

miyamoto.



# Urban Resilience & Rehabilitation

make the world a better, **safer** place. ●





**We place people, climate and nature at the center of the approach to build sustainable and resilient communities.**

Promoting more compact, inclusive, equitable, better integrated, better-connected cities and territories resilient to climate change and other risks and disasters is more important than ever.

We work through a system-based approach that acknowledges entire ecosystems, enhances community development, tackles risk mitigation, reinforces the ecologies, and fosters local economic development. We bring vast international knowledge and the ability to adapt, understand the politics of place, and address local contexts, needs, and potentials.



# Our Values and Principles





# Key Areas of Expertise

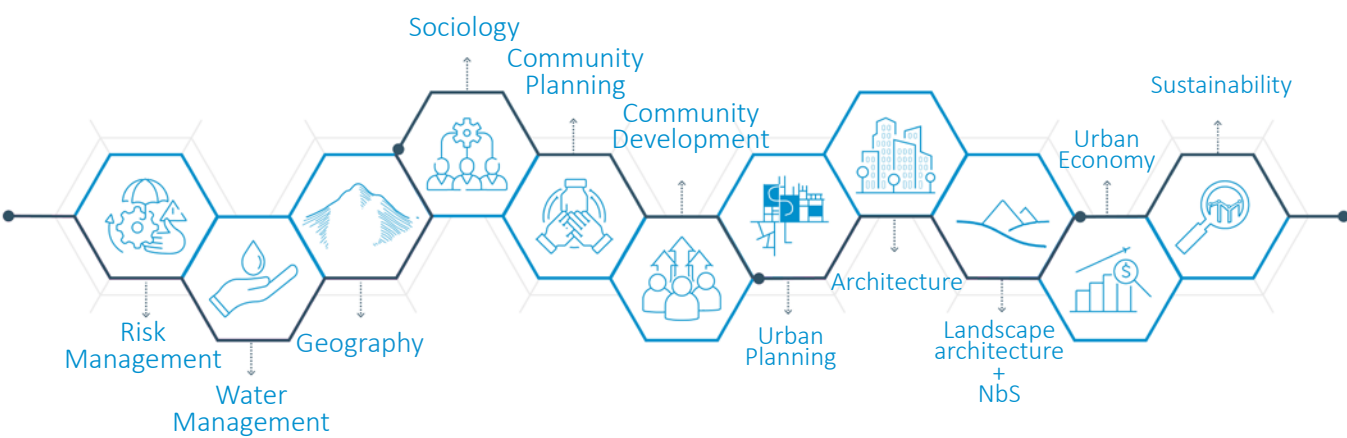




# Urban Resilience & Rehabilitation

Our team possesses deep experience in urban resilience, urban planning, and rehabilitation, including using nature-based solutions (NBS) and sustainable materials. Moreover, our experience in participatory planning processes and capacity building, ranging from community engagements in informal settlements to engaging with high-level officials and government entities, brings a pragmatic, cutting-edge, cross-disciplinary, and integrated approach to sustainability and resilience.

Miyamoto International’s Team of Experts specialize in the following areas:



Bridging various disciplines, including **urban planning, landscape design, architecture, sociology, community development, engineering, economy and geography**, we are able to consider all forces at play—social, economic, and environmental, in our analysis and outputs in order to propose integrated solutions. We leverage the specificities of each context to propose integral solutions that transcend beyond the physical aspects and include intangible elements, such as tenure aspects, policy and governance, enhancing resilient and vibrant environments and self-sustaining communities.



## Water and Urban Resilience

**Flood + Risk mitigation:** Addressing pluvial, river and coastal risk



## Urban Informality and Improvement Plans

**Urban rehabilitation + Reintegration:** Creating equity, inclusion and sustainability



## Climate Resilience and Urban Planning

**Area + Vision Plans:** Bridging multiple scales and dynamics



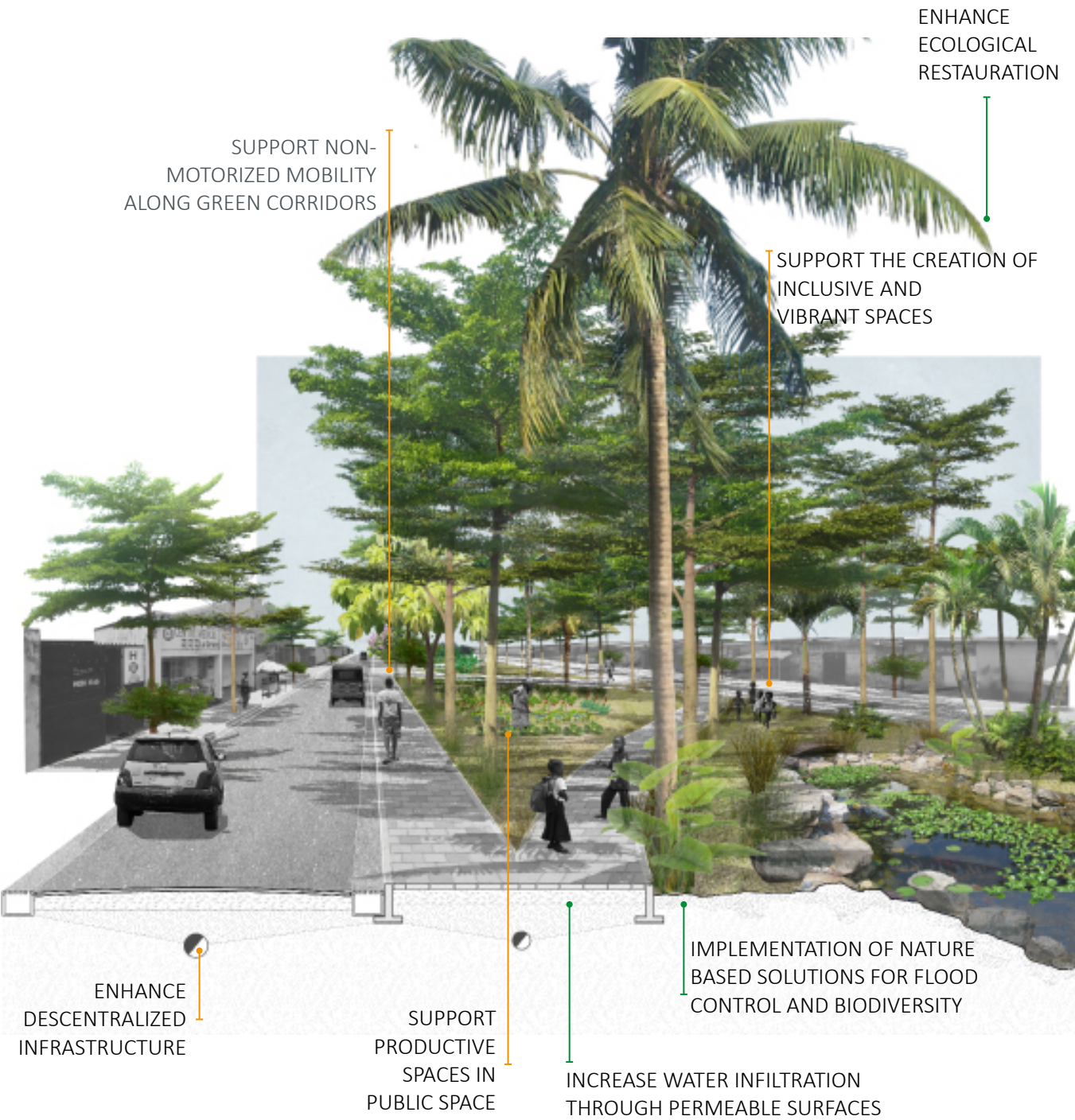
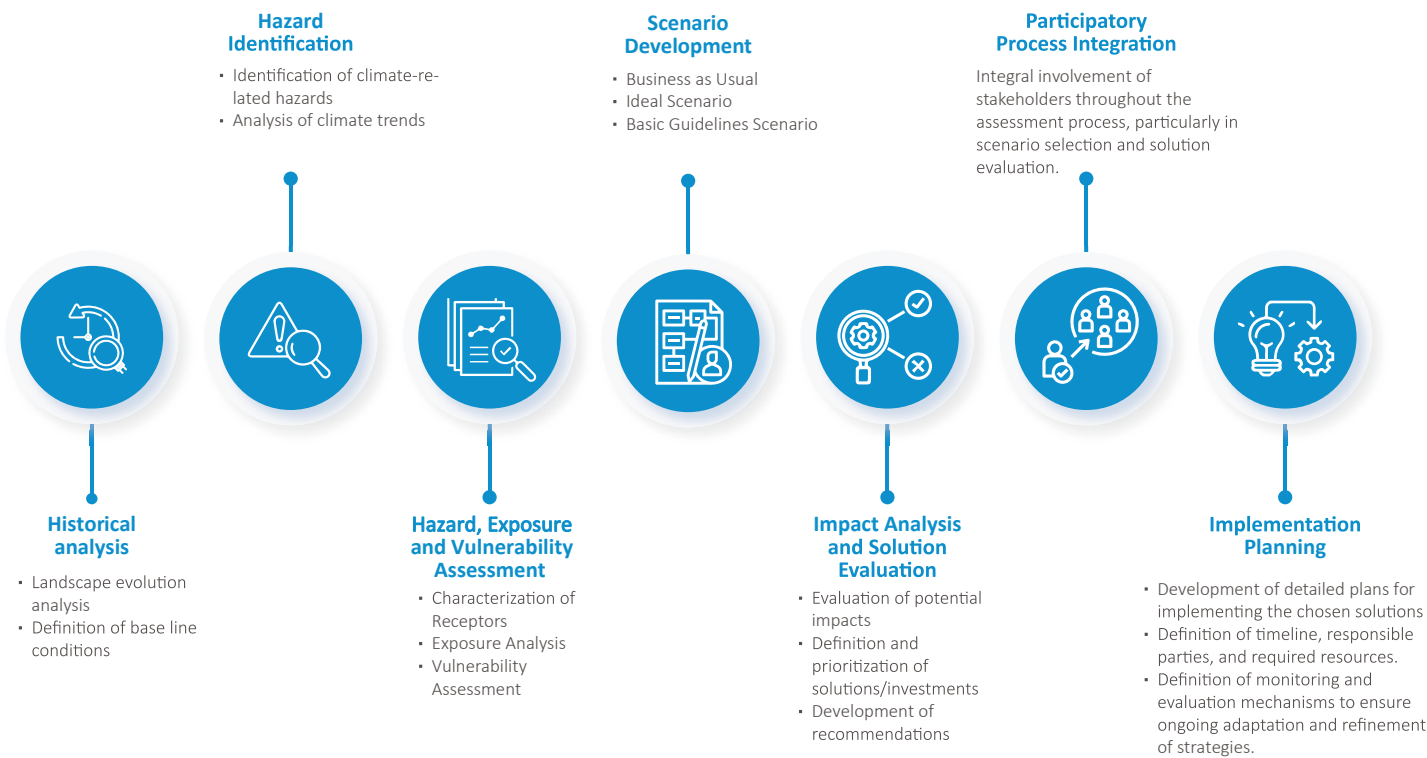


# Climate Smart Planning + Design

In an era where climate change poses unprecedented challenges to our communities, ecosystems, and infrastructures, Miyamoto stands at the forefront of innovative and sustainable solutions. We specialize in comprehensive climate change assessments, leveraging a multidisciplinary approach that combines cutting-edge scientific research, participatory processes, and years of expertise in urban and environmental planning. Our services are designed to not only identify and analyze the risks posed by climate change but also to develop robust, adaptive strategies that ensure the resilience of both human and natural systems.

Our climate change assessment approach begins with analyzing historical patterns and landscape evolution, grounding our understanding of environmental and urban shifts over time. This informs scenario development, ensuring relevance and effectiveness. We then identify hazards, risks, exposure, and vulnerabilities, characterizing receptors like people, nature, and infrastructure. Collaborating with experts in hydrology, erosion modeling, and assessment, we contribute insights into urban components, enabling the creation of scenarios like “Business as Usual,” “Ideal,” and “Basic Guidelines,” facilitating precise impact measurement and solution evaluation.

We emphasize participatory processes, engaging stakeholders in scenario development. Informed by historical analysis and vulnerability assessment, this approach ensures forward-thinking solutions tailored to specific contexts.

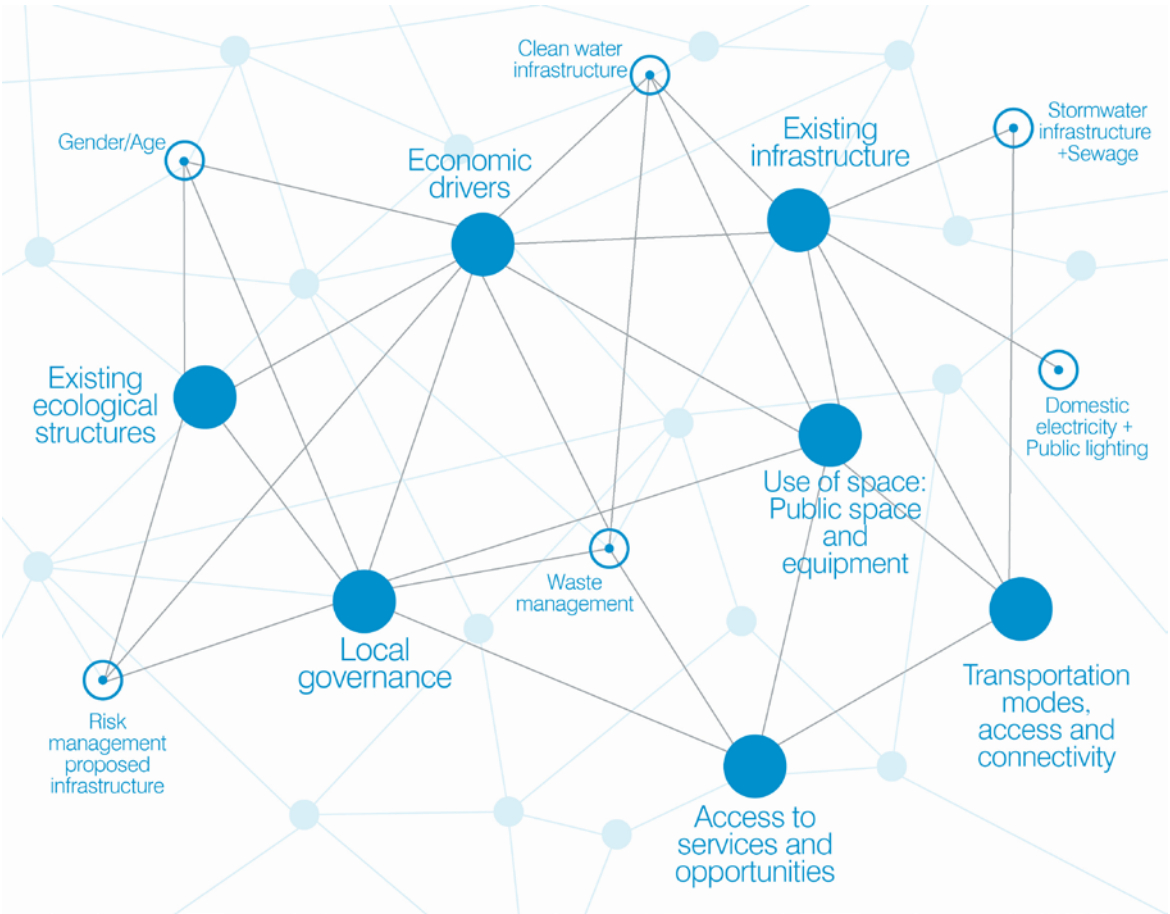




# Integrated and Compact Planning Strategies + Urban Informality

We offer a comprehensive approach to urban planning and design that encompasses climate-smart planning and the incorporation of green, blue, and hybrid infrastructure to foster healthier, environmentally conscious and more resilient urban environments. Our experience in diverse socio-economic, geographic, and institutional contexts reflects our adaptability, as well as our proficiency in context-driven approaches.

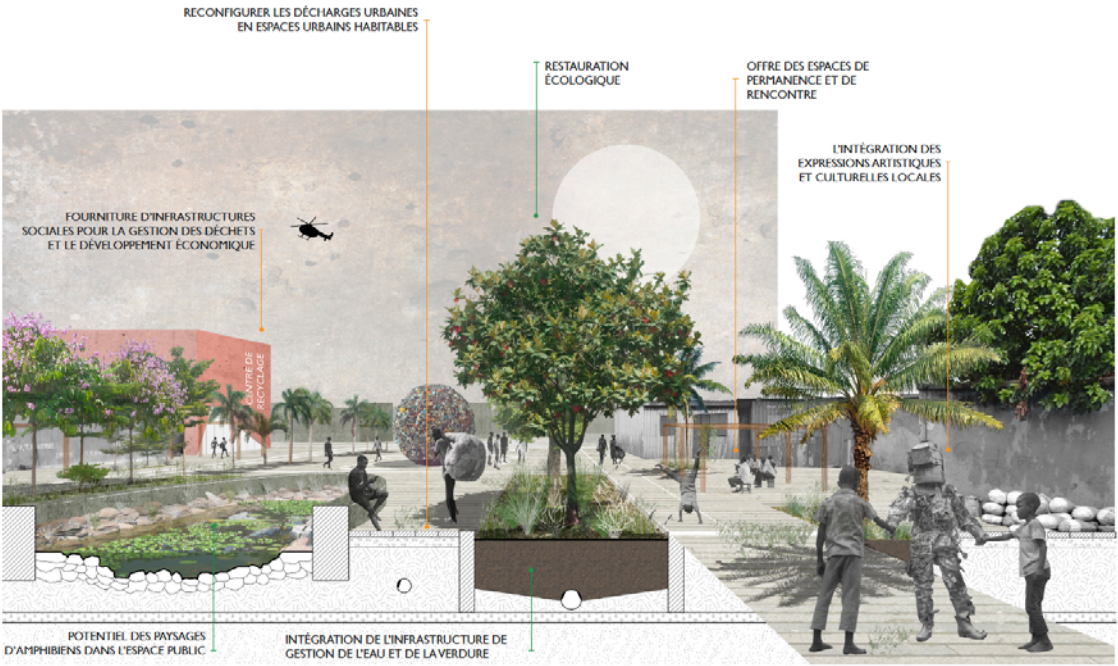
Emphasizing stakeholder engagement and participatory processes, we prioritize inclusivity and equity in our urban development strategies. By involving the community in decision-making, and integrating co-creation processes, we aim to foster context-driven approaches and enhance the overall sustainability of projects.



Example of urban components and interrelations considered in our integral approach to planning and design.

## Urban Rehabilitation and Addressing Urban Informality

Our team possesses extensive expertise in addressing challenges within informal settlements and navigating urban informality. We are dedicated to finding innovative solutions that aim to incorporate and reintegrate marginalized areas into the fabric of cities, fostering greater inclusion and equity. Our interventions are strategically designed to enhance mobility and connectivity infrastructure, elevating the quality of public spaces, services, and overall infrastructure, while simultaneously enhancing community development. Through our multifaceted approach, we strive to contribute to the creation of resilient, vibrant, and interconnected urban environments that prioritize the well-being of all residents.



Proposal for urban rehabilitation and integration of NbS in the Commune of Matete in Kinshasa DRC.

## Services

- |  |  |  |
|--|--|--|
| Urban diagnostics                              | Neighborhood improvement plans + urban rehabilitation. | Stakeholder Engagement + Participatory processes |
| Urban visioning                                |  | Climate Change                                   |
| Strategic area plans + Local development plans | Scenario planning                                      | Adaptation and Nature-based Solutions.           |





# Local Appropriateness and Sustainability

Our focus is on local appropriateness and sustainability on various levels—physical, environmental, financial, and socio-cultural. This approach results in designs that incorporate local values and identity.



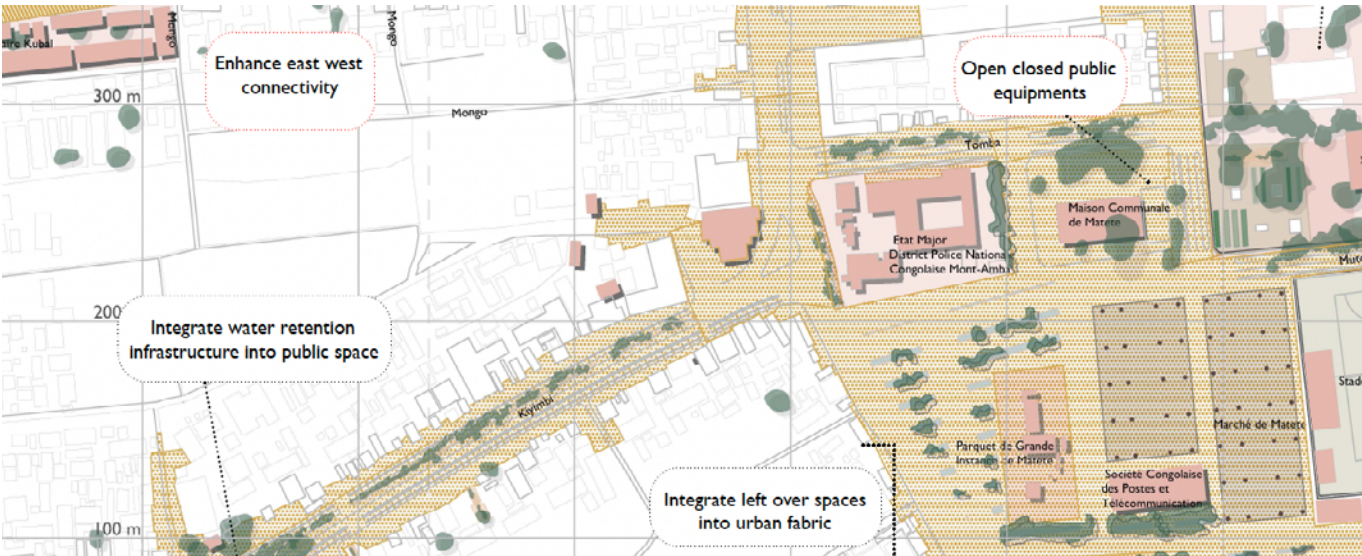
# Integrated Planning Strategies

Collaboration between urban and community planners, local government, authorities, and civil society is central to our approach.



# Addressing Multiple Scales

Our planning and design approach spans various scales, from regional to neighborhood levels. We consider the interconnections between these scales, treating sites and solutions as parts of a network.



# Resilience at the Core

We incorporate climate and disaster risk assessments into our design strategies, carefully considering the location and characteristics of risk areas alongside socioeconomic vulnerability factors. Our goal is to develop climate-smart solutions that prioritize adaptability and long-term sustainability.



# Focus on Community Development + Local Governance

We are committed to long-term sustainability and believe in the early incorporation of local governance structures to support the implementation (co-construction), maintenance and operations of interventions while enhancing appropriation. We seek to enhance **community development** throughout the process, including strong stakeholder engagement, and the integration of local knowledge, skills, resources and governance structures, and considering the entire **life cycle of interventions**. Our approach ensures that our projects not only meet immediate needs but also thrive over the long term, benefiting and empowering communities for years to come.



Our **team** has a proven track record of providing sustained support, fostering long-term sustainable solutions that are not only robust and adaptive but also integrated into the local politics of place and existing governance structures. This approach allows for the establishment of effective maintenance and operation strategies that evolve into sustainable governance mechanisms over time. The ongoing projects in over 30 countries stand as a testament to our unwavering commitment to ensuring community development and localization and investment that extend well beyond the project’s lifespan.

## Key aspects of our approach:

### Emphasis on Collaborative Practices

In a nutshell, our approach prioritizes collaboration, inclusivity, and practicality to create successful, community-driven projects. We have a track record of engaging diverse stakeholders, from local communities to high-level institutions, and we foster cross-sector collaboration to achieve innovative, sustainable solutions.

### Early Consideration of Maintenance and Operations

Recognizing the significance of addressing maintenance and operations from the outset, we prioritize this aspect to ensure the long-term sustainability of our projects.

### Creating Governance Strategies

We actively work on enhancing and establishing local governance strategies, empowering the community to take charge of the ongoing operation of the projects. These strategies are crucial components for the overall success of the initiatives.



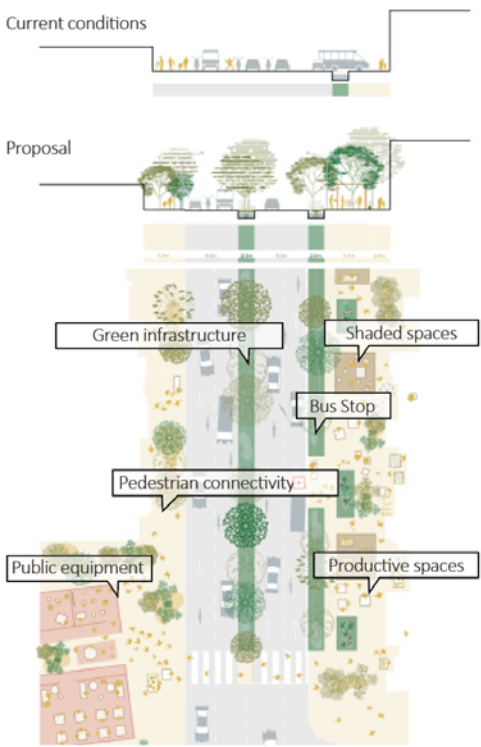
## Services

- Technical assistance to local governments + Institutional accompaniment
- Knowledge exchange + capacity building
- Toolkits for community driven projects and institutional co-creation practices.
- Stakeholder Engagement + Participatory processes

- Local governance strategies
- Private sector involvement
- Maintenance and operations strategies (O&M)
- Monitoring, Evaluation, Accountability and Learning (MEAL)



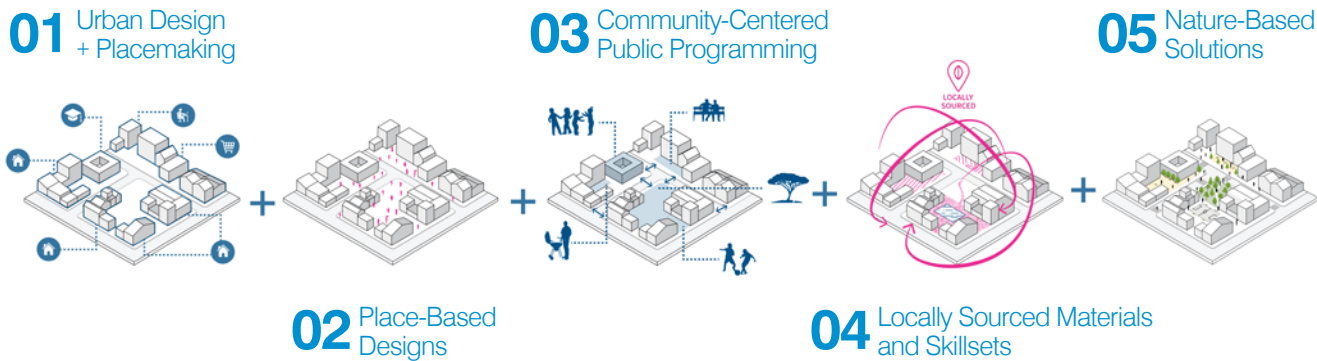
# Urban Design + Place Making + Tactical Urbanism



We embrace urban design and placemaking focusing on the creation of vibrant and sustainable urban environments that maximize both natural and physical resources, as well as local skills and cultural nuances. Our strategies involve crafting a diverse range of spaces, encompassing public, private, semi-private, and semi-public areas that are intentionally designed to offer various levels of appropriation and governance, and facilitate diverse and productive uses for the community.

Inclusive Design is at the core of our urban design philosophy. We consider people of all ages, genders, income levels, and abilities. Our objective is to enhance equity and access to opportunities such as employment, education, commerce, public life, and community activities, ensuring that the benefits of our interventions extend to everyone in the community. By tailoring our strategies to the unique context and needs of each block, neighborhood, and community, we aim to foster a “sense of place” that not only connects residents to their surroundings but also promotes community empowerment and long-term sustainability. Through strong public programming, locally sourced materials, as well as the integration of local expertise, our participatory and inclusive approach seeks to contribute to a more equitable and well-balanced urban environment.

Integration of community centered programming and NbS in Kinshasa, DRC.

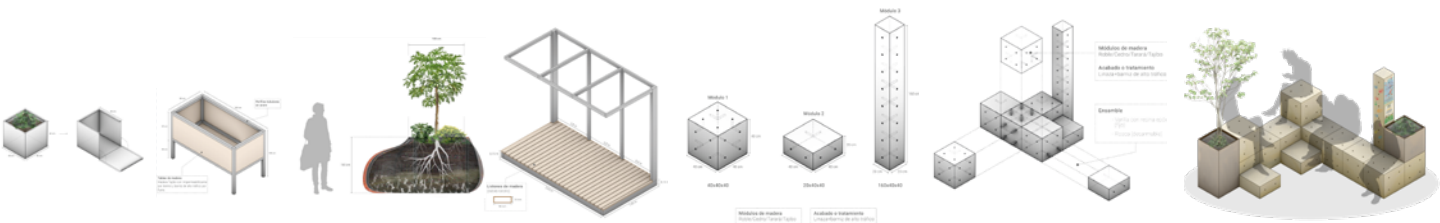


Example of focus areas on urban design projects and proposals

## Tactical Urbanism and Real-Time Testing

We use tactical urbanism, which involves implementing small-scale, low-cost interventions to improve public spaces, to test ideas in real-time and gather community feedback, enabling us to refine and adapt designs to better suit the needs of the community. We believe this real-time testing supports the creation of long-term sustainable solutions that are appropriate and well-received by the community.

By combining urban design, placemaking, and tactical urbanism, we create environments that not only meet the current needs of the community but also have the flexibility to evolve and adapt over time. Our goal is to foster vibrant, inclusive, and resilient urban spaces that truly serve the people who inhabit them.



Conceptual designs of toolkit for Tactical Urbanism project in Santa Cruz de la Sierra, Bolivia



## Services

- Public space design
- Nature-based solutions and urban resilience
- Area Master Plans
- Tactical urbanism, co-creation and co-implementation strategies
- Knowledge exchange + Capacity building
- Participatory processes
- Placemaking activities and interventions




## Low Tech And Vernacular Solutions

Passive design and sustainable materials leveraging indigenous practices

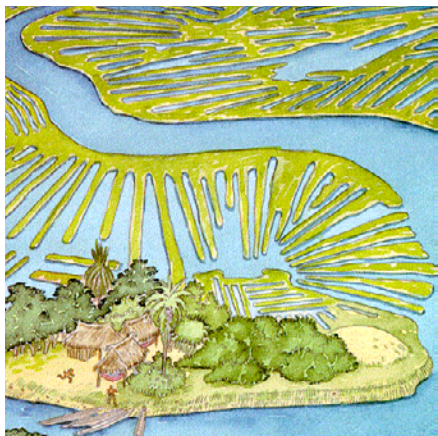
Our expert team consistently draws from vernacular wisdom and indigenous knowledge to look for innovative and locally appropriate contemporary solutions. By bridging low tech with modern methodologies, our solutions are both culturally sensitive and

environmentally sustainable. We seek not only to enhance resilient solutions but also foster cultural identity and pride, and contribute to the development of enduring solutions that deeply resonate with the communities we serve.



Embracing existing vernacular practices, reevaluating ancestral wisdom, and leveraging heritage infrastructure to inform innovative contemporary solutions.





Indigineous Wisdom and Passive Design

Embracing age-old techniques and local wisdom, our approach harnesses the power of low-tech solutions to enhance sustainability. From passive design principles that maximize energy efficiency to the use of sustainable materials, such as bamboo and earth, we create resilient structures that draw from the rich tapestry of local and indigenous practices.



Harnessing Vernacular Practices

Our understanding of vernacular architecture allows us to integrate the essence of traditional building methods into modern designs. By leveraging the deep-rooted knowledge of local communities, we ensure that our solutions not only endure but thrive in their environments.



Sustainable Material Selection

We prioritize sustainable materials, carefully chosen to reduce environmental impact while providing long-lasting performance. Our commitment to locally sourced and eco-friendly construction materials aligns with our dedication to minimizing the footprint of our projects and enhancing replicability.

Services

- (Vernacular) Building typology analysis and evaluation
- Integration of passive design and energy efficient strategies
- Identification of climate smart practices in local contexts

- Building solutions incorporating vernacular practices and locally sourced materials
- Knowledge exchange + Capacity building
- Incremental retrofits



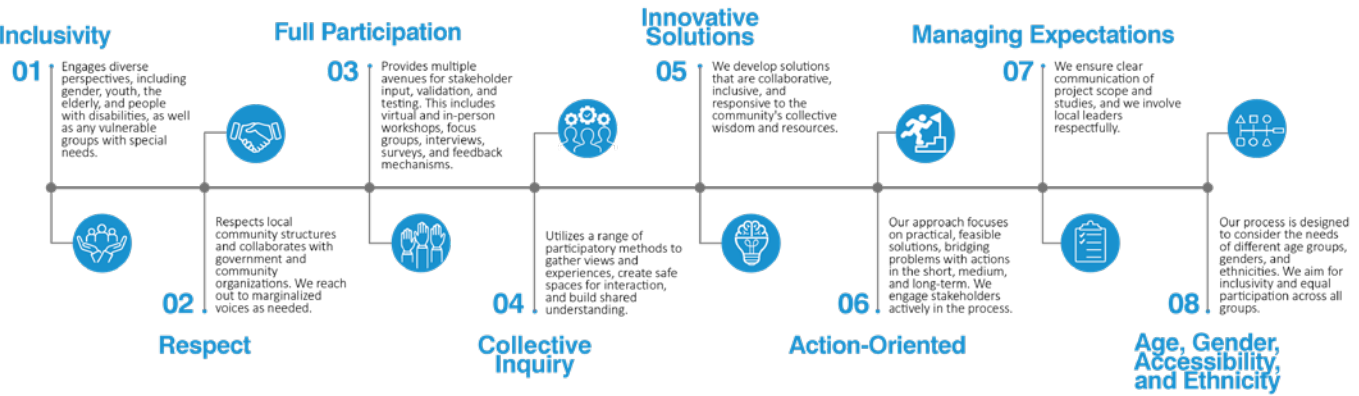
Late XIX century drawing of the Rimac Valley (Lima, Peru) from Cerro San Cristobal. The lush greenery attests to the effectiveness of pre-Hispanic irrigation channels.



# Participatory Planning+Co-Creation

At our core, we believe in engaging with stakeholders, involving the community, and fostering co-creation in order to meet user needs and ensure their long-term success.

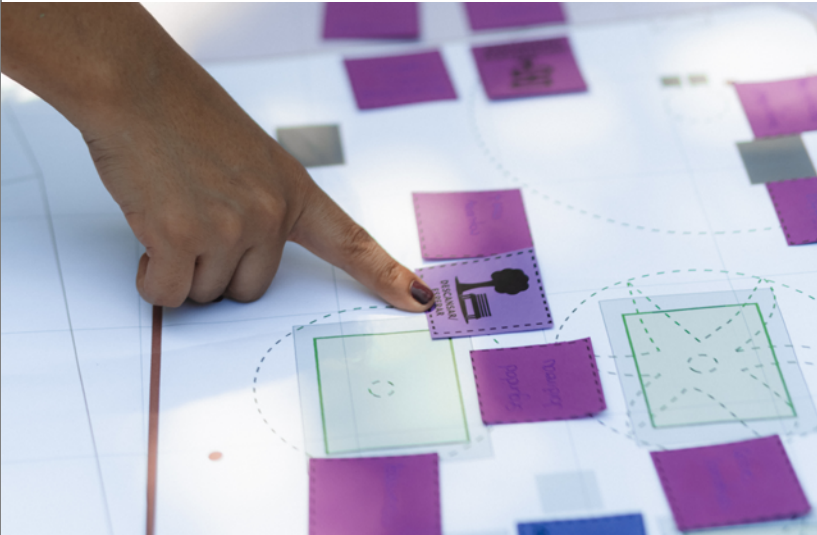
We aim to develop planning and design solutions that are culturally appropriate, innovative, and replicable. Our plans and designs are shaped by the specific needs, customs, values, and desires of each community. We actively involve the community in the design, decision making and implementation process to foster local ownership and shared responsibility.



Our team places a high priority on collaboration, inclusivity, and pragmatism to develop successful, community-driven projects and sustainable solutions. With a proven track record of engaging diverse stakeholders, ranging from local communities to high-level institutions, we actively promote cross-sector collaborations. We boast a multidisciplinary and global team, enabling us to craft tailored processes meeting the requirement of each context and community. Our strength lies in our ability to thrive on context-based approaches, responding effectively to specific needs and conditions.



Card sets for game-based methodologies for capacity building and co-creation workshops



## Services

- Participatory planning strategies
- Co-creation workshops
- Toolkit development
- Knowledge exchange + game-based pedagogical workshops

Community mapping

Data gathering and surveying by bridging open-source software for data collection and participatory processes.



# Landscape Based Approach + NbS

Our approach to urban planning and resilience emphasizes a thorough understanding of the landscape's key characteristics. We delve into the historical construction of human settlements, seeking to comprehend both existing and degraded ecosystems and their intricate interdependencies with other ecosystems, populations, and infrastructure. Our overarching goal is to cultivate a harmonious relationship with nature, aiming to maximize ecosystem services for creating healthy, productive and resilient environments.

Our team comprises landscape architects, Nature-based Solutions (NbS) , and water management experts who frequently collaborate with local biologists, geographers, and botanists to ensure the local appropriateness and applicability of our proposals. Additionally, we have risk assessment experts on board to provide insights into the relevance of NbS for risk management and preparedness.

## Key Steps Of Our Approach Co-Benefits of NbS

- 1

Identify keystone patterns and processes within the landscape, recognizing their physical, ecological, and social interrelationships.
- 2

Understand local values, symbols, and cultural meanings associated with the landscape.
- 3

Visually represent this knowledge in an accessible manner, creating a shared platform for discussion and the promotion of best practices.

We prioritize environmental responsibility in all our activities and actively seek and prioritize nature-based solutions wherever possible.



PROTECT + ENHANCE + CREATE

## Context and Local Appropriateness

We actively pursue interventions that are contextually appropriate, contributing to the enhancement of biological and cultural diversity, sustainable food production, effective water management, and the overall well-being of communities and their livelihoods.

## Sponge City

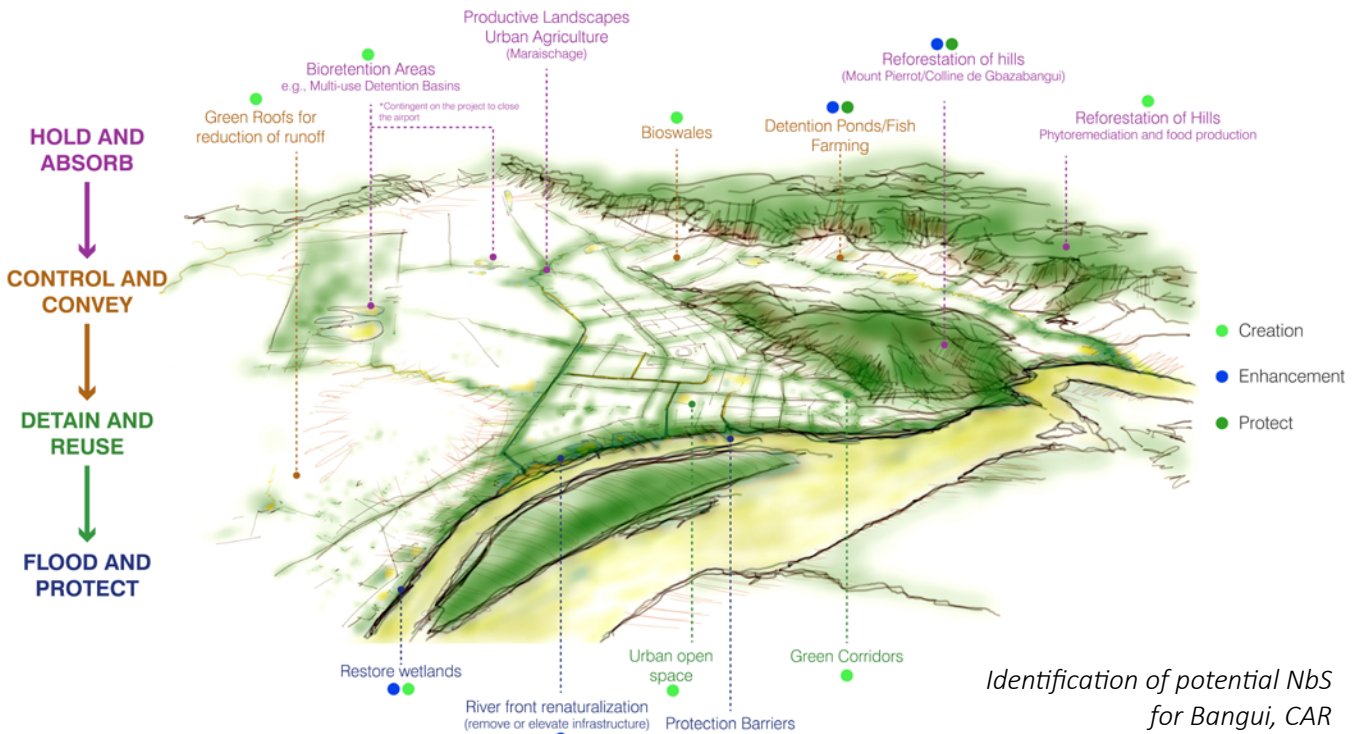
Transforming Vulnerability into Productivity:  
Our overall approach centers on working and designing with water. We aim to transform cities into productive "Sponge Cities," moving away from hazardous flooding. By integrating urban planning and design with water management, we shift the stormwater dynamic from a destructive force to a life-enriching one.

This approach improves livability standards, enhances ecosystems and biodiversity, and creates opportunities for development and growth.

## Empowering Communities

Our approach seeks to leverage existing informal and vernacular practices, local materials, and established social infrastructure. Furthermore, we aim to enhance local governance strategies to ensure long-term sustainability, efficient maintenance, and effective operations.

Moreover, noting that nature-based solutions can also produce food, restore the water cycle, increase biodiversity and recreational spaces, whenever possible NbS should be combined with strong public policies and programs to support people and communities.



## Services

- Historical Landscape Analysis
- Climate Change Adaptation and Mitigation Plans (particular focus on flood risk reduction)
- Climate Change Adaption Strategies + Nature-Based Solutions
- Disaster Risk Management Strategies



# Housing and Community: Beyond Four Walls And A Roof

An estimated 1.6 billion people in the world lack adequate housing, and the UN predicts that by 2030, two out of every five people will not have access to a safe home. In addition, with buildings accounting for 40% of global greenhouse gas (GHG) emissions, implementing green housing solutions is crucial to both climate mitigation and adaptation.

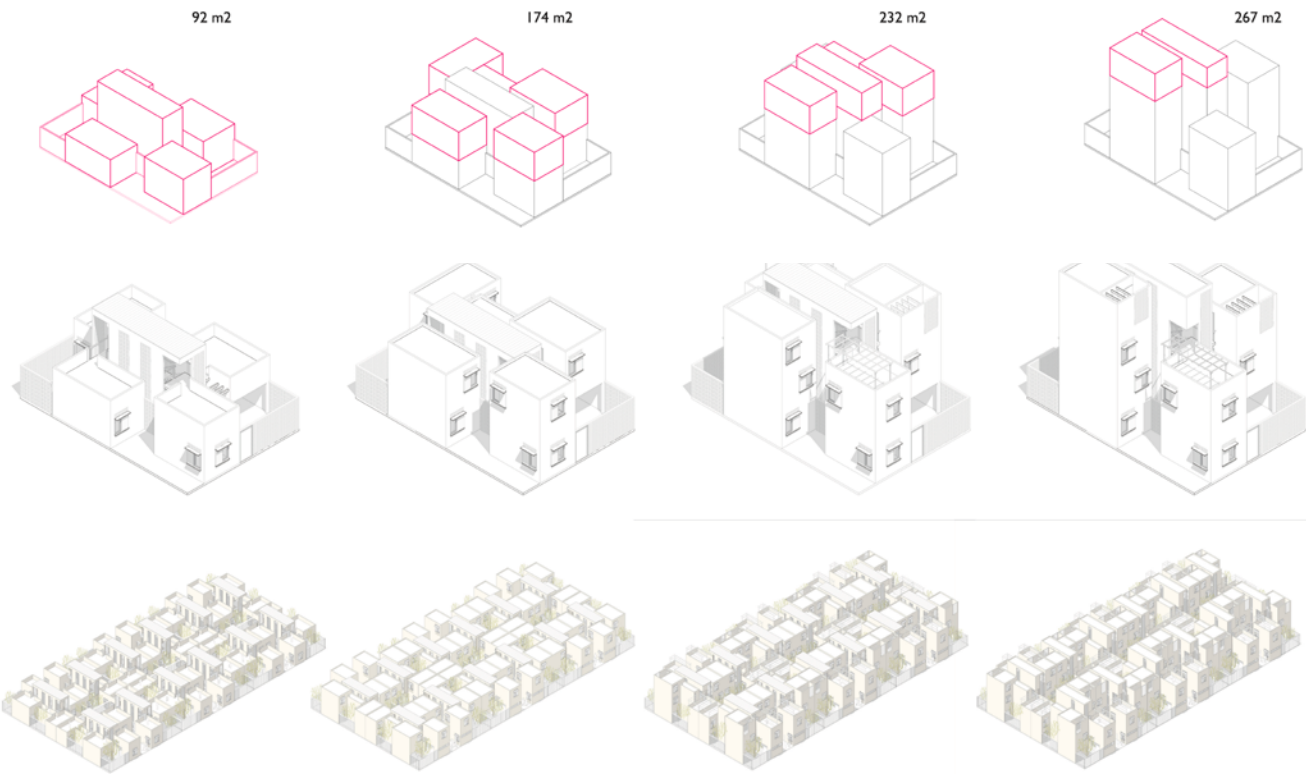
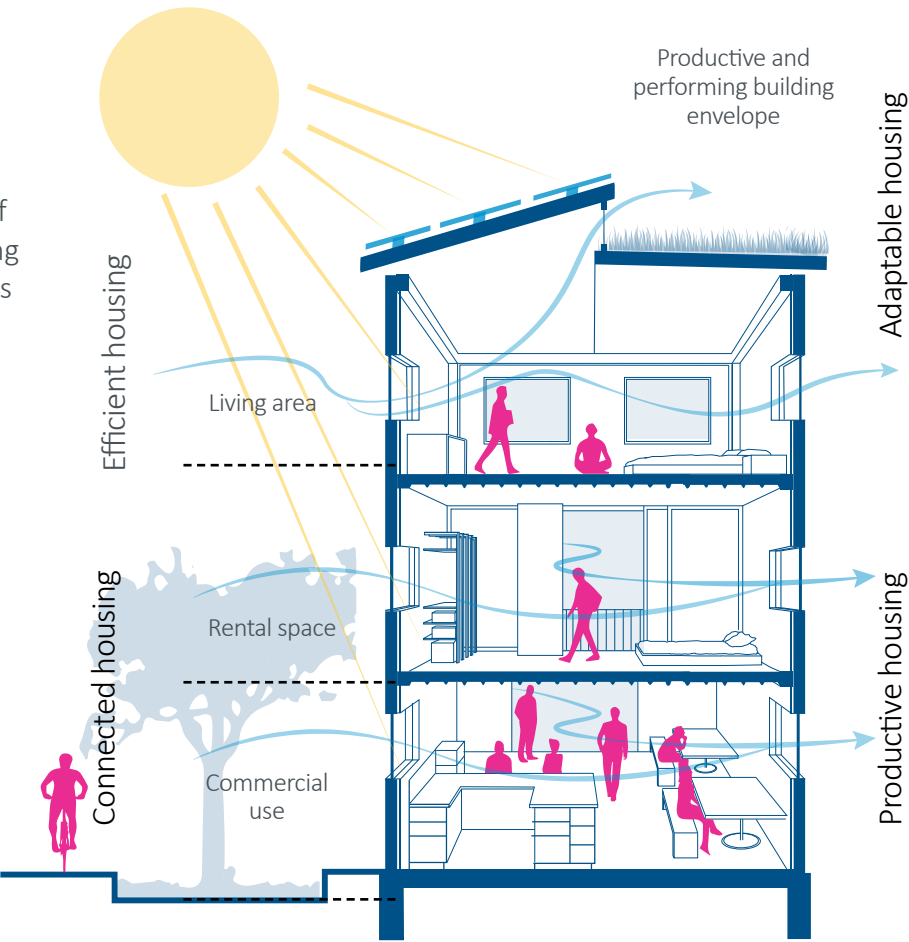
Effective programs require multi-disciplinary expertise in engineering, architecture, urban planning, policy, and finance. Miyamoto’s renowned housing specialists work across these fields to assess market gaps and opportunities, provide technical and financial advisory to diverse stakeholders, and design culturally appropriate, cost-effective approaches to new housing development, retrofits, and upgrades.

Our approach taps into the potential of housing production, emphasizing **capacity building, productivity, flexibility, and adaptability, acting as a catalyst to reduce CO2 emissions.**

Moving beyond the traditional notion of four walls and a roof, it envisions housing solutions that not only meet basic needs but also drive ongoing **opportunities for community and economic development, while enhancing adaptation and mitigation efforts.**

Our system-based approach precisely identifies opportunities for creating **well-served, compact, and sustainable urban spaces**, fostering efficiency and thoughtful design.

At the core of our methodology are **passive design strategies that improve energy efficiency, integrate circular and closed loop design strategies, improve comfort**, and play a pivotal role in climate change adaptation and mitigation.



*Incremental housing units for new developments designed to accommodate climate-displaced populations in Saint Louis, Senegal.*

## Services

- Housing finance
- Technical assistance for housing PPPs
- Housing market analysis, research and policy advisory services
- Housing typology analysis and design
- Passive design, circular design and energy efficient housing unit solutions
- Site planning and design
- Incremental housing strategies
- Green building codes, techniques, and materials, including the use of sustainable materials
- EDGE green building certification
- Retrofit solutions to reduce postdisaster demolition
- Sites and Services
- Use of sustainable materials and vernacular strategies
- Retrofit solutions by hazard type



# Whole Settlements Approach: Bridging Humanitarian Assistance And Long-Term Development + DRR

At Miyamoto, we bridge the worlds of humanitarian assistance and long-term development. Our approach integrates a holistic 'whole settlements' perspective into Disaster Risk Reduction (DRR) and reconstruction strategies. We aim to provide a more comprehensive, systems-based approach to DRR by merging participatory urban planning processes and focusing on building resilience. Our goal is to address not only crisis response but also to establish the foundation for sustainable, thriving communities.

## Key aspects of our approach:

- Rooted in disaster risk reduction principles.
- Consider the needs of people, the environment, and local climate in urban planning.
- Focuses on interconnected systems and networks rather than isolated solutions.
- Integrates various measures into urban areas to enhance resilience.

### Comprehensive Analysis

Examines various aspects of urban life and their relationships.

Addresses multiple scales- from the building, to the block, the settlement (neighborhood and the city).

Includes socio-economic data, stakeholder identification, land use, governance, economic factors, transportation, connectivity, access, natural features, and risk-prone areas.

### Environmental Considerations

Minimizes negative impacts and uses resources efficiently.

Prioritizes nature-based solutions for resilience.

Offers benefits like better risk management, community development, and ecosystem restoration.

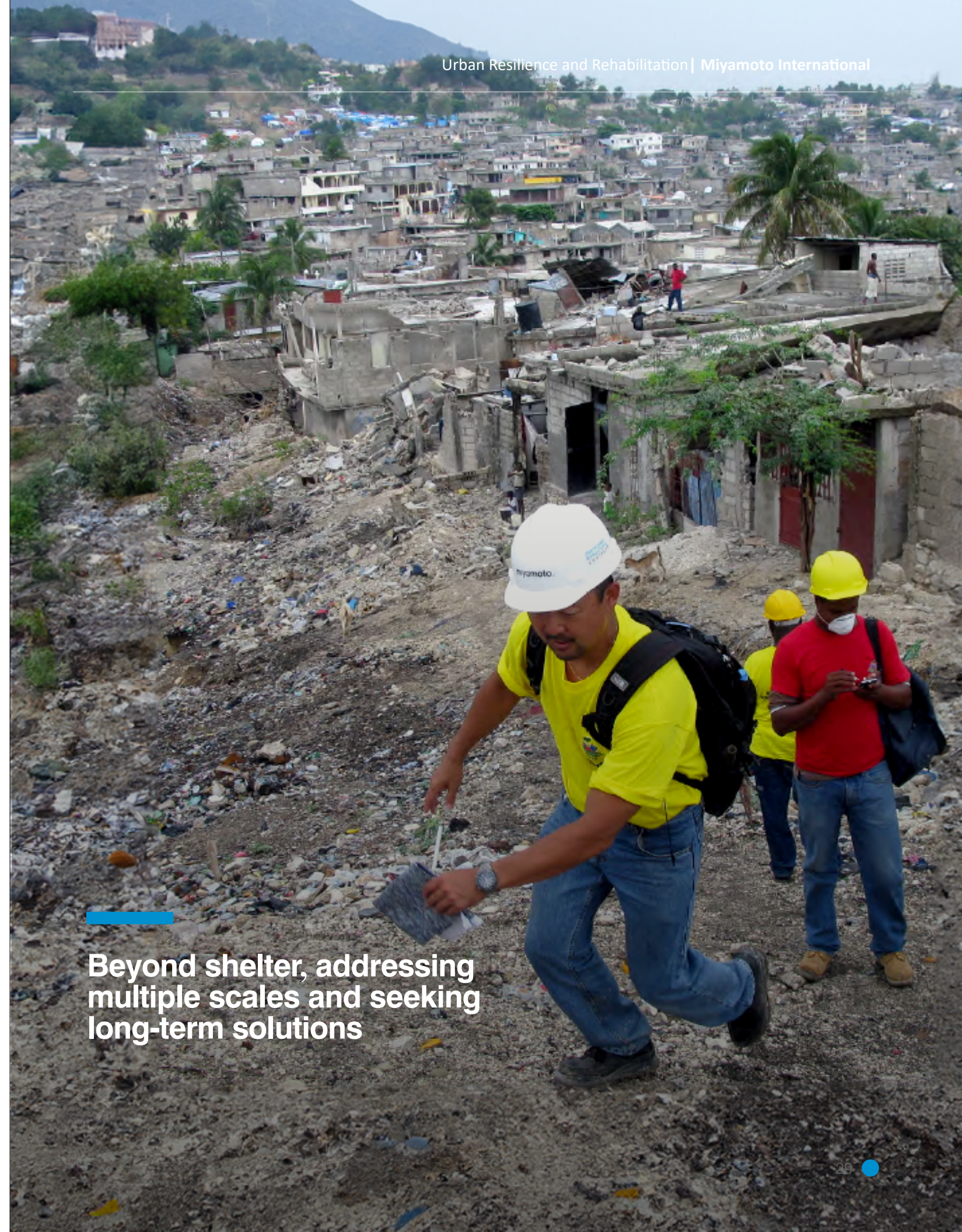
### Community Development

Aligns disaster risk reduction with community development, local economic growth, and improved quality of life.

Develops comprehensive strategies with positive community impacts.

Balancing enabling and provision

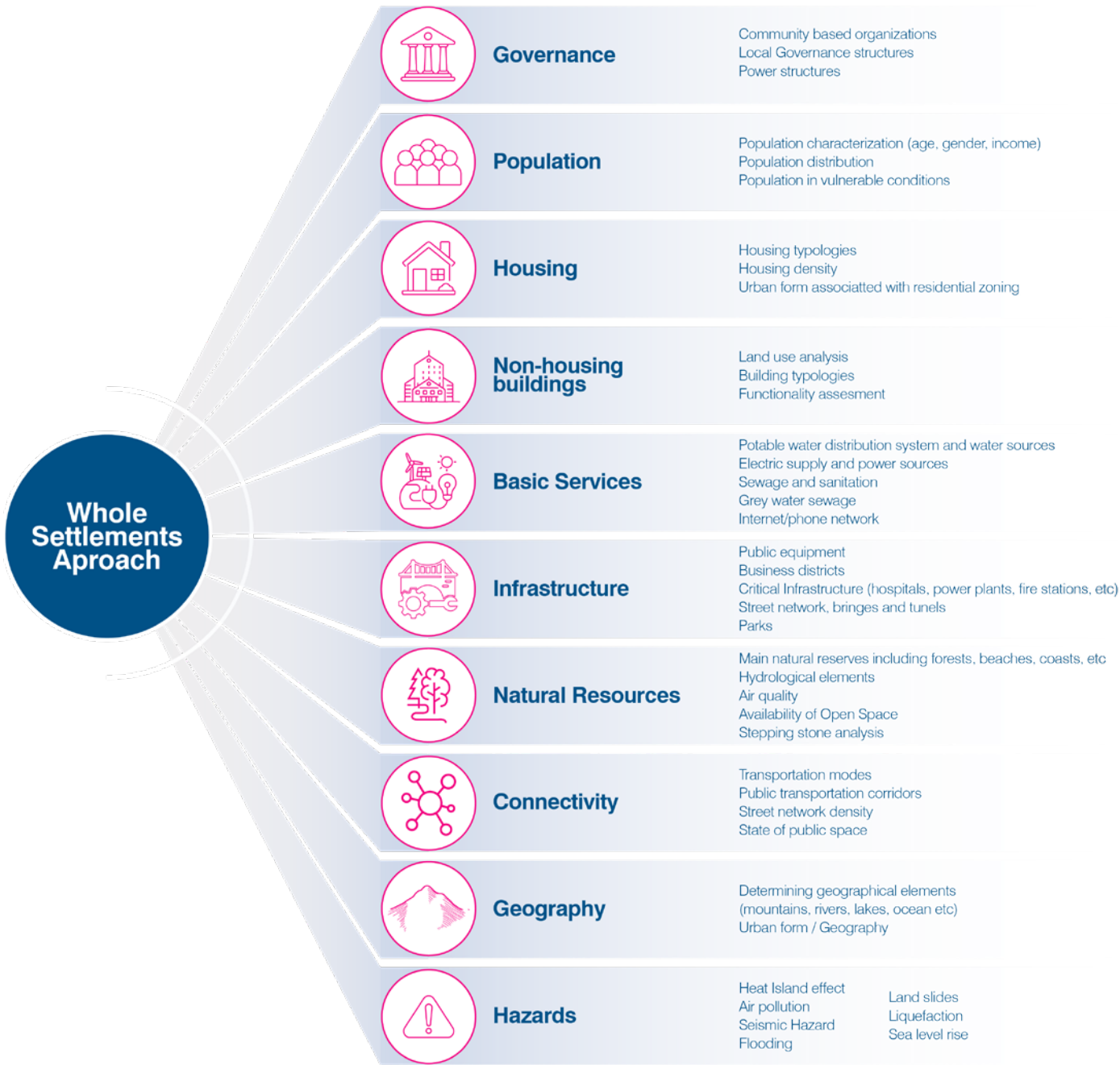
Tailor interventions to promote sustainable recovery, reconstruction and urban development.



**Beyond shelter, addressing multiple scales and seeking long-term solutions**



# Analysis Components Considered in the Whole Settlements Approach



## Services

Stakeholder mapping and donor mapping

Community mapping of damaged housing and infrastructure

Analysis of existing modern and traditional vernacular construction systems and typologies

Analysis of the various pathways to recovery for different affected groups

Technical support for implementation

Analysis of supply chains for materials, labor and tools ( construction value chain)

Settlements analysis and urban diagnostic

Gender, Equity and Social Inclusion (GESI)

Development of Monitoring, Evaluation, Accountability and Learning (MEAL) framework for the program/project.

Water, Sanitation and Hygiene (WASH)



# Promoting Resilient Infrastructure

Cities and communities worldwide must develop strategies to respond to climate change’s impacts and prepare for future threats. Repeated disasters or stressors stunt economic growth and can destroy years of development gains. Miyamoto’s multidisciplinary experts understand disaster. Using data and experience from responding to more than 100 environmental disasters in the last 30 years, we quantify risk and the economic and social benefits of targeted adaptation solutions to prioritize investments that save money and lives and keep in mind long-term sustainability. This includes the use of nature-based solutions. Our systems-based approach considers a more macro-scale, engaging infrastructure solutions as a network, dependent on each other and working with each other, rather than punctual interventions.

Miyamoto has advised governments, businesses, non-governmental organizations (NGOs), and multi-lateral donors. We use probabilistic, multi-hazard risk modeling to inform and improve resilience solutions for transport, power, buildings, housing, and other infrastructure sectors.

Our technical expertise, combined with an in-depth understanding of the built environment, enables Miyamoto to help clients reduce emissions and address the impacts of climate change. We work through robust participatory processes, working hand-in-hand with communities, government entities, and other stakeholders to ensure solutions are appropriate and long-term sustainability is kept in mind. In this regard, co-creation processes and capacity building are embraced when and where possible.

## Solutions-oriented + systems-based approach to infrastructure adaptation.



## Services

- |  |   |
|--|---|
| Loss and damage estimation   | Green building codes, techniques, and materials, including the use of sustainable materials |
| Impact quantification  | Retrofit solutions to reduce postdisaster demolition  |
| Multi-hazard probabilistic risk assessments                                | Cost- benefit investment prioritization   |
| Municipal climate insurance  | Disaster-resistant construction   |
| Structural and non-structural solutions (including nature-based solutions) | Asset resilience assessments  |
| Green & resilient housing strategies                                       | Operations & maintenance plans  |
| Retrofit solutions by hazard type  | Building code upgrades and institutionalization   |
| Asset inventory & operational management                                   | Life cycle cost analysis  |
| Circular design, passive design strategies                                 | Disaster/climate risk finance   |
| EDGE green building certification  | Resilient urban planning  |





Save lives,  
impact economies.



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