heavy rainfalls impact the neighborhood and whether this creates problems.

Walkthrough, photovoice, forum theatre.

CO-DESIGN

Nature based rainwater management is quite flexible and, barring the strictly technical parts, citizens can have a large impact on the design and functionality of the NBS. SUDS can easily be integrated or combined with other NBS which will allow for further co-design.

CO-IMPLEMENTATION

Citizens can help with plantings and maintenance.

CO-MONITORING

Performance during rainfalls, biodiversity.

BEST PRACTICES and REFERENCES

LINKS:

 $\frac{\text{https://sla.dk/en/projects/bryggervangen-sankt-}}{\text{kjelds-plads}}$

https://sla.dk/en/projects/herlev-hospitalhttps://sla.dk/en/projects/hanstavsenspark

COMPLEMENTAR NBS FROM URBINAT

WILDLIFE

THE GROWING CLASSROOM

WATERCOURSE RESTORATION RENATURA-LIZATION OF BROWNFIELDS

www.urbinat.e

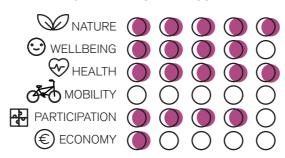




NBSterr5

TASTY GARDEN OF LEARNING

CHALLENGES ADDRESSED



IMPLEMENTATION SOFT **MEDIUM** HARD REPLICATION POTENTIAL/FLEXIBILITY MEDIUM LOW **AMORTIZATION PERIOD SHORT MEDIUM** LONG NA INVESTMENT MEDIUM HIGH LOW NA

TASTY GARDEN OF LEARNING

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DESCRIPTION

The Tasty Garden of Learning is a "growing classroom" in the yard of a kindergarten or school where children, teachers and parents unite their efforts to grow together herbs, vegetables, and fruits; there they all get valuable lessons and inspiration directly from their experience with Nature. It is a multi-dimensional educational tool with a potential to address real-life challenges in an integrated manner and to organize educational activities in an easy, inclusive, and inspiring way. A Tasty Garden of Learning brings together all participants in the educational process in a life-enriching relationship and leads them to a creative process of learning by experiencing that supports the development of the physical, intellectual, emotional, and social intelligence of the pupils; it also unites local communities and supports their sustainable development.

INNOVATION ASPECT

- Positive integration and shared responsibility of parents and local community in the educational process;
- Inclusive and experiential learning to develop multiple intelligences and basic competences such as creativity, team working, and risk management;
- Developing skills for healthy living in harmony with oneself, other people and Nature.

REPLICATION AND SCALABILITY

- The concept is highly replicable, but each garden is unique as it results from the vision, ideas and creativity of the particular collective and responds to local needs;
- The gardens are adaptable to any available space; the project has a high scalability potential – it could be developed even on a small plot of land or a terrace.

CO-DIAGNOSTIC

The availability of suitable space for the organic garden in the yard (natural light, shading, accessibility for watering, space for moving around the plant beds) is checked by expert analysis.

PARTICIPATION PROCESS

CO-SELECTION

The selection of the garden plot is based on teachers' didactic vision and needs for creating effective educational environment through motivational interviews with teachers.

CO-DESIGN

Model thinking (a physical model) is used jointly with teachers and children to choose appropriate local resources and materials to use and how to use them.

CO-IMPLEMENTATION

Based on a jointly developed vision, action plan and calendar of all activities. Tasks are discussed and distributed to all actors in world café.

CO-MONITORING

Two levels of assessment of the garden functioning applied: (a) the state of the ecosystem – through direct observations and walkthrough; (b)the educational effect – statistics on frequency and periods of visits, cultural mapping, interviews with teachers.

BEST PRACTICES and REFERENCES

LINKS:

A Tasty Garden was initiated in 2012 with the methodological support of ZAEDNO Foundation in Elhitsa Kindergarten (310 children aged 3 to 6, including 27 with special educational needs). An ecosystem was created, where children, helped by teachers and parents, grow seasonal vegetables, herbs, and spices. http://gradinka.zaedno.net/elhicaeng

COMPLEMENTAR NBS FROM URBINAT

CERAMIC GREEN WALL MULTIUSE WOOD Structure RAINWATER MANAGEMENT

BEHAVIOURAL Mapping **WORLD CAFÉ**

CAFÉ SOLIDARITY
MARKET FOR
CHILDREN

FARMERS MARKETS NETWORK

www.urbinat.e



Tasty garden of learning





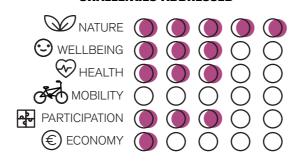


@UASG

NBSterr6

GREEN WALLS

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
-----	--------	------

AMORTIZATION PERIOD

AMONTIEM I EMOD			
SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
-----	--------	------	----

GREEN WALLS

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FOOD PRODUC-TION AND LEISURE

PAVILION

CERAMIC **GREEN WALL**

GROW TILE

RENATURA-LIZATION OF **BROWNFIELDS**

ADOPTION

SOLIDARITY

FARMERS MARKETS NETWORK

DESCRIPTION

Vertical green systems represent vertical surface with living plants. There are two main types of vegetated wall: traditional direct covering of a vertical surface and indirect vertical surface using additional support system to ensure air gap between the vegetation and the wall. An option to plant vegetation in planter boxes is implemented when the ground planting is not possible. Green walls have the potential to improve urban microclimate and visual site characteristics. They affect urban heat island by direct sunshade and by increasing air quality and humidity, improve acoustic environment and biodiversity. Green walls are relevant for compact city structure and areas with properties flanked by high solid fences. They can be used as noise and air pollutant screens, living elements in spatial organization of places, and for improving the aesthetics of a site.

INNOVATION ASPECT

- conventional urban greening;
- They provide improved air quality, heat island effect reduction, energy cost reduction, noise level reduction, visual benefits, increased biodiversity by creating habitats for birds and beneficial insects.

- Provide important ecosystem services in areas with sealed urban structure with no space for

REPLICATION AND SCALABILITY

- Can cover wide range of scales. Specific requirements could indicate different area of vegetation that could be ground planted or placed
- to site climate conditions.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Focuses of identifying needs and appropriate physical settings for growing plants.

CO-SELECTION

Could be focused on the selection of place/ façade, guided co-selection of planting material, and co-selection of the materials for the structure. Coordination with local administration and property owners is needed.

CO-DESIGN

The co-design is developed in focus groups and workshops by using physical models. The additional support system should be technically verified and the final design project should be approved by the technical department of the municipality.

CO-IMPLEMENTATION

The implementation requires expert action and supervision, yet it is important to motivate inhabitants to actively participate in planting, maintaining the structure, and growing the vegetation.

CO-MONITORING

Co-monitoring is related to subjective perceptions and estimations of citizens and could be performed through surveys, interviews, focus groups, walkthrough.

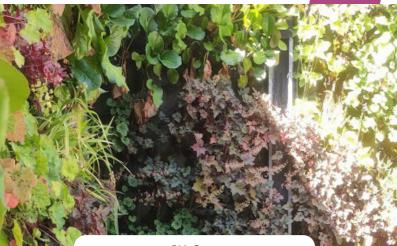
- in planter boxes
- Implementation is relatively easy and cheap to perform without special qualification. Constraints are imposed on the planting materials according

BEST PRACTICES and REFERENCES

LINKS:

Green walls are traditional gardening practices across Europe and part of vernacular housing architecture in many countries. Contemporary green walls use additional support system to ensure air gap between the vegetation and the wall. Free standing or attached to a wall planter boxes are used when the surface is sealed or vegetation height is required.

COMPLEMENTAR NBS FROM URBINAT

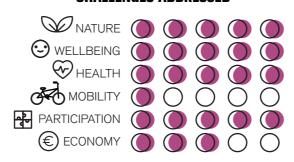


@Mr Green

NBSterr7

VERTICAL GARDENS / LIVING WALLS

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
-----	--------	------

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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VERTICAL GARDENS / LIVING WALLS

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DESCRIPTION

Green facades and living walls are vertical greenery systems for growing plants with less or without soil on a vertical surface. Living walls are relevant for interior and exterior vertical surfaces to be vegetated with wide range of plant species, herbs, and vegetables. All public buildings and public spaces can take advantage of the positive effects of a vertical garden implementation as they improve urban microclimate and visual site characteristics. They affect urban heat island by direct sunshade and increasing air quality and humidity, improve acoustic environment and biodiversity. They could have a positive effect on mental health through biophilia - a psychological orientation of being attracted to all that is alive and vital. Living walls are relevant for compact city structure locations and areas with properties flanked by high solid fences.

INNOVATION ASPECT

- Provide important ecosystem services in areas with sealed urban structure with no space for conventional urban greening;
- They provide improved air quality, heat island effect reduction, energy cost reduction, noise level reduction, visual benefits, increased biodiversity by creating habitats for birds and beneficial insects.

- Broadly replicable but constraints are imposed on the planting materials due to different climate conditions at different geographical locations;
- Can cover wide range of scales due to the flexibility of the conception for vertical plant layer implementation. Needs to be incorporated into the investment projects, especially when covering a

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Focuses of identifying needs and appropriate physical settings for growing plants.

CO-SELECTION

Co-selection could be focused on the selection of place/fascade, guided co-selection of planting material, and co-selection of the materials for the structure.

CO-DESIGN

Vertical greenery systems provide wide range of structure elements and plant species variations which depend on the implementation purposes and specific site requirements. Citizens could take part in the design process by choosing plant species and aromatic herbs.

CO-IMPLEMENTATION

Planting could be implemented in collaboration with citizens. Taking care of the plants and keeping and maintenance of the structure could be run by the citizens after proper instructions on the systems operation.

CO-MONITORING

Co-monitoring is related to subjective perceptions and estimations of citizens and could be performed through surveys, interviews, focus groups, walkthrough.

BEST PRACTICES and REFERENCES

LINKS:

Green walls, installed in a restaurant courtyard in order to improve the aesthetic and microclimatic qualities of the space. The process was initiated by the owner whose desire to saturate the sealed courtyard with vegetation in a space-saving way, led the design process.

https://mrgreenwalls.com/wp/%d0%be%d0%b1%d 0%b5%d0%ba%d1%82%d0%b8/the-school/

COMPLEMENTAR NBS FROM URBINAT

FOOD PRODUC-**TION AND** LEISURE **PAVILION**

MULTIUSE WOOD **STRUCTURE**

DESIGN THINKING

REPLICATION AND SCALABILITY

LEARNFORLIFE

SOLIDARITY MARKET FOR

CHILDREN

TIME BANK

FARMERS MARKETS NETWORK



Parque Central da Asprela, Porto. Author: Paulo Farinha Marques, José Miguel Lameiras et al

Rhone river bank, Lyon (Photo: IRSTV)

NBSterr8

WATERCOURSE RESTORATION

CHALLENGES ADDRESSED

NATURE			
₩ HEALTH			
MOBILITY			\bigcirc
PARTICIPATION		_	_
€ ECONOMY		\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
	IVILDICIVI	HIGH

AMORTIZATION PERIOD

SHORT N	MEDIUM	LONG	NA
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INVESTMENT

LOW	MEDIUM	HIGH	NA

DESCRIPTION

Watercourse restoration concerns rivers/streams that have been degraded by the urbanization process or by heavily engineered water management solutions: contained underground watercourses, channelled rivers, concrete banks, embankments, dams, among others. Despite being necessary solutions, excessive containment of waterflow means that a man-imposed limit on volume and flow might not be sufficient, offering lower flexibility to behaviour changes over time. Mixed solutions that combine man-driven watercourse control while respecting the riverbank ecosystem offers greater success at short and long term, while promoting biodiversity, ecological connectivity and a major increase in water purification.

INNOVATION ASPECT

Bringing urban streams to surface and designing them according to social, aesthetic, environmental and economic principles is a solution that is being tested in front runner cities with great health and wellbeing benefits towards local communities.

PARTICIPATION PROCESS

CO-DIAGNOSTIC & CO-SELECTION

Citizens can participate in walkthroughs to identify territorial needs and discuss NBS site implementation. These moments can be important to raise awareness about recovering waterlines and their role in urban environment.

CO-DESIGN

Citizens can be part of the discussions about selecting vegetation and materials.

CO-IMPLEMENTATION

Citizens can help in some planting and maintenance activities.

CO-MONITORING

Citizens can be part of monitoring activities to accompany the development of the waterline.

REPLICATION AND SCALABILITY

- It can be implemented in many sites but need to be adapted to flow regimes, ecological context (climate, local vegetation), and public needs;
- This NBS can be adapted to different watercourse sizes, from small streams (temporary) and rivers to the main rivers (permanent). It can be implemented all along the river or in different sections.

BEST PRACTICES and REFERENCES

- LINKS:
- Left bank of the Rhone river, Lyon Parque Central da Asprela, Porto. Author: Paulo Farinha Margues, José Miguel Lameiras et al. (https://biodiv.city/landscape-design-projects/ parque-central-da-asprela/)

WATERCOURSE RESTORATION

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MULTIUSE WOOD STRUCTURE WILDLIFE

AUTOCHTHO-NOUS

RAINWATER MANAGEMENT

RENATURA-LIZATION OF **BROWNFIELDS** **SUPERBARRIO**



COMPLEMENTAR NBS FROM URBINAT

Brownfield before intervention

After intervention (Parque da Levada, Rio Tinto. Author: Atelier do Beco da Bela Vista)

NBSterr9

RENATURALIZATION OF BROWNFIELDS

CHALLENGES ADDRESSED

NATURE			
HEALTH			
MOBILITY		\bigcirc	\bigcirc
PARTICIPATION		$\overline{}$	$\overline{}$
€ ECONOMY			\bigcirc

INNOVATION ASPECT

DESCRIPTION

Abandoned/degraded areas can be restored and used by local communities;

Renaturalization of neglected and abandoned urban

areas through green space development and conscious

planting design, to restore important ecologic and

social functions. In some remarkable sites they can

be an important cultural manifesto: an opportunity to promote historical continuity between its past and the

new layer of occupation. Promoting its character is

an important step for a truthful relation with the site's cultural identity, creating an opportunity to reflect on the

damage inflicted by its previous occupation or, on the

other hand, to celebrate the relevance of its past social

and technological achievements. By recovering former

abandoned spaces, this NBS creates opportunities for human use and wellbeing, while achieving ecological

benefits such as treatment of polluted areas, habitat

restoration and increase of local biodiversity.

Reclaiming permeable soil from impervious surfaces, soil remediation, and reuse of abandoned structures can be a cost-effective strategy with significant social, environmental, and ecological

This NBS is a potential tool for social, economic

and environmental transformation and can be

replicated to all neglected and socially deprived

The level of intervention can range from industrial

areas, to abandoned city areas and small plots to

wider areas. This NBS can also be developed in

vacant lots pending urban development.

PARTICIPATION PROCESS

CO-DIAGNOSTIC & CO-SELECTION

Citizens can participate in walkthroughs to identify territorial needs and discuss NBS site implementation. These moments can be important to raise awareness about the existence of permeable areas in urban environments.

CO-DESIGN

Citizens can be part of the discussions about selecting vegetation, materials and desired functions.

CO-IMPLEMENTATION

Citizens can help in some planting and maintenance activities.

CO-MONITORING

LINKS:

Citizens can be part of monitoring activities to follow the development of the brownfield.

IMPLEMENTATION

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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AUTOCHTHO-NOUS URBAN FOREST

WALKTHROU-**GH / FOCUS GROUPS IN** SITU

Foundries' Garden, France. Author: ADH

php/2009/09/foundries-garden/)

project.php?tipo=3&id=113)

Doazan+Hirschberger (http://landezine.com/index.

Parque da Levada, Rio Tinto. Author: Atelier do Beco

da Bela Vista (http://www.atelierbbv.com/in2010/



SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

	/11010111111/1	1011 1 211102	
SHORT	MEDIUM	LONG	NA

RENATURALIZATION OF BROWNFIELDS

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LIGHT MANAGEMENT

urban areas:

REPLICATION AND SCALABILITY

COMPLEMENTAR NBS FROM URBINAT

BEST PRACTICES and REFERENCES

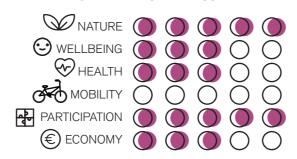


URBINAT

NBSterr10

GROASIS

CHALLENGES ADDRESSED



nature, requiring minimal water usage and custodial management. Given proper preparations and knowledge how and what to plant, survival rates are yet extremely high (above 90 percent). Plantations are undertaken using a boxx, either Waterboxx or Growboxx according to the land requirements. A drip-mechanism channels water to the root slowly. Atmospheric humidity is attracted during night, resulting in natural refilling, without any use of drip irrigation and minimum other irrigation.

CO-DIAGNOSTIC With Groasis, trees are planted in a way that mimics

DESCRIPTION

Active community engagement is important in diagnosing current problems such as over-use of water and and to gain appreciation for long-term benefits of naturally rooted trees not dependent on irrigation.

PARTICIPATION PROCESS

CO-SELECTION

Local communities should be engaged in the selection of lands, species, and methods for soil-improvement.

CO-DESIGN

Training and knowledge-transfers to the local community are integrated with the project design.

CO-IMPLEMENTATION

Local community involvement in preparations such as procurement and land preparation as well as actual plantation, monitoring and maintenance.

CO-MONITORING

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM HIGH NA

deep in the ground. Both survival rates and water

INNOVATION ASPECT

The Groasis multiple capillary drill enables access to inaccessible dry areas. Costs are reduced due to no use of pumps, tubes or energy.

savings are high;

 Groasis protects the roots while providing minimal water and thus spurring them to seek humidity

REPLICATION AND SCALABILITY

- Scalability highly attractive, since learning process makes it easier and less costly the larger the number of units planted;
- A global carbon credit scheme requires plantation of a large areas;
- Groais has a great potential of replication and can be adopted in different areas.

LINKS:

Best practices around the world include: Chile, Santiago; Ecuador, Galapagos Islands; Ghana, Mafi-Anfoe; Oman, Salalah Oman. Company/Author: Groasis, Pieter Hoff Location: the Netherlands, Extension: Ecuador

Year: 2011-13

GROASIS



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COMPLEMENTAR NBS FROM URBINAT

BEST PRACTICES and REFERENCES

FOOD PRODUC-TION AND LEISURE PAVILION

MOBILE VEGE-TABLE GARDEN **GREEN ROOF**

RAINWATER MANAGEMENT

BEEHIVE PROVISION AND **ADOPTION**

LEARNFORLIFE



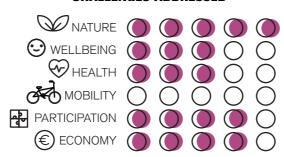


BEEHIVE, by Damien Tupinier

NBSterr11

BEEHIVE PROVISION AND ADOPTION

CHALLENGES ADDRESSED



DESCRIPTION

INNOVATION ASPECT

"Beehiving" offers a manmade replica of the natural environment, aimed to produce honey (the term is used interchangeably with "bee keeping"). The focus here is "beehiving" in urban areas, a relatively recent phenomenon. Such beehiving must be complemented by other functions, i.e., "side-activities" capable of supporting "harmony" with the surrounding urban dwellers and context. Getting that relationship right is a core task which incorporates revitalizing urban ecosystems, awareness creation, mindset change, distribution chains, and social innovation. Success in that regard supports the wellbeing of citizens while also increasing access to the healthy products produced by

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Negative past experiences led to regulations against urban beehiving, e.g., in US and UK cities. A combination of entrepreneurs and communities should actively take part in co-diagnostic leading to a decision of introducing urban beehiving.

CO-SELECTION

A group of citizens may agree to the desirability and acceptance of beehives. Municipalities may play a supportive role. Success is most likely, however, if beehiving is adopted through bottom-up initiative.

CO-DESIGN

Companies involved in introducing beehives are normally rooted in the local community and have large numbers of people volunteering.

CO-IMPLEMENTATION

A customer-oriented and citizen-centric organisation may assume different models, including public service, volunteering, or private sector development. Co-implementation is of high importance for the development of value-enhancing services and voluntary support, e.g., education and training matter greatly for the viability and scope of beehiving.

CO-MONITORING

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

		l
LOW	MEDIUM	l HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

REPLICATION AND SCALABILITY

Beehiving is scalable across cities and urban districts, suitable for diverse conditions;

Innovation is inherent to the inputs, processes and

bees and urban dwellers;

commercial and social gains;

delivering honey to adopters.

outputs as well as to the relationship between

Innovativeness is also important for achieving

Related innovations are found in the development

of special gift certificates and or new ways of

- A moderate level of population density is suitable. High density increases the risk of problems for humans while low density makes the model
- The optimal scale depends on local specificities, such as the land area and hand.

LINKS:

Beehiving has been developed in several locations, including Valencia in Spain, Puglia in Italy, Liverpool in the UK and in many US cities. A best practice case revitalizing deprived areas is ByBi in Copenhagen, Denmark. ByBi is a social enterprise and non-profit association which is successful both commercially and socially.

BEST PRACTICES and REFERENCES

COMPLEMENTAR NBS FROM URBINAT

FOOD PRODUC-TION AND LEISURE PAVILION

WILDLIFE PARK

GREEN ROOF

THE GROWING CLASSROOM

FORUM THEATRE

MARKETS NETWORK

FARMERS

BEEHIVE PROVISION AND ADOPTION

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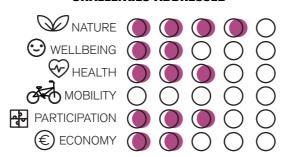
URBINAT



NBSterr12

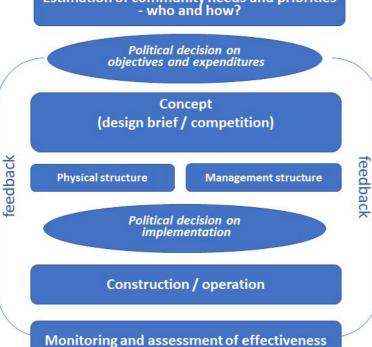
SWIMMING POOL WITH THERMAL

CHALLENGES ADDRESSED



A community swimming complex in Nadezhda District: Methodological guidelines

Estimation of community needs and priorities - who and how?



Thermal mineral water swimming pool

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
-----	--------	------

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM	HIGH	NA
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SWIMMING POOL WITH THERMAL MINERAL WATER

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GREEN ROOF

RENATURA-

WORLD CAFÉ

COMMUNITY WORKSHOPS

MUNICIPAL REGULATIONS **FOR INCLUSIVE PARTICIPATION**

DESCRIPTION

The pool relies on local geothermal resource to provide healthy environment for children's physical education, training, and recreational activities. A millennia-long regional cultural tradition of living in contact with mineral water is revived. The ancient city of Serdica once emerged by a mineral spring, which is still in the historic core of Sofia. Public baths with pools have been used in the region for centuries. Swimming has been a compulsory element of school physical education and training in Bulgaria since mid-1970s, yet only few large school complexes had functioning swimming pools by late 1980s. The life-cycle concept developed for the school swimming pool puts an explicit focus on the interaction between authorities, experts, teachers and pupils, and community actors in building the functional and spatial design concept of the pool complex and its integrated management

INNOVATION ASPECT

- The project aims at the psychological and emotional comfort of children and promotes a healthy living culture;
- The integrated programming, design, and operation management enables sensitivity to community's needs and preferences; various stakeholders take personal and institutional responsibility in all the stages of the process.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

CO-SELECTION

The co-selection of the activities and NBS in the complex is done through local public debate (discussion panels and focus groups) involving health, social and technical experts, citizens, local administration, NGOs, private business, etc.

CO-DESIGN

The co-design of the functional and spatial concept and the design brief are developed by focus groups and physical modelling. The architectural design is an expert activity and the final design project is approved by the technical department of the municipality.

CO-IMPLEMENTATION

The implementation requires expert action, yet it is important to motivate citizens' and children's creative action for organizing the surrounding area.

CO-MONITORING

The technical, and economic effectiveness of the pool are estimated by experts; its social and socio-cultural effectiveness - through cultural mapping, surveys and interviews.

REPLICATION AND SCALABILITY

- methodological concept of integrated programming, design, and operation management based on participatory approaches is broadly replicable;
- The scalability potential should be considered within the frame of specific functional requirements to school training facilities; expert contribution is obligator

BEST PRACTICES and REFERENCES

LINKS:

A functioning swimming pool complex in school No 56, Lyulin District, Sofia, which provides services for all the local community – from babies and schoolchildren to adults. Its successful functioning is indicative for estimated needs and the relevance. https://aquasofia.com/%d0%b1% d0%b0%d1%81%d0%b5%d0%b9%d0%bd-56-%d1%81%d0%be%d1%83/

COMPLEMENTAR NBS FROM URBINAT

LIGHT MANAGEMENT

LIZATION OF BROWNFIELDS

MOTIVATIONAL INTERVIEWING

URBINAT

'Promenade Plantée',

photo 2019 © raf ilsbroekx

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM	HIGH	NA
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ADAPTIVE REUSE OF URBAN NETWORK SPACE

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NBSterr13

CHALLENGES ADDRESSED

Wature O O O

ADAPTIVE REUSE OF URBAN NETWORK

DESCRIPTION

Urban network space can be defined as the urban public domain, generally facilitated as transport infrastructure and/or pedestrian space and its ambiguous residual spaces (e.g. streets, pavements, bridges, tunnels, underground car parks). The NBS 'adaptive reuse of urban network space' implies alternative - nature inspired - uses and/or spatial adaptations of urban network space (e.g. unsealing surfaces, creating linear parks, redesigning for active mobility, [re]programming under bridge vaults or underground parking lots) or a time management of various temporary uses in these spaces (e.g. Ciclovia Bogota, temporary marketplaces, street festivals). The main goals of this NBS contain revitalisation of neighbourhoods, eliminating existing physical/social/cultural barriers, reducing emissions, increasing active mobility and solidarity economy.

INNOVATION ASPECT

- Rethinking ambiguous traffic spaces and their residual spaces in a systemic way by means of ecological and social networks;
- Changing the mobility paradigm and anticipating to technological innovation in mobility (e.g. a modal shift to active/sustainable/shared mobility);
- Reducing the massive amount of sealed surfaces, tackling water issues.

PARTICIPATION PROCESS

CO-DIAGNOSTIC Variable, depending on the scale.

CO-SELECTION

Variable, depending on the scale.

CO-DESIGN

Variable, depending on the scale.

CO-IMPLEMENTATION
Only for small scale interventions.

CO-MONITORING

_

Many best practices of 'adaptive reuse of urban network space' start as bottom-up participatory processes (e.g. New York High Line), by phases of temporary use and appropriation, often introduced by inhabitants or local associations.

REPLICATION AND SCALABILITY

- Concepts are only partly replicable, tailoring 'in situ' is an inevitable part of this NBS;
- This NBS is extremely scalable, varying from 'quick wins', to small spatial interventions, up to massive transformations as a part of an overall integrated (re)design strategy.

BEST PRACTICES and REFERENCES

LINKS:

- •Paris, Promenade Plantée and Viaduc des Arts: a linear park on top of an abandoned viaduct and reconversion of its arcades into a strip of crafts/art shops.
- •Leuven, Park Belle Vue: a traffic space converted into a linear park landscape.
- *Zaanstad, Koog aan de Zaan, A8ernA: a reconversion of an ambiguous residual space under a highway bridge

COMPLEMENTAR NBS FROM URBINAT

MOBILE VEGETABLE GARDEN CYCLING AND PEDESTRIAN PATH

MULTIUSE WOOD STRUCTURE WALKTHROU-GH / FOCUS GROUPS IN SITU

COMMUNITY-BASED ARTS
PROJECTS

SOLIDARITY MARKET FOR CHILDREN FARMERS MARKETS NETWORK





Theatricalization of reality, staged problem

Community directly and actively involved

IN URBINATION AR

Spectator encouraged to enter the scene

NBSpart1

FORUM THEATRE

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
-----	--------	------

AMORTIZATION PERIOD

SHORT MEDIUM LONG NA				
	SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM HIGH NA

FORUM THEATRE

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DESCRIPTION

Methodology based on theatre techniques, games and exercises, involving the community in analyzing and discussing problems, provoking awareness and citizen participation. A Joker (facilitator) guides a group of participants to debate on individual oppressions/ problems having a collective impact, from which they choose topic(s) to be performed. The dynamic is ideally built during 10-12 workshops (4-6 months), both to prepare a presentation and to train participants to conduct workshops. A format of 1 workshop (2-4 days) is possible to just prepare the performance. After participants present the performance to a local audience, the Joker urges for a debate, which is followed by a second performance where the "spect-actors" of the audience can introduce changes, playing new actions and exploring new strategies for individual and collective action, as active participants of a role play.

INNOVATION ASPECT

- Process of bringing together individual and social dimensions, nurturing cohesion, commonality, and sense of identity;
- Performing arts allow addressing complex and symbolic dimensions of urban development, optimizing public discussion on collective issues and catalyzing action on alternative local development trajectories with available resources.

PARTICIPATION PROCESS

CO-DIAGNOSTIC & CO-IMPLEMENTATION

Fundamental to complement participatory solutions that are more focused on elaborating outcomes and using more rational components of interaction. E.g. focus groups, more used for co-selection and codesign.

Particularly relevant in the co-diagnostic for identifying local challenges, needs and ambitions by community members, as well as in the co-implementation for finding collective arrangements of co-maintenance and co-production.

CO-SELECTION

-

CO-DESIGN & CO-IMPLEMENTATION

The biggest challenge, at the end of the process, is to transfer the outcomes to the co-design and coimplementation of solutions.

It requires from 10/12 workshops (during 4 to 6 months) to 1 workshop (during 2-4 days) within local premises (ideally a cultural local facility) and facilitated by a Joker (or, for the short version, a trained facilitator). The participants need to be previously mobilized, and the communication actions should also mobilize the community for the final presentation.

CO-MONITORING

-

REPLICATION AND SCALABILITY

- To be formally applied, it usually requires a Joker and actors;
- Replication potential optimized with a facilitator aware of the topic and citizens with some theatre (informal) experience;
- Previous participations allow replication by understanding the sequential steps;
- In any territorial context, hosting from few to many participants in the audience.

BEST PRACTICES and REFERENCES

LINKS:

As part of the Theater of the Oppressed, Forum Theatre was developed by Augusto Boal in Brazil in the 1960s and is now practiced in over 70 countries. For example, in Portugal, GTO LX worked directly with disadvantaged populations for the creation of Forum Theatre community groups (www.gtolx.org).

COMPLEMENTAR NBS FROM URBINAT

PHOTOVOICE

COMMUNITY WORKSHOPS LEARNFORLIFE

SUPERBARRIO

PARTICIPATORY BUDGETING

EMPOWER-MENT EVALUATION 3D MODEL THINKING

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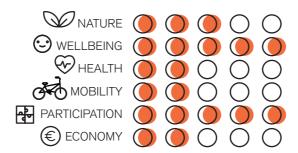
MAPEAR JUNTOS/AS O CERCO

Describing the cultural and localresources



CULTURAL MAPPING

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

I OW	MEDIUM	HIGH

AMORTIZATION PERIOD

7			
SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MED	DIUM HIGH	l NA
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CULTURAL MAPPING

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DESCRIPTION

Methodological tool in participatory planning and community development, it makes visible the ways that local cultural assets, stories, practices, relationships, memories, and rituals constitute places as meaningful locations.

Process of collecting, recording, analyzing and synthesizing information to describe the cultural resources, networks, links and patterns of usage of a given community or group, also strategically used to bring stakeholders into conversation.

Flexible according to the objectives, purpose and what one wants to map. E.g. facilities, organizations, stories of places, historical sites, for the past (memories and landmarks) or for the future (aspirational mapping), for the community or for outsiders.

It can be combined with approaches such as footprint of women (gender), forbidden cities (safety), asset-based community development (community assets), arts.

INNOVATION ASPECT

- Specific focus on cultural aspects and elements of a place, both tangible and intangible, that bring meanings to places;
- Focus on bottom-up processes for making visible the knowledge of citizens/residents;
- Allied with deep mapping, community mapping, participatory asset mapping, counter-mapping, qualitative GIS, and emotional mapping.

REPLICATION AND SCALABILITY

- Can be used in any territorial context and host from few to many participants;
- Organization of groups and design of materials to record results must be adapted according to number, specificities and availability of participants;
- Flexible according to objectives, applied in different ways and combined with different approaches.

PARTICIPATION PROCESS

Emphasis on processes that enable projects to be platforms for discussion, engagement and empowerment.

CO-DIAGNOSTIC & CO-MONITORING

- -baselines and data for thinking about places, people and resources
- -information and data not usually captured in standard statistic and profiles or other standard qualitative methods
- -ongoing monitoring and assessment of cultural vitality and community well-being (e.g. new cultural celebrations, production sites, intergenerational skills transfer)

CO-SELECTION & CO-DESIGN

- -incorporating meaningful symbolic elements (e.g. diversity of languages, historic objects)
- -sited in places meaningful to the community
- -enabling cultural activities
- -recuperating meaningful places
- -incorporating art (e.g. lighting features)
- -developing public art
- -engraving history and creating new landmarks

CO-IMPLEMENTATION & Co-MANAGEMENT

- -informed by initial mapping
- -involvement of inhabitants in collective life by promoting belonging, ownership and collective achievement
- -catalyst effect for NBS management

BEST PRACTICES and REFERENCES

LINKS:

Cultural mapping protocol and general guidelines for implementing participatory activities: annex 1 of URBiNAT's deliverable D3.1

Participatory activities for mapping: methodologies applied in the 2nd stage of local diagnostics, URBiNAT's deliverable D2.1

Cultural Mapping Toolkit by the Creative City Network of Canada (English & French)

COMPLEMENTAR NBS FROM URBINAT

EMPOWER-

FORUM THEATRE WORLD CAFÉ

COMMUNITY WORKSHOPS **SUPERBARRIO**

COMMUNITY--BASED ARTS **PROJECTS EVALUATION** 3D MODEL THINKING





PARTICIPATION PROCESS

photovoice results, corujeira school, porto, 2019



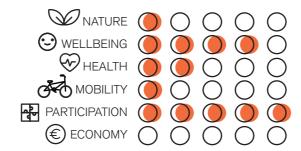
FOTOVOZ | CORUJEIRA | TURMA. | GRUPO. 1. Diamond Ranking - escolher as imagens mais importantes e numerar importante

Photovoice results, falcão school, porto, 2019

NBSpart3

PHOTOVOICE

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
	1112210111	1 11 011 1

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM	HIGH	NA
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PHOTOVOICE

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WALKTHROU-GH / FOCUS **GROUPS IN** SITU

MOTIVATIONAL INTERVIEWING

SUPERBARRIO

EMPOWER-EVALUATION

3D MODEL THINKING

DESCRIPTION

Photovoice NBS uses photos to make people aware of a reality or topic, as nature-based solutions or inclusive urban regeneration. It's is a human-centered solution to engage citizens in the transformation of their territory. It's also a tool to collect data related with people's memories and perceptions. Photos allows a co-

construction of the reality through the interaction of 3 elements: the researcher, the photos and the interviewee. It is a technique (called photo voice) that works well to engage children and young people in research, but also adults with advanced age that want to share their life stories. The photo voice aims to give voice, through photography, to those who are usually silenced or not involved in urban planning process.

It is also known as "participatory photography" and it has a correlation with "photo elicitation".

INNOVATION ASPECT

- Photovoice is a NBS that contributes to the process of empowering people and communities by making visible their stories, memories, perceptions and also ideas or dreams to transform the territory;
- It's easy to implement and is low-cost. It can use a digital enabler or physical materials. It's focused in the participant, not in the researcher.

CO-MONITORING

CO-DIAGNOSTIC

CO-SELECTION

CO-DESIGN

the NBS to implement.

CO-IMPLEMENTATION

change represented in the picture.

Photovoice can be important tool to monitor the impact of the corridor. Photos can represent the transformations and participants can describe their perceptions and the way they use the corridor.

It supports the engagement of the citizens and

stakeholders in new projects., Participants express

needs and perceptions related to NB. Participants say

what they like, they don't like and what they would like to

Use motivational interviewing to understand the possibility of use images to express perceptions, memories, needs

It can be used to talk about existing NBS or to identify

The researcher or the participant can bring photos of

Participants can discuss how they want to use photovoice

by identifying together the purpose of the activity.

existing NBS to inspire concrete proposals

To evaluate photovoice activity, the researcher can do an interview or a short questionnaire.

REPLICATION AND SCALABILITY

- Photovoice is a NBS that contributes to the process of empowering people and communities by making visible their stories, memories, perceptions and also ideas or dreams to transform the territory;
- It's easy to implement and is low-cost. It can use a digital enabler or physical materials. It's focused in the participant, not in the researcher.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT Photovoice workshop in Porto and Sofia (2019) - Link

Film Visage Villages (2017) - Link

Photovoice.org -https://connect.photovoice.org/

COMPLEMENTAR NBS FROM URBINAT

CULTURAL MAPPING

COMMUNITY--BASED ARTS **PROJECTS**









NBSpart4

WALKTHROUGH

CHALLENGES ADDRESSED

NATURE		\bigcirc	\bigcirc	\bigcirc
○ WELLBEING				
HEALTH			\bigcirc	\bigcirc
MOBILITY				
PARTICIPATION				
€ ECONOMY		\bigcirc	\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHOF	RT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA	

WALKTHROUGH / FOCUS GROUPS IN SITU

Scan me for digital format



DESCRIPTION

Walkthrough is a method of analysis that combines observation in situ with an interview simultaneously. It creates an accepting environment that puts a small number of participants at ease allowing then to thoughtfully answer questions in their own words and add meaning to their answers. It also identifies the negative and positive aspects of the analyzed environments.

It allows identifying the perception of the residents in the place where they live. In this technique, they are invited to appropriate the neighbourhood and evaluate the territory, its inadequacies, surplus or missing furniture, barriers and potentialities, among other important elements.

Walkthrough is a participatory method and solution (NBS) that creates awareness while participants walk and discuss what they feel, see and know.

INNOVATION ASPECT

 It's a participatory nature-based solution, with a human-centered approach, to engage citizens in environmental and social challenges of their territory. It can virtual or physical. It puts the focus on the community collective vision that offers a positive and useful view for the future, at the same time motivate people to go on together.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

It supports the engagement of the citizens and stakeholders in new projects., Participants express needs and perceptions related to NBS. Participants say what they like, they don't like and what they would like to change while they walk in the territory.

CO-SELECTION

The participants identify solutions for specific needs that are observed in situ.

CO-DESIGN

Participants can discuss solutions and design it in situ in direct contact with the challenges that need to be

It also can generate creative thinking and motivate people to look for a solution.

CO-IMPLEMENTATION

CO-MONITORING

Walkthrough activity can be organized to plant trees in the intervention area or to develop education activities about nature or heritage.

REPLICATION AND SCALABILITY

Walkthrough can be organized with max. 15 participants per 1 facilitator. In URBiNAT it was used with young people, families, citizens and stakeholders, and professionals. It was used in several cities with different contexts, demonstrating its replicability and scability. With the COVID-19 restrictions, Nantes organized a virtual walkthrough - video.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT Walkthrough in Porto and Sofia (2019) -

URBiNAT Walkthrough in Nantes (2020) - Link

COMPLEMENTAR NBS FROM URBINAT

ADAPTIVE **REUSE OF** URBAN NETWORK SPACE

PHOTOVOICE

DESIGN THINKING

MOTIVATIONAL INTERVIEWING

EMPOWER-**MENT EVALUA-**TION

BEHAVIOURAL MAPPING

3D MODEL THINKING



Walktrough Porto



Community workshop Nantes





Community workshop Sofia

NBSpart5

COMMUNITY WORKSHOPS

CHALLENGES ADDRESSED

NATURE	\bigcirc	\bigcirc	\bigcirc	0
⊕ WELLBEING				\bigcirc
₹ HEALTH		\bigcirc	\bigcirc	\bigcirc
MOBILITY	\bigcirc	\bigcirc	\bigcirc	\bigcirc
PARTICIPATION				
€ ECONOMY	\bigcirc	\bigcirc	\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

COMMUNITY WORKSHOPS

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DESCRIPTION

Open meetings facilitated and organized in small groups in which participants are invited to debate a specific thematic. This method allows to explore and develop bottom-up and grassroots community development skills for people within their own communities. Participants can identify their most pressing social determinants, with positive and negative aspects of their environment, bringing social justice and environmental sustainability. The method also assists people to gain a clearer understanding of the principles of community development and community capacity building, increasing awareness and understanding of the main themes, terms and definitions.

INNOVATION ASPECT

 It is a method that involves citizens in solutionbased actions around neighbourhoods issues. That is not only essential, but smart, because they are experts in that area and for sure have innovative ideas for solving long term problems. The method assists to arise this invisible wisdom and create a collective view for the community future.

REPLICATION AND SCALABILITY

Community workshops can be used in any territorial context and should host max. 15 participant with one facilitator. If you have more, then you should create more groups. In URBiNAT, it was used in several cities with different contexts and goals, demonstrating its replicability and scability.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

It supports the engagement of the citizens and stakeholders in new projects, as URBiNAT.

Depending on the goal, participants share knowledge, express needs and perceptions. It was associated with different tools, as 3D model thinking.

CO-SELECTION

Workshop were organized to discuss and select NBS, taking in consideration the needs identified in previous workshops. NBS cards were used to inspire the participants in selecting NBS from the catalogue or from their knowledge.

CO-DESIGN

Community workshop were organized to co-design ideas and proposals that were selected in the previous meetings. Participants used 3D models, and design thinking to develop the new NBS. Technical experts were invited to support. Meetings were physical or online, using digital tools as MIRO.

CO-IMPLEMENTATION

It will support the implementation of cultural and solidarity economy NBS.

CO-MONITORING

Workshops will be organized to discuss the impact of the NBS implementation, the best practices and barriers.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT Community workshop in Porto, Nantes, Sofia, Brussels, Siena

Porto - Community workshop to present the healthy corridor preliminary plan - link

Sofia - Community workshop to present the Local diagnostic - link

Nantes - Community workshop to play superbarrio - link

COMPLEMENTAR NBS FROM URBINAT

FORUM THEATRE COMMUNITY WORKSHOPS

MOTIVATIONAL INTERVIEWING

SUPERBARRIO

MUNICIPAL REGULATIONS FOR INCLUSIVE PARTICIPATION

EMPOWER-MENT **EVALUATION** 3D MODEL THINKING





GUDA COCREATE EUROPEAN PROJECT





NBSpart6

DESIGN THINKING

CHALLENGES ADDRESSED



IMPI	EMEN	ITATI	INN

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

	l	1
LOW	I MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

DESIGN THINKING

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DESCRIPTION

Design Thinking is founded on the ability to combine empathy for the context of a problem, creativity in generating ideas, insights and solutions, and rationality to analyze and match solutions to the context. Design Thinking processes are at the same time analytical and empathic, rational and emotional, methodical and intuitive, often tackle ill-defined problems where the use of creative thinking abilities is fundamental to first a correct problem finding.

Design Thinking is human centered and is based on understanding the needs and motivations of people. And it is optimistic; it believes that there is always a solution to be found. From problem finding to problem solving.

By using Gamification, Serious Games, Senses and Dreams, the Design thinking tools allows people to give firsthand deeper information that it is crucial to complement and simultaneously cross-validate other sources of codiagnostic gathered through other methods and tools.

INNOVATION ASPECT

It is a method that engages and involves citizens in co-creation of value approach. Specially focused on supporting the co-diagnostic and co-design stages by listening and dialoguing with the citizens and observing the neighborhoods. The Design Thinking designed tools allow the citizens and stakeholders to express their emotions, feelings, perceptions and behaviors concerning the territories and their community.

REPLICATION AND SCALABILITY

The Design Thinking method, tools can be used in community workshops in any territorial context, process stage, actions and activities that need to gather deep information for problem finding or new fresh ideas for problem solving and should host max. 25 participant with one facilitator. If you have more, then you should create more groups. In URBiNAT, it was used in several cities with different contexts and goals, demonstrating its replicability and scability.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

It supports the engagement, motivations and the goal of gathering deep, personal and collective information from the local citizens and stakeholders of participatory based projects, as URBiNAT. Depending on the goal, participants share emotions, feelings, express needs, identify opportunities, experiences, narratives, perceptions, behaviors and dreams for their neighborhoods. It was associated with different tools such as cultural mapping, walkthrough, photovoice and community workshops.

CO-SELECTION

It supports the co-selection of NBS inspired in the URBiNAT NBS catalogue by stimulating thinking in all directions and adapt to local context.

CO-DESIGN

Used the online meetings and workshops for the cocreation of new citizens NBS's. The diverge / converge and the analyses / synthesis framework are fundamental support the ideation step. Also relevant, adapted tools of consensus generation "Delphi" and approximation of arguments and viewpoints the "Triz".

CO-IMPLEMENTATION & CO-MONITORING

It will support the implementation of cultural and solidarity economy NBS. It can be particularly relevant to emerging issues during monitoring for the improvement of implemented solutions and the overall evaluation of the transformation of public life.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT Design Thinking tools in Porto, Nantes and

Design Thinking tools used in the Porto co-diagnostic stage - Mapping in Schools and Kick-off meeting;

Design Thinking tools used in the Porto Online co-design - Ideation, design and validation Workshops.

COMPLEMENTAR NBS FROM URBINAT

PROJECTS

CULTURAL MAPPING

PHOTOVOICE

WORLD CAFÉ

MOTIVATIONAL INTERVIEWING SUPERBARRIO

COMMUNITY--BASED ARTS 3D MODEL THINKING







NBSpart7

LEARNFORLIFE

CHALLENGES ADDRESSED



DESCRIPTION

INNOVATION ASPECT

LearnforLife (LfL) represents a behavioural change methodology with a number of building blocks including incentive schemes, tailored rewards and real-time communication targeting specific behaviours and key

LfL focuses on empowering individuals to induce selfreinforced processes in regard to healthy behaviour, green behaviour and safe behaviour. Using specially designed e-packages the scheme builds awareness and motivation to engage in behavioural change both on a personal basis as well as on community level.

Innovation in the application of behavioral science

The systematic methodology to gradually enforced

The approach to focusing attention on minor

and yet significant lifestyle modifications with high impact on well-being and in support of a

through the integrated approach;

motivation through interactivity;

sustainable environment.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

By implementing LfL, real-time data can be derived for several purposes. These include diagnostics, mapping stakeholders, understanding incentives and underpinning motivations.

CO-SELECTION

LfL can usefully be applied through a process where citizens become effectively involved in co-selection and combination of various complementary NBSs.

CO-DESIGN

The application adds high value within a co-creation process where the engagement of citizens evolved through a process of gradual intensification. Constructive interface between citizens and different stakeholders is further made use of systematically, in support of a successful design of and application of the LfL Methodology.

CO-IMPLEMENTATION

The implementation is preferably preceded by a pilot whereby a small number of users are made to test the product and its relevance in the local context. After finetuning, the results of the pilot can be applied more broadly.

CO-MONITORING

	IMPLEMENTATION			
SOFT	MEDIUM	HARD		

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT MEDIUM	LONG	NA
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INVESTMENT

LOW MEDIUM	HIGH	NA
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REPLICATION AND SCALABILITY

- The LfL Methodology is best applied in an environment that facilitates rapid communication of motivational messages, handling of responses and feedback:
- Mobile apps can be scaled into new environments; Light adaptation of infrastructure, user practices and tools can arrange in consideration of culture and target audiences.

BEST PRACTICES and REFERENCES

LINKS:

Best practice of LfL takes the shape of a collaborative model, as illustrated in the figure below.

LEARNFORLIFE



THE GROWING CLASSROOM

CULTURAL MAPPING

PHOTOVOICE

MOTIVATIONAL INTERVIEWING

SOLIDARITY MARKET FOR **CHILDREN**

FARMERS MARKETS **NETWORK**

COMPLEMENTAR NBS FROM URBINAT

LOCAL CUR-RENCIES FOR NATURAL BA-SED CIRCULAR ECONOMY

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URBINAT

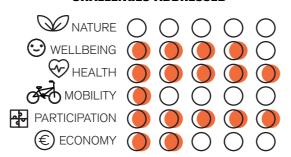
@IKED



NBSpart8

MOTIVATIONAL INTERVIEWING

CHALLENGES ADDRESSED



DESCRIPTION

Extending from the experience of psychology focusing on addressing behavioural risk factors, such as drinking, smoking or other forms of substance abuse, Motivational Interviewing (MI) has evolved to form a methodology and technique for wider efforts to promote behaviorchange in extended communities. MI starts out with collaborative, person-centred communication method and form of guiding to understand needs and to elicit and strengthen motivation for changed behaviours. MI is particularly devised to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion. It integrates features of human, face-to-face interaction and mechanisms for establishment of trust, to build incentives for positive changes.

INNOVATION ASPECT

- The translation of MI techniques into novel forms of community engagement in support of various NBS opens for a range of commercial and social
- Innovations are required in tackling the needs of specific categories of residents and relating to their particular motivations;

PARTICIPATION PROCESS

CO-DIAGNOSTIC

MI is a method that can be used to identify needs and challenges of residents in the local communities and study areas of URBiNAT.

CO-SELECTION

A diverse set of residents in the local communities addressed by URBiNAT should ideally partake in MI, strengthening their ability to identify and articulate their needs and, on this basis, take part in the selection of NBS capable of contributing to solutions to the challenges they are confronted with.

CO-DESIGN

MI can be used as a component in citizen engagement processes, where it helps guide interactive communication practices and raise the ability of individuals to design NBS solutions and how they are put to use.

CO-IMPLEMENTATION

MIcan be co-implemented by the project team with local experts within the framework of local community development, alongside the implementation of various other participatory nature-based solutions, such as Walk through, Behavioural mapping, Super barrio, LearnForLife, World café and Photovoice.

CO-MONITORING

REPLICATION AND SCALABILITY

- High in the sense that one can build on positive experience in one area for replication in another;
- Adapts the methodology used in one context can be applies to a different set of issues.

BEST PRACTICES and REFERENCES

LINKS:

The UK Medical Research Council's guidance for developing and evaluating complex interventions (Campbell, M., Fitzpatrick, R., Haines, A., Kinmonth, A. L., Sandercock, P., Spiegelhalter, D., & Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. BMJ, 321, 694-696.

MOTIVATIONAL INTERVIEWING

IMPLEMENTATION

REPLICATION POTENTIAL/FLEXIBILITY

AMORTIZATION PERIOD

INVESTMENT

LONG

HIGH

MEDIUM

MEDIUM

MEDIUM

MEDIUM

Scan me for digital format

SOFT

LOW

SHORT

LOW



HARD

NA

NA

THE GROWING

FORUM THEATRE WORLD CAFÉ

COMMUNITY WORKSHOPS

BEHAVIOURAL MAPPING

@IKED

URBINAT



CLASSROOM

SUPERBARRIO

MENT **EVALUATION**

EMPOWER-

COMPLEMENTAR NBS FROM URBINAT

Welcome CALLELLINA . Super BARRIO Superbarrio@IAAC



Superbarrio@IAAC

NBSpart9

SUPERBARRIO

CHALLENGES ADDRESSED

NATURE		\bigcirc	\bigcirc	\bigcirc
⊕ WELLBEING		\bigcirc	\bigcirc	\bigcirc
HEALTH	\bigcirc	\bigcirc	\bigcirc	\bigcirc
MOBILITY				
PARTICIPATION				
€ ECONOMY		\bigcirc	\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

7			
SHORT	MEDIUM	LONG	NA

INIVERTACEIT

INAE9 I MEM I				
LOW	MEDIUM	HIGH	NA	

SUPERBARRIO

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DESCRIPTION

SuperBarrio is a video game designed to gather citizens' opinion about public space design and programme. It allows citizens to visualize, navigate and interact with their neighbourhood that is represented as a detailed three dimensional model.

With a simple and intuitive interface that any user can understand, the solution gives users the possibility of playing with URBiNAT NBS or urban elements (e.g. smart urban furniture, benches, trees, markets, micro-windmills, etc.) in the public space. The user can drag the NBS in the 3D model and can visualize data about their impact on the urban environment such as data regarding accessibility, productivity, economy, ecology and social interaction for the neighbourhood.

Data about the solutions proposed by citizens are collected in a repository and statistics about their preferences can be created..

INNOVATION ASPECT

- As an online tool, it widens the potential audience of participatory processes, overcoming the limits of conventional methodologies;
- It enables the collection of a consistent dataset about citizens' preferences, allowing designers and municipalities to thoroughly investigate the decision-making process of the user and to potentially find user patterns.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Superbarrio can be used to identify needs and preferences of residents in the local communities and study areas of URBiNAT.

CO-SELECTION & CO-DESIGN

The solution can be used as a digital enabler during the co-selection process. It can support decision-making processes by providing data on game sessions.

CO-IMPLEMENTATION

It can be co-implemented through workshop or webinar with facilitators that assist the players and provide them with further information about the urban site and the solutions included in the game.

CO-MONITORING

The solution's functioning can be monitored by analyzing the data collected during the game sessions.

REPLICATION AND SCALABILITY

- The NBS and urban elements included in the video game can be modified or replaced;
- New typologies of solution's impacts can be included:
- Any other neighbourhood can be designed and included in the 3d models of the game;
- Superbarrio can be used both in presence (e.g. in Living Labs) and remotely.

BEST PRACTICES and REFERENCES

LINKS:

Superbarrio has been developed by IAAC and already tested in Barcelona, Genova and Favara. More info can be found at: www.superbarrio.iaac.net.

COMPLEMENTAR NBS FROM URBINAT

MULTIUSE WOOD STRUCTURE

LIGHT MANAGEMENT

ADAPTIVE **REUSE OF** URBAN NETWORK SPACE

WALKTHROU-DESIGN **GH / FOCUS** THINKING **GROUPS IN**

SITU

MOTIVATIONAL INTERVIEWING

PARTICIPATORY BUDGETING AND EMPAVILLE **SERIOUS GAME**





3D Model thinking

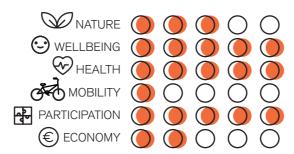
TFA

3D Model - Combra

NBSpart10

COMMUNITY BASED ARTS PROJECTS

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

COMMUNITY BASED ARTS PROJECTS

Scan me for digital format



DESCRIPTION

A community-based arts project is where an artist works with a community to facilitate a creative process that enables participants to express their needs, aspirations, inspirations, identity or sense of place. Such activities are also referred to as community arts, artists in the community or community cultural development (CCD). Communitybased arts projects are increasingly being used because they are able to reach people more deeply, to create bounds between all stakeholders and have a meaningful impact on their lives. This method allows the co-creation and participatory processes participants to "build" objects together and helps people to better understand their common values, system to beliefs and their collective sense of belonging to the places / communities.

INNOVATION ASPECT

- It engages and involves citizens in co-design processes simultaneously to co-creating real life objects or interventions in their neighborhoods;
- It reinforces the "implementation" orientation since the citizens "see" tangible collective achievements during the process itself. It can test solutions developed in the co-creation process.

REPLICATION AND SCALABILITY

- Community Based Artes Projects can be used in any territorial context and should host max. 15 participant with one facilitator. If you have more, then you should create more groups;
- In URBINAT, it being used in several cities with different contexts and goals, demonstrating its replicability and scability.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

It supports the engagement, motivations and "doing" orientation of the citizens and stakeholders in participatory based projects, as URBiNAT.

Depending on the goal, participants share emotions, feelings, express needs and perceptions toward the neighborhoods and build a collective art object. It was associated with different tools such as Serious Games and Community workshops.

CO-SELECTION

CO-DESIGN

Community Based Artes Projects were organized to support the co-design stages. Simultaneously engage and empower citizens and stakeholders to develop new NBS ideas and proposals for the Healthy corridor, participations were asked to co-design e co-build a collective Art object focusing the specificity and context of each one the Cities. It can be used to test the solutions in a public event to interact with the community.

CO-IMPLEMENTATION

It will build tangible objects simultaneously to the process actions and activities that willbecome a symbolic representions of the project.

CO-MONITORING

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT Community Based Artes Projects in Porto, Høie-Taastrup and Brussels

In Porto, the community by arts methodology was planned as a public event to test the NBS proposed by citizens, it was called "Experimento". Due to COVID19 restrictions it was postponed.

COMPLEMENTAR NBS FROM URBINAT

CULTURAL MAPPING

PHOTOVOICE

WALKTHROU-**GH / FOCUS GROUPS IN**

SITU

COMMUNITY

WORKSHOPS

DESIGN THINKING

LEARNFORLIFE

3D MODEL THINKING

www.urbinat.eu







Picture by Carlos Barradas

NBSpart11

EMPOWERMENT EVALUATION

CHALLENGES ADDRESSED

NATURE		\bigcirc	\bigcirc
₩ELLBEING			
HEALTH		\bigcirc	\bigcirc
MOBILITY			
PARTICIPATION			
€ ECONOMY		\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

I O\\\/	MEDIUM	HIGH
LUVV	IVIEDIUIVI	півп

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

EMPOWERMENT EVALUATION

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DESCRIPTION

Empowerment evaluation is the use of evaluation concepts, techniques, and findings to foster improvement and selfdetermination.

Program participants conduct their own evaluations, with the support of an outside evaluator and an additional facilitator, in workshops to complete the following steps: a) developing a mission; b) taking stock where the program stands; c) planning for the future.

Participants determine the type of evidence required to document and monitor progress. Subsequent evaluations, such as interviews and surveys, test whether strategies are working to allow mid-course corrections. Another formal assessment of activities allows comparison with the previous ratings of key activities. All results are recorded in accessible documents to be used as references, baseline and data point for planning, implementation, monitoring and evaluation of the co-creation process.

INNOVATION ASPECT

- By internalizing and institutionalizing selfevaluation processes and practices, a dynamic and responsive approach to evaluation can be
- Addressing long-standing issues of dysfunction and inefficiency, Inclusive and transparent, open to critique and review;
- Generating meaningful data to inform decision making;
- Cultivating internal accountability.

REPLICATION AND SCALABILITY

- Facilitators must be trained to understand sequential steps, expected role, and importance of recording results in accessible way;
- Organization of groups and design of materials to record results must be adapted according to number, specificities and availability of participants; Applied in over 16 countries, it can be used in any territorial context.

PARTICIPATION PROCESS

As any other evaluation process, empowerment evaluation is relevant as a starting point to establish a baseline for planning, implementation, monitoring and assessment of NBS co-creation. Thus, it can be applied for the establishment of Living Labs and guide the progress of Living Labs' work throughout the co-creation process, from co-diagnostic to co-monitoring.

CO-DIAGNOSTIC

initial taking stock exercise represents the community's baseline for future comparison.

CO-SELECTION & CO-DESIGN

empowerment evaluation can also be applied at any point of the co-creation process, in order to foster decision making and self-determination, to propel action based on a common understanding and vision, and to focus on evidence-based results.

CO-IMPLEMENTATION

empowerment evaluation can also be applied at any point of the co-creation process, in order to foster decision making and self-determination, to propel action based on a common understanding and vision, and to focus on evidence-based results.

CO-MONITORING

a second taking stock exercise is a second data point enabling the community to measure.

BEST PRACTICES and REFERENCES

LINKS:

David Fetterman introduced empowerment evaluation to the field of evaluation.

Fetterman, D. (2017). Empowerment Evaluation. BetterEvaluation. Retrieved from https://betterevaluation. org/en/plan/approach/empowerment evaluation

COMPLEMENTAR NBS FROM URBINAT

CULTURAL MAPPING

PHOTOVOICE

WORLD CAFÉ

DESIGN

THINKING

PARTICIPATORY BUDGETING AND EMPAVILLE SERIOUS GAME

COMMUNITY--BASED ARTS **PROJECTS**

3D MODEL THINKING



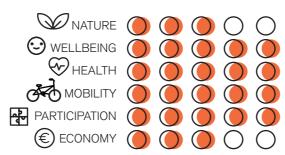
NBSpart12

BEHAVIOURAL MAPPING

DESCRIPTION

INNOVATION ASPECT

CHALLENGES ADDRESSED



corridors and implementation of place oriented NBSs.

 Non-participant observation method with the help of new information and communication technologies for documenting and mapping;

Behavioural mapping is structured observation combining

different techniques for documentation, mapping and

counting of activities performed by people passing and

occupying a defined space in chosen moments of time.

It helps to explore the quantity and the quality of various activities performed at the place observed, the non-

motorized moving, staying, recreating or playing. The

process of gathering of data through observations and data analysis and visualization can reveal the ways of presence

of different targeted groups in the study area and their behaviour. This information can present overall pictures of

health, wellbeing, socialization, time budget and physical

activity. The results can provide in-depth knowledge of the

users' dynamics at specified locations as input for urban regeneration decisions, planning and design of healthy

Can reveal important patterns in public space use with the help of various cartographic and other methods for visualization.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Very relevant for the in-depth understanding and communication of performed activities, usual extraordinary behaviour observed in a public space.

CO-SELECTION

Particularly relevant for the informed selection of solutions more suitable to the public life which adapted to the existing environment and was cultivated in time.

CO-DESIGN

Particularly relevant for preliminary evaluation of the impact from planned and designed interventions. Also relevant for the involvement of volunteers from the community to help them to understand places beyond their routine.

CO-IMPLEMENTATION

Can be relevant if included between phases of implementation and as part of tactics for gradually evolving design and realization, step by step.

CO-MONITORING

Particularly relevant to emerging issues during monitoring for the improvement of implemented solutions and the overall evaluation of the transformation of public life, pattern of old and new activities, changes in the behaviour of users.

BEST PRACTICES and REFERENCES

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

INVESTMENT

	_		
LOW	MEDIUM	HIGH	NA

REPLICATION AND SCALABILITY

- Easy replicable in smaller scope and useful in diverse places of interest;
- Quality of replication relates to initial preparation, instructions, motivation and potential use of reliable hardware:
- Processing and visualization of data through GIS, illustration and preprint design techniques possible with the help of free and open source software.

LINKS:

Gehl collaborated with the J. Max Bond Center for a study of public life and urban justice in New York City in 2015. Gehl Architects included behavioural mapping in a report for the historical centre of Sofia in 2017. It was preceded by two demonstration projects of the Union of Bulgarian Spatial Planners - Share the Neighborhood and Urban Standard.

More: urbinat.eu

BEHAVIOURAL MAPPING



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ADAPTIVE **REUSE OF UR-BAN NETWORK** SPACE

LEARNFORLIFE

COMMUNITY--BASED ARTS **PROJECTS**

3D MODEL THINKING

SOLIDARITY MARKET FOR **CHILDREN**

LOCAL **EXCHANGE AND TRADING** SYSTEM

COMPLEMENTAR NBS FROM URBINAT

BREAD HOUSES NETWORK





Behavioral_mapping in Sofia





3D Model - Combra

NBSpart13

3D MODEL THINKING

CHALLENGES ADDRESSED

NATURE	\bigcirc	\bigcirc	\bigcirc	\bigcirc
○ WELLBEING				\bigcirc
HEALTH		Ō	Ō	Ō
MOBILITY				
PARTICIPATION € ECONOMY				$\tilde{}$
(E) ECONOMY		()	()	()

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIUM HIGH NA	LOW	I \/ -	HIGH	NA
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3D MODEL THINKING

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DESCRIPTION

Model thinking is a collaborative design tool to develop urban and architectural projects with experts and citizens, in the frame of participatory processes.

Architects, landscape architects and urban planners don't lose their role as experts but engage citizens in the design process in order to explore common visions/ideas/

The models are co-designed and co-build in workshops by participants with materials and objects that were collected by all of them. These materials can be the traditional ones, has wood or paper, or the improbable ones, has metal or plastic objects taken from everyday life.

The construction of the model can be the first step for creating consensus, by the common effort of representing the existing urban context in a small scale. Around the 3D physical models, participants can easily make strategic proposals and integrate other inputs.

INNOVATION ASPECT

 It's a participatory nature-based solution, with a human-centered approach, to engage citizens in creation of solutions for their territory. Models not only represent realities, ideas and proposal but are also a platform for creativeness, where ideas can be discussed and consensus can be achieved.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Models are an abstraction of reality and are also its simplification. In this sense, it can be used to represent the main characteristics of the diagnostic, where specific elements can be highlighted.

CO-SELECTION

Models of urban areas can support the decision-making process, by simulating the implementation of solutions.

CO-DESIGN

Models of urban areas are platforms for designing solutions together with different experts and also with stakeholders. Models have a close relation with the existing elements - topography, buildings, public space. It's also possible to represent new buildings, new public space, as squares, roads, or even activities.

CO-IMPLEMENTATION

Real scale prototypes can be developed to test the solutions, simulating material and immaterial solutions, as amphitheater, or a solidarity market.

CO-MONITORING

REPLICATION AND SCALABILITY

The 3D models are site specific but the methodology for the construction of the model and for the activity can be replicated in several contexts.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT 3D Model in Porto (2019) URBiNAT 3D Model in Hoje-Taastrup (2020) - Link URBiNAT Virtual Reality Model in Porto Urban Plan (2020)

COMPLEMENTAR NBS FROM URBINAT

CYCLING AND PEDESTRIAN PATH

ADAPTIVE **REUSE OF** URBAN NETWORK SPACE

PHOTOVOICE

COMMUNITY WORKSHOPS

LEARNFORLIFE

EMPOWER-MENT **EVALUATION** **BEHAVIOURAL** MAPPING







NBSpart14

COMMUNITY-BASED MONITORING

CHALLENGES ADDRESSED

W NATURE			\bigcirc	\bigcirc
₩ELLBEING				\bigcirc
₩ HEALTH			\bigcirc	\bigcirc
MOBILITY		\bigcirc	\bigcirc	\bigcirc
PARTICIPATION				
€ ECONOMY			\bigcirc	\bigcirc

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA		

INVESTMENT

LOW MEDIUM HIGH N

COMMUNITY-BASED MONITORING

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DESCRIPTION

Tool for participatory decision-making improvement. It promotes an organized way of collecting ongoing or recurring information by residents, to be used by local governments and civil society, for planning, budgeting, and implementing local development programs, as well as for monitoring and evaluating their performance. Its activities cover community mapping, mobilization, capacity building, and information dissemination. Its benefits include:

- identification of problems and solutions in areas with fragmentation of needs and different vulnerable groups, which make it difficult to provide standardized solutions
- collective elaboration of simple and intuitive indicators
- contrast to lack of transparency and clientelism
- creation of relations of mutual trust between citizens and public officials
- awareness about policy-making helping citizens to understand the constraints of public action.

INNOVATION ASPECT

- Development of local data not otherwise available;
- Continually improve systems of policy-making, programme implementation, monitoring of policy impacts and local needs, policy/programme adjustments and change;
- Citizen engagement and social accountability;
- Use of ICT-based tools, added value in pandemic periods. E.g. tablets connecting monitoring group.

REPLICATION AND SCALABILITY

- Needs commitment, both financial and human resources, of local governments in this process;
- The concept of community must take into account, simultaneously, relations between individual citizens and public policies/projects, as well as the action of intermediate bodies, i.e aggregate stakeholders and their capacity to activate collective dynamics.

PARTICIPATION PROCESS

8 step process (as defined by the community-based monitoring systems network), transversal to the cocreation process:

CO-DIAGNOSTIC

- 1. advocacy/organization
- 2. data collection and field editing organization
- 3. data encoding and map digitalization
- 4. processing and mapping

CO-SELECTION & CO-DESIGN

- 5. data validation and community consultation
- 6. database (knowledge)
- 7. plan formulation

CO-IMPLEMENTATION & CO-MONITORING

8. dissemination, implementation and monitoring

The Co-decision method includes:

- the creation of a large partnership of actors
- collective creation of a set of indicators and core-
- training activities for creating the pre-conditions for the success of the inquiry
- collection, compilation, interpretation, and dissemination of data
- creation of common arenas of deliberation
- community-based evaluation of public policies and projects, and monitoring of their implementation

BEST PRACTICES and REFERENCES

LINKS:

Basic Principles of Community-Based Monitoring https://issuu.com/uclacalu/docs/community-based monitoring

An informative and practical guide for local and regional leaders on the realities of the practice with real case studies and analysis. Developed by CES for United Cities and Local Governments and German Development Cooperation.

COMPLEMENTAR NBS FROM URBINAT

FORUM THEATRE PHOTOVOICE

COMMUNITY WORKSHOPS LEARNFORLIFE

SUPERBARRIO

COMMUNITY--BASED ARTS **PROJECTS**

3D MODEL THINKING









Solidarity Market and fair for children

NBSsoli1

SOLIDARITY MARKETS FOR CHILDREN

CHALLENGES ADDRESSED

NATURE				\bigcirc
			\bigcirc	\bigcirc
₩ HEALTH	\bigcirc	\bigcirc	\bigcirc	\bigcirc
MOBILITY				
PARTICIPATION				
€ ECONOMY				

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW MEDIU	M HIGH	NA
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SOLIDARITY MARKETS AND FAIRS FOR CHILDREN IN THE PUBLIC SPACE

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DESCRIPTION

The exchange markets are examples of practices that promote new ways of consuming goods and services based on reciprocity, solidarity and justice. They can strengthen a more adequate perception of public space as a space for everyone. The markets allow pedagogically to work with the detachment of children in relation to toys and various goods consumed, unraveling the sense of fun from the idea of accumulating objects that are always new (Lucas dos Santos & Caitana, 2014). Associating elements such as generational sustainability and the socialization of children in the context of urban regeneration further enhances the markets in their transformative role, since: it makes the child aware of the relationship between finitude of resources, the recognition of urban spaces as a space that must integrate everyone without discrimination and the reconstruction of consumption as a collective act.

INNOVATION ASPECT

- Promoting new ways of consuming goods and services based on reciprocity, solidarity and justice; Changing individual and collective behaviors based on other consumption criteria already experienced since childhood;
- Raising children's awareness about limits and scarcity of natural resources, urban inclusion, and consumption as a collective act.

REPLICATION AND SCALABILITY

- The new created values are shared with the families with a positive impact for future generations, setting up bases for generational sustainability;
- schools can promote markets as creative dagogical practices and can contribute to their eplication, through the integration with the urban

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Participants are identified and will be able to assess the need and conditions to implement the market., supporting the definition of the best criteria that apply to the territory.

CO-SELECTION

CO-DESIGN

The markets are designed with children, in order to guarantee them the right to participate actively in activities that affect them. Participatory planning is the way in which markets can be adapted from the beginning, enhancing the community's ongoing bond and adhesion.

CO-IMPLEMENTATION

The implementation of the markets involves: 1) technical professionals responsible for ensuring the logistical and infrastructure conditions in the public space, 2) the families, by being present in the activities together with the children and contributing to the pedagogical objectives, 3) children and youth from the communities.

CO-MONITORING

As part of the methodology to assess the markets during their implementation as a way of monitoring the progress and correcting possible deviations that may arise.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT solidarity market for children in Porto:

Exchange Market for Children - Coimbra Portugal: http://nacasadaesquina.blogspot.com

COMPLEMENTAR NBS FROM URBINAT

MULTIUSE WOOD STRUCTURE

FORUM THEATRE **PHOTOVOICE**

PARTICIPATORY BUDGETING AND EMPAVILLE **SERIOUS GAME**

COMMUNITY **CURRENCIES** TIME BANK

LOCAL **CURRENCIES FOR NATURAL BASED CIRCU-**LAR ECONOMY





Solidarity Market



NBSsoli2

SOLIDARITY MARKETS AND FAIRS

CHALLENGES ADDRESSED

NATURE			\bigcirc	\bigcirc
₩ELLBEING			\bigcirc	\bigcirc
HEALTH		\bigcirc	\bigcirc	\bigcirc
MOBILITY		\bigcirc	\bigcirc	\bigcirc
PARTICIPATION				
€ ECONOMY				

IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA
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SOLIDARITY MARKETS AND FAIRS IN THE PUBLIC SPACE

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DESCRIPTION

In these spaces of conviviality products, knowledge and services manufactured by the own participants are exchanged using or not social currencies as intermediary mechanisms. These markets intensify the social dynamics through valuing the knowledge diversity from the community and creating a circuit of integration and economic autonomy. The markets/fairs contribute to a broader movement focused on rediscovery of the local and popular economy. It innovates by combining three distinct elements in the same space in society: the social ties of proximity, solidarity consumption and the use / occupation of public spaces. Into the markets we find the figure of the "prosumer" who refers to the person who is both consumer and producer. For the continued participation of community members, the markets can be implemented through a local residents' committee and through activities beyond market spaces.

INNOVATION ASPECT

- Promoting consumption through the combination of shared management and collective consumption
- oster new ways of sociability and urbanities;
- Expanding and diversifying the functionality of
- Building a space for debate and political articulation to face community social problems.

REPLICATION AND SCALABILITY

- Markets naturally have enormous potential for scale-up, participation and emancipation;
- The number of stakeholders, the diversity demand of offered products increase as mmunities become more aware of markets'
- The resources needed for its implementation can be easily found in any urban context.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Mapping popular economic initiatives in the neighborhood, managed by individual or collective producers (producers, craftsmen, self-employed professionals). Simultaneously, mapping community's needs in terms of products/goods and services.

CO-SELECTION

CO-DESIGN

The mobilization of the local community for active participation in market planning can be carried out through the constitution of a local committee that could be composed by citizens, local associations, and other stakeholders from municipalities, universities and local economic initiatives.

CO-IMPLEMENTATION

The market for its implementation can need the adaptation and/or construction of adequate infrastructure in public spaces as well as dissemination and community mobilization activities.

CO-MONITORING

Specific categories can be taken into account to monitor with participants the implementation and results obtained.

BEST PRACTICES and REFERENCES

LINKS:

URBiNAT solidarity market in Porto: CampMarket (under development). See the project in this link Troca-a-Tod@s Fair. Local: Covilhã - Portugal. https:// coolabora.pt

Digital solution for social currencies and payments: Clickoin - https://web.clickoin.com and Cyclos https://www.cyclos.org

COMPLEMENTAR NBS FROM URBINAT

URBAN MUSHROOM FARM

THE GROWING CLASSROOM

FORUM THEATRE

CULTURAL MAPPING

WALKTHROU-GH / FOCUS **GROUPS IN** SITU

COMMUNITY WORKSHOPS

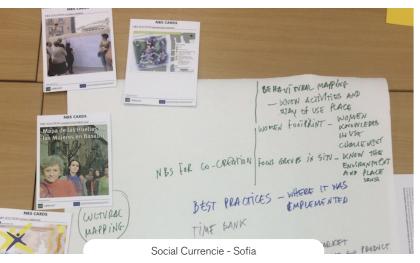
EMPOWER-MENT **EVALUATION**





ORQUÍDEA JARDIM BOTÂNICO

Social Currencie





NBSsoli3

COMMUNITY SOCIAL CURRENCIES

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

COMMUNITY SOCIAL CURRENCIES FOR INCLUSIVE

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DESCRIPTION

Social currencies could be created with physical (or virtual) support and managed by a community with the objective of promoting local economy, especially in places where there are vulnerabilities. Its use is voluntary and the purpose is not to replace the official currency or to seek the accumulation or capitalization but they are primarily intended to expand exchanges between people with products of different use value, facilitating exchanges that would hardly occur from direct exchange. The necessary basis for its circulation is the democratic management and the mutual trust relationship. Despite its restricted circulation, this currency may have a political meaning, as it results from a community process of construction and decision, strengthening the symbolic autonomy of the subjects and the communities (Lucas dos Santos and Caitana, 2014).

INNOVATION ASPECT

- nked to simple methods for their implementation, with significant effects and changes in the communities;
- The social currencies expand access to goods and ervices, and to the bonds of mutual trust;
- It alters the local economy with the population's adhesion and allows to keep wealth into neighborhoods.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Participants will be able to prepare an action plan. The information brought by the participants and discussed in the collective will help to define the best criteria that apply to the context of the territory.

CO-SELECTION

CO-DESIGN

The definition of name, use and scope, implies an intense discussion in the collective. Their implementation involves a strong relationship of trust among all.

CO-IMPLEMENTATION

The social currencies may or may not assume parity with the conventional currency. Its use may occur in different contexts: into the solidarity markets, fairs, or local commerce. It may operate with the possibility to change conventional currency by social currency giving users some kind of advantages (e.g. discount) to stimulate its use.

CO-MONITORING

The creation of groups for management will be able to assume the monitoring as one of their activities.

REPLICATION AND SCALABILITY

- Adherence to the use of social currencies within the scope of solidarity markets;
- The use of currencies can be expanded in local commerce, going beyond the markets and aching a larger community.

BEST PRACTICES and REFERENCES

LINKS:

Currency Mor in Portugal: https://moedamor.pt Currency "Waste" - Campolide. Portugal: http:// portugalparticipa.pt/News/Details/2095c60c-11fd-4715-bc97-fcb3864f5597

Spain:

Vila Watts - energy and social currency: http://www. vilawatt.cat/es/moneda

COMPLEMENTAR NBS FROM URBINAT

CULTURAL MAPPING

COMMUNITY WORKSHOPS

SOLIDARITY MARKET FOR

CHILDREN

TIME BANK

BREAD HOUSES

NETWORK

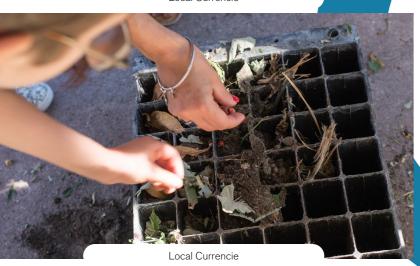
FARMERS MARKETS **NETWORK**

LOCAL CUR-RENCIES FOR NATURAL BA-SED CIRCULAR ECONOMY

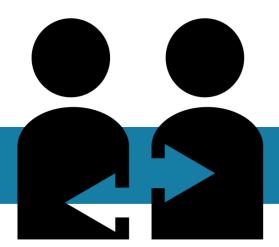




Local Currencie



Local Currencie



Local Currencie

NBSsoli4

LOCAL CURRENCIES FOR NATURAL

CHALLENGES ADDRESSED

NATURE			
		\bigcirc	\bigcirc
₩ HEALTH		\bigcirc	\bigcirc
MOBILITY			
PARTICIPATION			
€ ECONOMY			

ILID			
INAL	I ►N/I	^ .	
IMP	LLIVI	^11	UI

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

1.0111	14550014	LIICH
LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT MEDIUM LONG NA	4
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INVESTMENT

LOW	MEDIUM	HIGH	NA

LOCAL CURRENCIES FOR NATURAL BASED CIRCULAR ECONOMY

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DESCRIPTION

The main goal is to promote the waste recovering through a highly social efficient separation strategy. This would aim to separating mix waste into different fractions, organic and plastic in particular, in order to properly recycling each of them. To properly separate and recover the different fractions citizens have to look at the waste of a community as a natural resource in a metabolic perspective. In this sense, giving a reward to citizen that can be used in local commerce would foster the diffusion of this perspective. It would also constitute a deep and effective injection of wealth and an increasing of local transactions. A Natural Based Currencies can be considered as an exploratory solution adapted to recycling challenges and would represent a high synergy bio mimetic solution

INNOVATION ASPECT

- To enhance local transactions thanks to a local currency that boost proper waste separation practices;
- To improve the transition towards natural based local ecosystems through the implication of local administration and stakeholders in a systemic way;
- The currency can be used as discount in commerce retailers or for paying municipal taxes.

CO-DIAGNOSTIC

The resources that will support the currency (e.g. organic, plastics, electronic devices, etc.) will be decided in a participatory process in each local community.

PARTICIPATION PROCESS

CO-SELECTION

CO-DESIGN

-

CO-IMPLEMENTATION

Every home, commerce or economic actor produces waste and therefore anyone can earn currency and wealth just by performing a more effective waste separation.

CO-MONITORING

The weight of the selected fraction of waste that a single person separates (organic or/and plastic, or/and others) will be monitored as an amount of currency issued: "my separate contribution generates money and wealth!!".

REPLICATION AND SCALABILITY

- High potential for replicability since the resources needed for implementation are found in almost all neighborhoods:
- It can be disseminated through the use of digital resources Clickoin or Cyclos applications.

BEST PRACTICES and REFERENCES

LINKS:

La MOLA (Liberated Organic Matter) https://www.monedamola.com/

IRATI - Local Complementary Currency

<u>http://mancomunidad-irati.es/irati-ekhi-moneda-intercambio-reciclaje-birziklatzean-trukerako-txanpona/</u>

COMPLEMENTAR NBS FROM URBINAT

FOOD
PRODUCTION
AND
LEISURE
PAVILION

MULTIUSE WOOD STRUCTURE PHOTOVOICE

.

COMMUNITY Workshops PARTICIPATORY
BUDGETING
AND EMPAVILLE
SERIOUS GAME

SOLIDARITY MARKET FOR CHILDREN LOCAL CUR-RENCIES FOR NATURAL BA-SED CIRCULAR ECONOMY

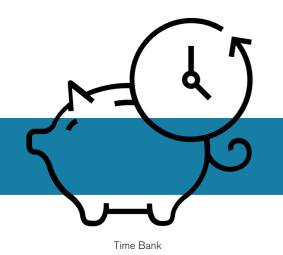




Time Bank - Coimbra



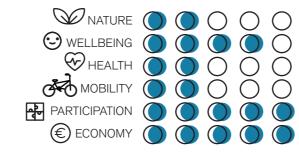
Time Bank - Coimbra



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TIME BANK

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA

INVESTMENT

LOW	MEDIUM	HIGH	NA

Time Bank is a system that encourages the solidary exchange of knowledge, services and products without money as an intermediary. It meets both the offer and demand of services provided by participants. It uses timebased currency, which is valued equally, independently of the type of the knowledge, skills or tasks: for each hour participants give to help the community, they earn one hour's credit in their time bank. Key principles of Time Banking also include: "everyone's skills are useful" and "everyone needs to give and receive time". This solution strengthens the networks of social support, as well as the sense of belonging to the community. It is also a great opportunity to reduce loneliness and amplify the models to value the time and the mutual care between neighbors. Members of existing experiences report that they acquire new skills, meet new people, and feel healthier.

INNOVATION ASPECT

DESCRIPTION

- The promotion of intergenerational relations based on reciprocal and solidarity attitude.
- The community becomes the reference for help, in face of social changes and when there are no close family members.
- The use of digital enablers to support the interactive communication among citizens and to engage different target audiences.

REPLICATION AND SCALABILITY

- The replication of Time Banking can be coordinated by organizations or individuals.
- Active networks in different European countries can be of support and share knowledge.
- Resources needed for implementation are easily found in any urban or rural context.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

A stage to identify existing experiences close to the neighborhood, as well as to map available resources.

CO-SELECTION

-

CO-DESIGN

Participants will organize a local coordination and define its functioning.

Existing regulations and codes of conduct can be used as references.

CO-IMPLEMENTATION

The exchanges of services can take place between two members or in groups.

After the activation, anyone who needs a particular service can contact the local coordination.

The coordination contacts the available members and informs them about the service needed and who is requesting it. Membership cards can be used when people do not know each other.

CO-MONITORING

Specific categories can be taken into account to monitor with participants the implementation and the results obtained.

Measure and monitor the performance, number of participants, as well as the exchanges undertaken and their frequency.

BEST PRACTICES and REFERENCES

COMPLEMENTAR NBS FROM URBINAT

LINKS:

Experiences in Portugal: Graal - Banco de Tempo https://bancodetempo.pt

TIME BANK

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FOOD
PRODUCTION
AND LEISURE
PAVILION

URBAN MUSHROOM FARM GROW Tile

COMMUNITY WORKSHOPS

NITY IOPS

DESIGN THINKING EMPOWER-MENT EVALUATION COMMUNITY CURRENCIES

www.urbinat.eu

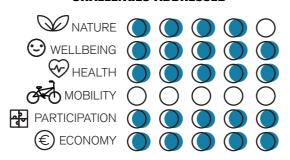




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BREAD HOUSES NETWORK

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW	MEDIUM	HIGH

AMORTIZATION PERIOD

|--|

INVECTMENT

IIA NE 9 I IAIEIA I				
LOW	MEDIUM	HIGH	NA	

BREAD HOUSES NETWORK

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DESCRIPTION

The Bread Houses Network is an initiative of International Council for Cultural Centers Association. It creates and unites centers for community-building, creativity, and social entrepreneurship. The mission of BHN is to inspire individuals and communities to develop their creative potential and cooperate across all ages, professions, gender, special needs, and ethnic backgrounds through collective bread making and accompanying art forms. The network strives to empower the people to connect with each other and find hope and solutions to their challenges. Currently, the network unites 8 Bread Houses in Bulgaria and trained people and organizations in 20+ countries on 6 continents.

INNOVATION ASPECT

- Collective preparing and sharing of food facilitate community building;
- The inclusive "Theatre of Crumbs" method and 'Build a Bread House" events allow involvement of people with different, backgrounds, abilities;
- Bread as symbol of peace and unity and the bread making foster cooperation and collective experience across cultures, professions, ages.

PARTICIPATION PROCESS

CO-DIAGNOSTIC & CO-DESIGN & **CO-IMPLEMENTATION**

Bread Houses Network creates opportunities for co-designing and co-creating through the "Theatre of Crumbs" method and the "Build a Bread House" educational board game.

The Theatre of Crumbs method consists in collective bread making during which the participants are engaged in creative activities: drawing in flour and expressing ideas on a chosen topic; mixing dough in couples; making and decorating bread puppets and playing out a collective story. Every bread making has a specific topic, which can be related to any aspect of the community or personal life, fostering direct cooperation, co-creation and self-expression.

In the "Build a Bread House" educational game, the participants identify and discuss the challenges in their community and collectively propose solutions for overcoming them. The game enables collective creation of ideas and design of solutions, but also teaches basic social entrepreneurship skills.

CO-SELECTION

CO-MONITORING

REPLICATION AND SCALABILITY

- The concept of the Bread House is to be an sible and friendly space where people from alks of life can gather and participate in ective creative activities;
- e Bread House can be a social and cultural centre and a successful social enterprise at the same time. The social enterprise model can include the Event centre and Bakery forms.

BEST PRACTICES and REFERENCES

LINKS:

The model and methods of the Bread Houses Network have been awarded and recognized as good practices by various international organizations. As an example, the Sofia Bread House cooperation with the Health and Social Development Foundation was dedicated to educational bread makings for children of Roma origin between 4 and 8 years old.

COMPLEMENTAR NBS FROM URBINAT

BEEHIVE PROVISION AND **ADOPTION**

CULTURAL MAPPING

MOTIVATIONAL INTERVIEWING

COMMUNITY--BASED ARTS **PROJECTS**

SOLIDARITY MARKET FOR **CHILDREN**

TIME

FARMERS MARKETS NETWORK



@Bread Houses Network



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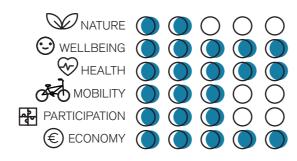


@ Farmers"Market Network"

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FARMERS MARKETS NETWORK

CHALLENGES ADDRESSED



IMPLEMENTATION

SOFT	MEDIUM	HARD

REPLICATION POTENTIAL/FLEXIBILITY

LOW MEDIUM	HIGH
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AMORTIZATION PERIOD

SHORT	MEDIUM	LONG	NA
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INVESTMENT

LOW MEDIUM HIGH NA	4
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FARMERS MARKETS NETWORK

DESCRIPTION

The Farmers' market (FM) is an alternative food network that provides shorter delivery circuits of farmers' products to local communities through direct interaction with farmers in the urban environment. This practice enables restoration of the connection of inhabitants of bigger cities to land, fresh and good quality tasty food of healthy origin. It raises people's awareness on nature-friendly farming practices, provides access to good quality local production, thus leading to healthier lifestyles and new social networks and relations. The Farmers' Markets have an additional social value as a community event that may bring additional elements. The farmer-consumer cooperatives or other organizations could operationalize efforts by bringing together farmers and acting as a platform securing farmers meet a set of requirements for access and organise farmer market venues and events.

INNOVATION ASPECT

- FM builds local social networks;
- FM brings together farmers and consumers;
 FM shortens supply chains;
- FM allows sharing and keeping knowledge, practices, and values.

PARTICIPATION PROCESS

CO-DIAGNOSTIC

Identification of the socioeconomic profile of the community by analysing the neighbourhood economic data, focus groups, and "cultural mapping."

CO-SELECTION & CO-DESIGN

-Starts with awareness raising and mobilization of interested local community members and active dissemination of information about the market. Provides opportunities for community members to discuss during accompanying events.

CO-IMPLEMENTATION

Community members can be involved in the organisation of workshops and accompanying activities. Possibility to establish a long-term body responsible for communication and dissemination of information.

CO-MANAGEMENT

Stakeholders could be involved for the management of the market's legal entity. Formal or non-formal structures and groups could be involved.

CO-MONITORING

Interviews, questionnaires, and feedback collection techniques can be applied. A steering committee and a partnership with the local technical teams are essential for the participatory monitoring process.

REPLICATION AND SCALABILITY

- The farmers' market models can be easily adapted in each location and urban environment, which makes it ready for replication, by integrating local specifics:
- Resources for its organisation are to be found in any location urban or rural;
- The farmers' market scale depends on local potentialities and the organization ability.

BEST PRACTICES and REFERENCES

LINKS:

FM in several neighbourhoods in Sofia, as well as monthly farmer market fests in the centre of Sofia have become a new phenomenon over the last 4 years. They contribute to fostering a healthier consumer identity and provide a new cultural and social space for encounters, and shared identity. In Sofia – Hrankoop Cooperative has leaded the process.

COMPLEMENTAR NBS FROM URBINAT

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URBAN Mushroom Farm WILDLIFE Park BEEHIVE PROVISION AND ADOPTION ADAPTIVE REU-SE OF URBAN NETWORK SPACE COMMUNITY--BASED ARTS PROJECTS BREAD Houses Network LOCAL CUR-RENCIES FOR NATURAL BA-SED CIRCULAR ECONOMY

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