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FROM EVENT TO LEGACY: MEGA-EVENTS AS CATALYSTS FOR SUSTAINABLE URBAN DEVELOPMENT

WHITE PAPER | UN-HABITAT and EXPO CITY DUBAI

Acknowledgements

This white paper synthesizes insights from the Knowledge Session "From Event to Legacy: Mega-Events as Catalysts for Sustainable Urban Development" held on 29 October 2025 at the Asia Pacific Cities Summit & Mayors' Forum in Expo City Dubai, Dubai, United Arab Emirates.

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Cover Photo Credit	Expo City Dubai https://virtualexpodubai.com/listen-watch/events/event-launch-global-goals-week

We thank the organizers of the Asia Pacific Cities Summit & Mayors' Forum 2025 and all Knowledge Session participants whose questions, insights, and collaborative engagement enriched the discussions and recommendations in this white paper.

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**2025 ASIA PACIFIC CITIES SUMMIT
& MAYORS' FORUM**

Expo City Dubai, UAE 27-29 October



FROM EVENT TO LEGACY: MEGA-EVENTS AS CATALYSTS FOR SUSTAINABLE URBAN DEVELOPMENT

White Paper | UN-Habitat + Expo City Dubai

Executive Summary

Mega-events, like World Expositions, Olympic Games, and FIFA World Cups, present cities with transformative opportunities to accelerate sustainable urban development. Yet the track record remains mixed, with successes alongside costly failures that deepen inequalities and leave behind underutilized infrastructure.

On 29 October 2025, UN-Habitat and Expo City Dubai convened a Knowledge Session at the Asia Pacific Cities Summit 2025 to explore how cities can transform temporary spectacles into lasting urban value. This white paper synthesizes insights from six expert speakers, collaborative workshops with city leaders, and a comprehensive analysis of global case studies spanning two decades.

Key Finding: Mega-events offer unprecedented opportunities for urban transformation when legacy planning is embedded from the bidding phase, community engagement is meaningful, and integrated governance approaches are established.

Success Patterns Identified: **Community-Centered:** Prioritize local needs and meaningful participation; **Inclusive Governance:** Multi-stakeholder coordination with dedicated authorities; **Adaptive Design:** Flexible infrastructure for post-event transformation; **Economic Sustainability:** Avoid white elephants, ensure viability; **Social Equity:** Affordable housing, local jobs, anti-displacement; and **Evidence-Based:** Data-driven monitoring and evaluation

This white paper presents an integrated framework combining these principles with lifecycle approaches, governance mechanisms, and stakeholder-specific recommendations. It calls for collaborative action across governments, organizers, communities, international organizations, and the private sector to transform mega-events into catalysts for localizing Sustainable Development Goals.

Foreword

Mega-events have long captured global imagination, bringing nations together in celebration of sport, culture, innovation, and human achievement. Yet beyond the spectacle lies a profound question: Can these temporary gatherings create permanent value for the cities and communities that host them?

The evidence is clear. When strategically planned with legacy at the core, mega-events can accelerate infrastructure delivery, prototype innovative solutions, catalyze cross-sector partnerships, and transform underutilized areas into thriving neighborhoods. Paris 2024's commitment to 95% venue reuse and carbon neutrality, Expo City Dubai's transformation of over 80% of Expo 2020 buildings into permanent mixed-use assets, and these demonstrate what is possible when vision meets governance.

At UN-Habitat, we work with cities worldwide to advance the New Urban Agenda and localize the SDGs. Through programmes, we have witnessed firsthand how intentional legacy planning can transform mega-events from temporary spectacles into long-term catalysts for sustainable urban development.

This white paper represents a collaborative effort between UN-Habitat, Expo City Dubai, and six experts who gathered at the Asia Pacific Cities Summit & Mayors' Forum 2025. Together, we examined what works, what doesn't, and why, synthesizing lessons from two decades of global experience into an actionable framework.

Our hope is that this framework will guide future host cities, event organizers, communities, and international partners in creating mega-event legacies that truly serve the people who call these cities home. The choice is ours: Will mega-events deepen inequalities and burden public finances, or will they accelerate our journey toward sustainable, inclusive urban futures?

The legacy of any mega-event is not predetermined; it is created through intentional choices, sustained commitment, and collaborative action.

Dr. Ayman El Hefnawi
GCC Representative,
UN-Habitat
November 2025

1. Introduction

Cities and Sustainable Development Goals

With over half the world's population living in cities, urban areas are critical for achieving Sustainable Development Goals, particularly SDG 11 on sustainable cities and communities. Cities lag significantly behind SDG targets, making urban transformation processes essential catalysts for change.

Mega-events, World Expositions, Olympic Games, and FIFA World Cups, present unique opportunities to accelerate development, attract investment, and pilot innovative solutions at scale. However, the track record remains mixed, with successes alongside costly failures that deepen inequalities.

Mega-Events as Urban Transformation Catalysts

The past two decades witnessed a fundamental shift from viewing mega-events as temporary spectacles to strategic accelerators of long-term transformation. They serve as policy laboratories for testing innovations, investment catalysts for infrastructure, governance platforms for collaboration, and legacy creators for permanent urban assets.

Expo City Dubai: Flagship Case Study

Expo 2020 Dubai exemplifies transformation potential and establishes Expo City Dubai as a future-focused district. With over 80% of buildings being repurposed into permanent assets, museums, business hubs, and cultural centers, it demonstrates how strategic planning creates lasting value when integrated with long-term urban planning.

White Paper Purpose and Methodology

This white paper synthesizes insights from the Knowledge Session "***From Event to Legacy: Mega-Events as Catalysts for Sustainable Urban Development***" at the Asia Pacific Cities Summit & Mayors' Forum 2025, to analyze successful and failed strategies, propose integrated frameworks, and provide actionable recommendations for cities and stakeholders.

The methodology combines expert contributions from six specialists representing diverse perspectives: integrated urban solutions, community-centered planning, data-driven governance, circular systems, adaptive design, and innovation in regional development.

Case study analysis examines six major mega-events using the Triple Bottom Line framework, supported by a collaborative workshop engaging participants in mapping opportunities and co-creating framework principles.

2. Background and Context

Global Mega-Event Investment at a Glance:

- **95% venue reuse** target achieved by Paris 2024
- **80%+ building repurposing** at Expo City Dubai
- **73 million visitors** to Shanghai Expo 2010 (largest in history)
- **€11 billion** cost of Athens 2004 Olympics (cautionary example)

Integration with National Planning

Contemporary mega-event planning integrates with national and local development strategies, representing a shift from isolated events to embedded transformation processes. Leading examples include Expo 2020 Dubai, Paris 2024 Olympics (green games with 95% venue reuse), and Los Angeles 2028 (no-build strategy leveraging existing infrastructure).

Strategic Acceleration

Cities increasingly view mega-events as mechanisms to fast-track infrastructure delivery and catalyze inclusive regeneration through four key trends: resilience and climate adaptation in post-event planning; smart infrastructure integration and futureproofing; social inclusion mandates and community benefits; and SDG localization, accelerating local target achievement.

Challenges in Achieving Sustainable Legacies

Despite transformational potential, mega-events face criticism for unfulfilled promises and deepened inequalities. Key challenges include gentrification and displacement from rising property prices; lack of affordability in high-end infrastructure investments, ignoring housing needs; environmental concerns from short-lived structures and missed nature-based solution opportunities; and missed social impact when investments and planning lack community engagement.

Opportunities for Sustainable Urban Futures

When rooted in community needs and aligned with policy frameworks, mega-events can build permanent, adaptable infrastructure; trigger innovation in transport, energy, and public spaces; foster cross-sector partnerships and civic engagement; strengthen city identity and investment appeal; and contribute to evidence-based urban policy development.

Measuring the Sustainability of Legacy

Accountability requires clear measurement frameworks using indicators across four dimensions: land use and community access (GIS analysis, surveys, audits); economic impact (employment data, business registrations, economic surveys); environmental performance (monitoring, lifecycle assessments, ecological surveys); social inclusion (housing studies, demographic analysis, impact assessments); and SDG alignment (monitoring frameworks, VLR reporting).

Table 1: Conceptual Framework for Measuring the Sustainability of Legacy

Dimension	Key Indicators	Measurement Methods
Economic	Job creation, SME development, tourism, property values	Employment data, business registrations, economic surveys
Social	Housing provision, displacement, access, equity	Housing studies, demographic analysis, social assessments
Environmental	Carbon reduction, renewable energy, biodiversity	Environmental monitoring, lifecycle assessments
Governance	Stakeholder engagement, transparency, accountability	Participation rates, reporting frequency, oversight

3. Global Case Studies

3.1 Paris 2024 Olympics, France

Context: With 11 million inhabitants, Paris leveraged the 2024 Olympics to address social inequalities and accelerate climate action, aligning the Games with the French Climate Law and Paris Climate Action Plan.

Paris 2024 in Numbers: (Source: Paris 2024 Organizing Committee, IOC Sustainability Progress Update 2024)

- **€8 billion** budget focused on cost-efficiency and sustainability
- **95% venue reuse** avoiding construction of "white elephants"
- **16 million visitors** accommodated through upgraded transport systems
- **3,000 housing units** created from Olympic Village (25% social housing)
- **30% funding allocation** to SMEs and local community projects
- **50% carbon reduction** target through renewable energy and sustainable practices

The Challenge: Previous Olympic Games had created financial burdens and underutilized infrastructure. Paris needed to demonstrate that mega-events could drive climate and social agendas without creating long-term liabilities.

The Solution: SOLIDEO, a dedicated legacy authority, governed the entire process with a clear mandate and multi-year funding. Early integration of sustainability commitments ensured trackable goals from bidding through post-event transformation. Community needs shaped venue selection and post-use planning.

Legacy Impact: Paris 2024 demonstrates that mega-events can advance climate neutrality and social equity when aligned with comprehensive policy frameworks and governed by dedicated authorities with long-term mandates.

3.2 Lisbon Expo 1998, Portugal

Context: Lisbon's eastern waterfront faced post-industrial decline with a brownfield site of abandoned factories, polluted land, and disconnected communities requiring comprehensive regeneration.

Lisbon Expo 1998 in Numbers: (Source: *Bureau International des Expositions, Lisbon Expo 1998 Official Report*)

- **\$7 billion investment** in waterfront transformation
- **11 million visitors** exceeding initial projections
- **340 hectares** of brownfield land remediated and redeveloped
- **Oceanário de Lisboa** established as Europe's largest indoor aquarium
- **Oriente Station** created as major multimodal transport hub
- **8 km of riverfront** opened for public access

The Challenge: Transform a heavily polluted industrial zone into a vibrant mixed-use district while improving transport connectivity and creating public access to the waterfront.

The Solution: Integrated the Expo site into Lisbon's long-term urban masterplan from the outset. Environmental cleanup preceded development. Transport infrastructure (Oriente Station, Metro extensions) was designed for permanent city-wide benefit. Post-event transformation into Parque das Nações was planned during the bidding phase.

Legacy Impact: Lisbon Expo 1998 is widely considered a model of sustainable urban regeneration. However, subsequent gentrification reduced housing affordability, highlighting the need for explicit anti-displacement and social equity measures in legacy planning.

3.3 Athens 2004 Olympics, Greece

Context: Athens hosted the 2004 Olympics to celebrate Greece as the birthplace of the Games and demonstrate modernization amid Eurozone entry pressures and urban infrastructure challenges.

Athens 2004 in Numbers: (Source: *International Olympic Committee, Athens 2004 Post-Games Report; Hellenic Court of Audit*)

- **€11 billion total cost** (most expensive Summer Games to that point)
- **6 million visitors** (below projections)
- **22 competition venues** constructed, many highly specialized
- **Metro extensions** and airport link providing lasting mobility benefits
- **Multiple venues abandoned** within 5 years post-Games
- **Ongoing maintenance costs** exceeding €100 million annually

The Challenge: Deliver world-class facilities on an accelerated timeline while managing fiscal constraints and ensuring post-event utility for venues in a city with moderate sports infrastructure demand.

Implementation: Weak governance with no dedicated legacy authority and fragmented responsibilities across ministries. Specialized venues (Olympic Stadium, Velodrome, Softball Complex) were designed without viable post-event business models. Construction delays consumed budgets, leaving no funds for legacy planning or post-event management.

Cautionary Legacy: Athens 2004 exemplifies the risks of mega-events without integrated governance and early legacy planning. The €11 billion expenditure worsened Greece's public finances ahead of the debt crisis. Many venues became

white elephants, underscoring the critical importance of community integration, post-use planning, and fiscal sustainability.

3.4 Johannesburg 2010 FIFA World Cup, South Africa

Context: As the first FIFA World Cup hosted in Africa, Johannesburg (4.4 million residents) carried symbolic weight for post-apartheid transformation while facing deep socioeconomic inequalities.

Johannesburg 2010 in Numbers: (Source: *FIFA 2010 World Cup Technical Report, South African Government Evaluation*)

- **\$3.5 billion public investment** in infrastructure and venues
- **3 million visitors** during the tournament
- **Gautrain rapid rail system** (80 km) connecting Johannesburg and Pretoria
- **Soccer City Stadium** (94,700 capacity) successfully repurposed
- **Multiple stadiums underutilized** post-tournament
- **Job creation targets** partially met; informal settlements largely excluded from benefits

The Challenge: Leverage the World Cup to address historical inequalities, improve urban infrastructure, create employment, and deliver tangible benefits to marginalized communities while meeting FIFA standards.

Mixed Results: Transport infrastructure (Gautrain, airport upgrades) provided lasting citywide mobility benefits. Soccer City Stadium successfully integrated into South Africa's sports and cultural life. However, several stadiums in secondary cities became underutilized. Promises of job creation, poverty reduction, and benefits for informal settlements were largely unmet.

Key Lesson: Johannesburg 2010 demonstrates the risks of venue-focused approaches without comprehensive community integration. Transport investments succeeded because they addressed existing needs; stadium investments struggled where demand was overestimated. Social equity requires binding commitments, not aspirational promises.

3.5 Shanghai Expo 2010, China

Context: Shanghai (23 million residents) leveraged Expo 2010 to position itself as a global hub while addressing severe environmental challenges along the polluted Huangpu River waterfront.

Shanghai Expo 2010 in Numbers: (Source: *Bureau International des Expositions, Shanghai Expo 2010 Official Report*)

- **\$45 billion investment** in infrastructure and development
- **73 million visitors** (largest World Expo in history)
- **5.28 square kilometers** of riverfront transformed
- **400 km of new metro lines** expanding citywide network
- **China Pavilion and Expo Axis** preserved as cultural landmarks
- **Mixed-use district** created with business zones, cultural facilities, public spaces

The Challenge: Transform heavily polluted industrial waterfront into world-class cultural and business district while delivering transport infrastructure to serve 23 million residents in China's largest city.

The Solution: Comprehensive environmental cleanup preceded development. Massive transport investments (400 km metro expansion) addressed citywide mobility needs beyond the Expo site. Post-event transformation was integrated into Shanghai's long-term urban masterplan, creating permanent mixed-use districts.

Legacy Impact: Shanghai Expo 2010 demonstrated China's capacity for large-scale urban regeneration and environmental remediation. Transport investments provided lasting benefits citywide. However, the top-down planning model limited community participation, raising concerns about affordability, displacement, and accessibility for existing residents.

3.6 New York 2012 Olympic Bid, USA

Context: New York's bid for the 2012 Olympics targeted seven underused districts with infrastructure investments explicitly designed to proceed regardless of whether the city won hosting rights, a no-regrets strategy.

New York 2012 Bid in Numbers: (Source: NYC Economic Development Corporation, Regional Plan Association)

- **\$2.8 billion transport projects** completed despite losing bid
- **Hudson Yards** developed on 28 acres (largest private real estate development in US history)
- **7-Line subway extension** (2.4 km) improving connectivity
- **Hunters Point South** (5,000 housing units) created from planned Olympic Village site
- **Brooklyn Bridge Park** (85 acres) along waterfront
- **Flushing Meadows-Corona Park** improvements

The Challenge: Catalyze the transformation of underutilized districts and deliver infrastructure improvements in a fiscally constrained environment, creating value whether or not the Olympic bid succeeded.

The Successful Failure: Despite losing the bid to London in 2005, New York's integrated urban vision and catalyst strategy created lasting political momentum and inter-agency cooperation. Key projects proceeded because they addressed genuine urban needs independent of hosting the Olympics.

Key Lesson: New York 2012 demonstrates that resilient legacy planning can succeed regardless of hosting outcomes when mega-events serve as catalysts for needed infrastructure rather than justifications for speculative construction. However, housing goals achieved partial success, with limited affordability for low-income residents, highlighting ongoing equity challenges.

Comparative Analysis Summary

The following table synthesizes the economic, social, and environmental outcomes of selected global events, highlighting varying degrees of success, trade-offs, and long-term urban impacts across different contexts.

Table 2: Summary Comparative Assessment of Economic, Social, and Environmental Outcomes of Major Global Events

Event	Economic	Social	Environmental	Assessment
Paris 2024	95% venue reuse, SME investment	Housing inclusion, citywide benefits	Carbon neutrality, green mobility	Strong Success
Lisbon 1998	Waterfront revival, tourism boost	Public spaces, gentrification concerns	Brownfield cleanup, green spaces	Overall Success
Athens 2004	€11B debt, unused venues	Poor integration, limited benefits	No green vision, missed opportunities	Mixed Results
Johannesburg 2010	Transport upgrades, stadium underuse	Informal settlements excluded	Stadium-focused, minimal sustainability	Mixed Results
Shanghai 2010	Global trade links, economic zones	Urban renewal, resident displacement	Riverfront greening, social trade-offs	Economic Success
New York 2012	Infrastructure continuity, regeneration	Housing delivery, equity limitations	Brownfield redevelopment, transit	Resilient Planning

4. Expert Insights

4.1 Green and Human-Centered Planning (Dr. Nadine Bitar Chahine)

Dr. Chahine emphasized that mega-events unfold across four demanding phases: agenda setting and bidding, event delivery, operational management, and post-event legacy, each requiring long-term coordination and institutional continuity. She stressed that *“we need to reframe sustainability around communities and places, not just around events. This means enforceable commitments that outlast the spectacle.”*

Her analysis highlighted contrasting global experiences. Expo 2020 Dubai achieved 80 percent building reuse and is evolving into a mixed-use innovation district, though affordability concerns persist. London 2012 successfully transformed the Olympic Park but reduced affordable housing commitments during implementation. Rio 2016, by contrast, suffered from weak governance and fiscal crisis, resulting in incomplete or abandoned projects. Dr. Chahine proposed a three-point framework for community-centered legacy planning: reframing sustainability around long-term community needs; strengthening municipal leadership to ensure continuity beyond event organizers; and treating legacy sites as prototypes that can be tested, adapted, and scaled across the city. She identified priority interventions for prototyping, including nature-based solutions such as biodiversity gardens and urban agriculture, resilience infrastructure for stormwater and climate adaptation, and digital engagement platforms that offer real-time community feedback and participatory tools.

4.2 Data-Driven Governance (Dr. Alsaleh Sugati)

Dr. Sugati highlighted the transformative role of data and analytics in urban governance, emphasizing that *“evidence-based decision-making enables cities to anticipate challenges, optimize resources, and enhance citizen outcomes.”* He noted that integrating real-time data streams from infrastructure, mobility, environmental monitoring, and social feedback allows cities to respond proactively to dynamic urban conditions, particularly in contexts with high population growth, seasonal visitor influx, and event-driven pressures. Dr. Sugati outlined three core principles of data-driven governance. First, predictive analytics enable authorities to anticipate demand, manage risks, and optimize resource allocation. Second, integrated governance facilitates coordination across multiple sectors and agencies, ensuring that policy decisions are cohesive and mutually reinforcing. Third, continuous performance monitoring allows for iterative policy adjustments, strengthening accountability and transparency.

He illustrated these principles with case studies from Saudi cities, like mega-events that Riyadh is hosting, and the ongoing giga projects, including Green Riyadh (green belts and parks addressing thermal peaks) and Sports Boulevard (linear connectivity addressing urban heat through design), where data-driven governance has enhanced large-scale project planning, improved service delivery, and supported resilience-building. By linking advanced analytics with urban strategy, cities can ensure that infrastructure, environmental management, and citizen services deliver measurable and sustainable benefits for both residents and visitors.

4.3 Circular and Climate-Resilient Systems (Dr. Leila Mohaghegh)

Dr. Mohaghegh highlighted the role of circular design in advancing sustainable urban futures, noting that *“every drop, watt, and material counts when circular design becomes the DNA of the city. Mega-events give us the scale and urgency to test these systems, but legacy requires permanence.”* She emphasized that mega-events can serve as testbeds for resource-efficient systems, provided these innovations are integrated into long-term planning.

Her intervention focused on three pathways for lasting ecological legacies: circular energy-water loops powered by renewable energy and greywater reuse; material circularity through modular, low-carbon construction designed for disassembly; and nature-positive systems supported by green-blue infrastructure and waste-to-resource innovation. Dr. Mohaghegh illustrated these principles through the Terra Sustainability Pavilion at Expo City Dubai, featuring solar energy generation, greywater recycling, low-carbon materials, and post-event reuse, and Paris 2024, which achieved a 50 percent carbon reduction by reusing existing venues, adopting modular structures, committing to renewable energy, and prioritizing sustainable mobility. She concluded with policy pathways that include institutionalizing circularity in planning, promoting adaptive reuse and modular infrastructure, engaging communities and SMEs, and scaling successful practices through regional networks.

4.4 Adaptive Urban Design (Ms. Caroline Bos and Ms. Dana Behrman)

The UNStudio team emphasized designing urban environments for long-term flexibility, noting that the test of a successful mega-event is not what happens during the two weeks of global attention, but what happens in the two decades that follow. Adaptive urban design integrates architecture, planning, and technology from the outset to ensure infrastructure and spaces can evolve over time.

They outlined five key principles: future-proofing for multiple post-event uses; integrated planning linking architecture, urban planning, and smart technologies; flexible spatial arrangements; smart systems enabling real-time adaptation; and human-centric design prioritizing community needs. The team also stressed that successful legacy requires innovative governance balancing public interest, private efficiency, sustainability, and stakeholder accountability, supported by multi-scenario planning, layered infrastructure, community integration, and phased activation.

4.5 Innovation and Data (Mr. Abdulrahman Ibrahim)

Al Madinah Region manages 1.5 million residents and 18 million annual visitors, with an annual growth rate of 3 percent, reflecting a uniquely high-volume visitor flow. As Mr. Abdulrahman Ibrahim noted, *“according to global mega event definitions in terms of visitor numbers, Al Madinah is effectively hosting a mega event every single day of the year.”* This scale is further demonstrated by the intensive monthly activity at the Prophet’s Mosque, which in the off-season of 2025 recorded 20.7 million worshippers, 2.1 million visitors to the Prophet, and 1.0 million Rawdha worshippers.

The region employs a data-driven framework oriented around three core outcomes: Sustainable Development (balancing growth with resource efficiency), Resilience (managing seasonal fluctuations and disruptions), and Quality of Life (ensuring residents benefit alongside large volumes of visitors). Innovation efforts include real-time monitoring systems, predictive analytics for anticipating demand, integrated governance aligning religious, cultural, and urban priorities, and continuous experimentation in management approaches.

4.6 Inclusive Cities for Children (Dr. Sarah Sabry)

Dr. Sabry envisions mega-events, as well as large events like summits and conferences, as catalysts for urban transformation that center children, families, and communities: *“Imagine if every large event that brings thousands of people into a city could become a catalyst for urban transformation, especially for children, families, and communities. We should challenge all major events and conferences to leave behind a meaningful legacy, not just to tick a box, but something that can be replicated or scaled.”* Dr. Sabry challenges fundamental assumptions about who cities are planned for, arguing that most contemporary cities are still designed around able-bodied, working-age men and car-oriented mobility systems. As a result, essential questions related to children’s health, safety, well-being, mobility, and happiness are rarely addressed.

Caregivers' needs remain largely invisible, and many public spaces and transport systems do not accommodate families, older persons, or persons with disabilities. This systemic exclusion, she argued, begins long before cities consider hosting major events.

Dr. Sabry discussed seven legacy priorities for creating child-friendly mega-event outcomes: safer streets around schools and venues; playful urban spaces including permanent and temporary play areas; mechanisms for youth participation in planning and legacy governance; neighborhoods that prioritize walkability, cycling, and happiness; inclusive and accessible event facilities; and using mega-event investments to support slum upgrading, childcare, and essential services.

4.7 Expo City Dubai Legacy (Ms. Misha Mittal)

Transformation from Expo 2020 represents a comprehensive mega-event legacy with over 80% building reuse into Expo City Dubai, Sustainability/Mobility/Opportunity thematic districts preserved, and mixed-use development including tech hub, innovation center, startups, offices, housing, museums, cultural centers, and public spaces. Sustainability implementation features policy integration in all development decisions, strategic phased approaches ensuring continuous improvement, international certifications for buildings and infrastructure, and ongoing environmental outcome monitoring. Crisis management capabilities developed during COVID-19 postponement now provide ongoing operational resilience through flexible operations, digital integration, and health protocols.

Human-centric model demonstrates successful characteristics: community accessibility to public spaces and cultural facilities, innovation ecosystem with startups and research facilities, green infrastructure integrating energy-water-waste systems, cultural programming providing permanent civic assets, and economic diversification mixing residential, commercial, educational, and cultural uses. Strategic alignment with Dubai Urban Plan 2040 and UAE Vision 2030 ensures integration with long-term urban development rather than standalone project status.

5. Framework for Legacy Planning

A robust framework for legacy planning ensures that mega-events generate lasting social, economic, and environmental benefits. By integrating strategic principles, measurable indicators, phased implementation, and governance mechanisms, cities can maximize positive outcomes and mitigate common risks such as white elephants, social exclusion, and environmental degradation.

5.1 Eight Guiding Principles

These principles guide legacy planning from early stages through post-event transformation, emphasizing sustainability, equity, adaptability, and learning from global best practices.



1. **Early Integration:** Embed legacy planning from bidding phase, shaping venue design, site selection, and financial planning from earliest stages. Success requires integrated concepts like Paris 2024 and Expo City Dubai.
2. **Community-Centered:** Prioritize local needs, meaningful participation, and anti-displacement measures. Communities need substantive voice, binding protections, and guaranteed benefit access. Failure leads to Athens 2004 and Rio 2016 outcomes.
3. **Climate-Positive:** Establish binding environmental commitments including circular economy and renewable energy targets. Measurable through carbon neutrality, waste reduction, and biodiversity enhancement as demonstrated by Paris 2024.
4. **Inclusive Governance:** Create multi-stakeholder coordination with dedicated legacy authorities ensuring transparency and accountability. Effective models include SOLIDEO (Paris) and Expo City Dubai Authority versus fragmented Athens 2004 governance.
5. **Adaptive Design:** Develop flexible infrastructure enabling multiple post-event uses through modular construction and future-proofing. Buildings designed for transformation, not single purposes, exemplified by UNStudio's approach.
6. **Economic Sustainability:** Avoid white elephants through long-term financial viability and reuse prioritization. Target 80%+ venue reuse with clear post-event business models versus Athens' specialized stadiums without post-use.
7. **Social Equity:** Mandate affordable housing quotas (minimum 25%), create local employment, deliver benefits to marginalized groups. Paris 2024's social housing and SME funding demonstrate equity commitment.
8. **Evidence-Based:** Implement data-driven monitoring, continuous evaluation, and learning systems. Saudi Quality of Life Program and Al Madinah approaches show analytics guiding interventions throughout event lifecycle.

5.2 Key Indicators

The following indicators translate principles into measurable outcomes across economic, social, environmental, and governance dimensions, enabling monitoring, accountability, and evidence-based adjustments.

Table 3: Key indicators for legacy planning

Dimension	Indicators	Targets
Economic	Cost-benefit ratio, job creation, SME participation, tourism sustainability, property values, municipal revenue	Positive ROI within 10 years, net job growth, 30% local business engagement, balanced growth without displacement
Social	Affordable housing delivery, community access, displacement metrics, inclusivity measures, social infrastructure, cohesion	25% affordable housing minimum, majority local facility usage, zero involuntary displacement, universal design standards

Environmental	Carbon reduction, renewable energy, green space, waste reduction, biodiversity, resource efficiency	50% emission reduction, 100% renewable energy, zero waste to landfill, net positive biodiversity
Governance	Stakeholder engagement, institutional continuity, transparency, accountability, partnership effectiveness	Meaningful community representation, 5+ years authority operation, annual comprehensive reporting, third-party verification

5.3 Lifecycle Approach

Organized into four phases: pre-event, delivery, post-event transformation, and long-term evaluation, this approach ensures structured implementation, adaptive reuse, and sustained community and urban benefits.

Phase 1: Pre-Event (Years -7 to -2)

Priorities: Vision alignment with masterplans, community consultation establishment, binding sustainability commitments, dedicated governance creation, risk assessment and mitigation, financial planning with 20% contingency.

Deliverables: Legacy master plan, governance charter, community benefit agreements, sustainability commitments, baseline data systems.

Phase 2: Event Delivery (Years -2 to 0)

Priorities: Infrastructure decisions with transformation plans, workforce development for long-term pathways, circular procurement and SME participation, real-time monitoring, community benefits realization, crisis management protocols.

Deliverables: Completed transformation-ready infrastructure, trained workforce, documented lessons, community feedback integration.

Phase 3: Post-Event Transformation (Years 0 to +3)

Priorities: Adaptive reuse within 6-12 months, community programming launch, ongoing monitoring and reporting, policy integration citywide, economic transition support, social impact management.

Deliverables: Operational legacy sites, affordable housing delivered, environmental targets achieved, economic sustainability demonstrated.

Phase 4: Long-Term Evaluation (Years +3 onwards)

Priorities: 5-year and 10-year comprehensive assessments, knowledge sharing through networks, continuous improvement, regional dissemination, framework refinement, learning community participation.

Deliverables: Impact reports, case studies, updated frameworks, mentor relationships with future hosts.

5.4 Governance Mechanisms

Strong governance combines dedicated authorities, legal frameworks, public-private partnerships, and municipal capacity building to ensure transparency, coordination, and continuity in achieving legacy outcomes.

Dedicated Legacy Authorities: Effective models include SOLIDEO (Paris 2024), Expo City Dubai Authority, and London Legacy Development Corporation with characteristics of legal mandate, multi-year funding (minimum 5 years), stakeholder representation, clear accountability, and technical expertise.

Legal Frameworks: Robust systems establish community rights protection, environmental safeguards, affordable housing quotas (25% minimum), anti-displacement measures, labor standards enforcement, and public access requirements.

Public-Private Partnerships: Effective models balance risk sharing, performance-based contracts, long-term value focus, community benefit agreements, and transparent procurement ensuring public benefit while leveraging private efficiency.

Municipal Capacity Building: Required capabilities include data analytics, project management, community engagement, financial management, inter-agency coordination, and international best practice learning through training programs, technology systems, professional development, and knowledge networks.

6. Recommendations

6.1 For National and Local Governments

Governance and Planning

- **Establish Dedicated Legacy Governance Bodies** with clear mandates, multi-year budgets (minimum 5 years post-event), stakeholder representation, legal authority for binding decisions, and cross-government coordination *before bidding begins*
- **Integrate Mega-Events into Long-Term Urban Masterplans** and national development strategies, aligning with Vision 2030-type frameworks, SDG action plans, and climate commitments to ensure events serve broader objectives
- **Invest in Municipal Capacity** for data-driven monitoring, evaluation, and adaptive management, building capabilities in analytics, project management, community engagement, and financial planning through training and technical assistance

Infrastructure and Fiscal Sustainability

- **Prioritize Existing Infrastructure Reuse** over new construction, targeting 80%+ venue reuse. Require post-event business case demonstration and demand justification for any new venues, defaulting to temporary modular construction
- **Ensure Fiscal Sustainability** through realistic budgeting with contingency planning (minimum 20% reserves), transparent cost-benefit analysis, and avoidance of excessive public debt. Learn from Athens 2004's €11 billion burden
- **Create Post-Event Funding Mechanisms** for ongoing management, maintenance, and programming through property tax increments, tourism levies, endowment funds, and long-term public-private partnership arrangements



Social Equity and Community Protection

- **Require Legally Binding Commitments** for affordable housing (minimum 25% social housing), meaningful community consultation with displacement veto rights, and environmental remediation with enforceable carbon neutrality targets
- **Protect Vulnerable Communities** from displacement through land-rights safeguards, relocation assistance where necessary, rent control mechanisms, and right-to-return guarantees. Target zero involuntary displacement with comprehensive remedies

6.2 For Event Organizers and Developers

Circular Design and Environmental Sustainability

- **Adopt Circular Economy Principles** prioritizing material reuse, recycled content, waste minimization, design for disassembly, low-carbon materials, and material recovery systems. Target: Zero waste to landfill
- **Use Modular and Adaptive Construction Methods** enabling post-event transformation through multiple use scenarios, separable systems, and reconfigurable spaces. Follow Paris 2024's lightweight temporary venue approach
- **Commit to Carbon Neutrality** through 100% renewable energy, low-carbon materials, and credible offsets for unavoidable emissions. Benchmark: Paris 2024's 50% carbon reduction achievement

Venue Strategy and Post-Event Planning

- **Maximize Use of Existing Venues** and temporary structures. Avoid permanent single-use facilities. Conduct rigorous post-event demand analysis. Learn from Athens' specialized stadium failures that became white elephants
- **Design for Post-Event Flexibility** with multiple use scenarios planned from the outset. Require documented business plans for three different post-event uses and engage future operators during design phase

Local Engagement and Transparency

- **Engage Local SMEs and Workforce** throughout project lifecycle. Target: 30%+ local participation through apprenticeships, preferential procurement, and workforce development with post-event employment pathways
- **Establish Transparent Reporting** on social and environmental impact aligned with GRI standards and SDG indicators. Provide regular progress reports, independent audits, and public data access to build trust and enable learning
- **Collaborate with Academic and Research Institutions** for innovation and documentation, providing research capacity, evaluation expertise, knowledge dissemination, and embedded partnerships, monitoring real-time impacts

6.3 For Communities and Civil Society

Meaningful Participation and Advocacy

- **Demand Meaningful Participation** in planning processes beyond token consultation. Require early engagement before decisions are finalized, access to technical information, and binding enforceable commitments
- **Monitor and Advocate for Commitments** to affordable housing and local benefits. Document promises made during bidding and planning, track delivery progress, and publicly hold authorities accountable for implementation gaps
- **Build Coalitions Across Affected Neighborhoods** for collective voice. Unite diverse communities sharing displacement, affordability, and access concerns to increase bargaining power for sustained advocacy

Documentation and Knowledge Sharing

- **Document and Share Experiences** for policy learning and accountability. Use participatory video, photo documentation, surveys, and storytelling to record community impacts for media, researchers, and future host cities.
- **Activate community-oriented competitions linked to the legacy agenda**, aligned with the legacy event's theme to catalyze both short-term activation and long-term transformation, prioritizing locally driven solutions, youth engagement, and social innovation.

Post-Event Engagement and Rights Protection

- **Engage in Post-Event Governance** through legacy authority representation. Demand community seats on governing boards, participation in programming decisions, and ongoing operations monitoring to ensure sustained community benefit
- **Develop Community-Led Programming Proposals** for legacy facilities. Proactively create cultural programs, social services, educational activities, and economic initiatives rather than waiting for government decisions
- **Use Legal Mechanisms to Protect Rights**, including community benefit agreements, participatory budgeting, and environmental justice frameworks. Work with legal advocates to ensure enforceable protections beyond voluntary pledges

6.4 For International Organizations and Development Partners

Standards and Frameworks

- **Develop Standardized Frameworks for Legacy Assessment** through coordination among UN-Habitat, IOC, BIE, and FIFA. Create common indicators, measurement methodologies, and reporting standards enabling cross-event and cross-city comparison
- **Advocate for Alignment with SDGs, New Urban Agenda, and Paris Agreement** by framing mega-events as opportunities to accelerate global goals. Require demonstration of SDG contributions and integration with Voluntary Local Review (VLR) processes

- **Integrate Mega-Event Legacy into VLR Processes** encouraging cities to use legacy planning and evaluation as part of comprehensive SDG progress assessment, connecting event impacts to broader sustainable development trajectories

Capacity Building and Knowledge Exchange

- **Provide Technical Assistance for Capacity Building** in host cities, offering expertise in participatory planning, environmental assessment, data analytics, financial management, and governance design through expert rosters available for advisory missions
- **Facilitate Knowledge Exchange Between Host Cities** through peer learning networks. Organize study tours, exchanges, and collaborative workshops connecting past, current, and future hosts with comprehensive case study dissemination
- **Embed education and skills development** through dedicated community programs, including school-based initiatives that culminate in structured exchanges between students and event experts.
- **Offer free, practical workshops for local communities** on sustainable building practices, urban gardening, circular economy solutions, and other locally relevant sustainability skills.
- **Support Research on Best Practices, Innovations, and Failures** by funding independent research examining what works and why. Commission longitudinal studies tracking 10+ year outcomes and make research publicly accessible

Financial Mechanisms

- **Create Funding Mechanisms for Sustainable Legacy Implementation**, including blended finance, green bonds, and concessional lending for sustainable infrastructure. Work with development banks to offer favorable terms for projects meeting sustainability criteria
- **Provide seed funding and capacity-building support** for community-led experimentation, to test small-scale, place-based initiatives that promote healthy, inclusive, and environmentally sustainable neighborhoods, with mechanisms to scale successful models.

6.5 For Private Sector and Investors

Investment Strategy and ESG Integration

- **Adopt ESG Criteria for Mega-Event Investments** with measurable environmental, social, and governance targets. Integrate sustainability performance into investment decisions, contract awards, and ongoing monitoring
- **Support Long-Term Value Creation** over short-term speculation. Design investment structures and timelines aligned with 10-20 year horizons, avoiding models that incentivize quick flips that undermine sustainability goals

- **Invest in Green Technologies and Circular Solutions** including renewable energy, waste-to-resource systems, water recycling, and low-carbon materials. Use mega-events as testbeds for scalable innovations

Local Partnerships and Social Equity

- **Partner with Local Communities and Enterprises** through capacity building, joint ventures, and preferential procurement. Invest in local supply chain strengthening and apprenticeship/skills development programs
- **Contribute to Affordable Housing and Social Infrastructure** accepting that purely market-rate development perpetuates inequalities. Incorporate mixed-income housing (minimum 25% affordable), community facilities, and public services

Ethical Practices and Governance

- **Commit to Transparent Supply Chains and Ethical Labor Practices** with zero tolerance for exploitation. Ensure fair wages, safe working conditions, and worker rights throughout supply chains with independent monitoring and remediation mechanisms
- **Participate in Legacy Governance Mechanisms** and community engagement. Accept board representation alongside government and community representatives, committing to sustained dialogue and accountability beyond construction completion

6.6 Prototyping Opportunities

Legacy sites should serve as **living laboratories for urban innovation** with successful pilots scaled to other contexts through rigorous documentation, replication toolkits, regional learning networks, policy integration, and adaptation funding.

Child-Friendly Public Space and Streets: Prototype safe, child-friendly streets through traffic calming, tactical urbanism, and safe crossings. Test pop-up play and resting spaces, including modular, eco-friendly, and durable “play-in-a-box” systems that can travel to underserved and urban-poor communities and be reused across sites.

Inclusive Mobility and Active Transport: Prototype inclusive mobility solutions that prioritize walking and cycling infrastructure to and around event sites, ensuring safe, affordable, and accessible access for children, older persons, and persons with disabilities.

Biodiversity and Nature-Based Solutions: Urban agriculture, demonstration gardens, green roofs, rainwater harvesting, soil regeneration, pollinator corridors, educational programming (Examples: Milan Expo 2015 Planetary Garden, Shanghai Expo 2010 Cultural Park).

Climate Resilience Infrastructure: Integrated drainage systems, stormwater management, flood protection, heat mitigation, climate-adaptive design, early warning systems (Examples: Queen Elizabeth Olympic Park wetlands, Rotterdam Water Square, Copenhagen Cloudburst Plan).

Digital Engagement Platforms: Real-time feedback systems, community dashboards, AI-powered management, participatory budgeting tools, open data platforms, digital twins (Examples: Vienna Smart City, Amsterdam Living Labs, Barcelona Urban Lab with Decidim).

Circular Economy Systems: Material recovery facilities, composting systems, energy-from-waste technologies, water recycling, industrial symbiosis, repair cafes (Examples: Terra Sustainability Pavilion, Paris 2024 circular procurement).

Affordable Housing Models: Cooperative housing, community land trusts, incremental housing, mixed-income developments, innovative financing, co-housing arrangements (Examples: Paris 2024 Olympic Village social housing, New York Hunters Point South).

7. Conclusion

Mega-events represent transformative opportunities for cities when strategically leveraged as catalysts for long-term sustainable urban development. Global case study evidence demonstrates that legacy outcomes depend critically on planning approach, governance structure, and community engagement quality.

Paradigm Shift: From Spectacle to Lasting Value

The era of treating mega-events as temporary spectacles has ended. Cities increasingly recognize that real value lies not in weeks of global attention, but in decades of urban benefits that follow. This requires a fundamental mindset shift:

- From **event hosting** to **legacy creation**
- From **top-down planning** to **community-centered design**
- From **single-use infrastructure** to **adaptive systems**

Three-Dimensional Integration

Successful mega-event legacies integrate three inseparable dimensions:

Economic Sustainability:

- Avoid white elephants through infrastructure reuse (target: 80%+ venue reuse)
- Prioritize existing venues over new construction
- Use modular temporary construction where new facilities are required
- Ensure long-term financial viability with post-event business models

Social Equity:

- Address displacement risks through binding anti-displacement measures
- Provide affordable housing (minimum 25% in new developments)
- Enable meaningful community engagement with decision-making authority
- Create local employment pathways beyond event construction
- Deliver tangible benefits to marginalized groups

Environmental Leadership:

- Establish binding climate commitments (target: carbon neutrality)
- Adopt circular economy principles throughout project lifecycle
- Create nature-positive systems that enhance biodiversity
- Use mega-events as laboratories for green innovation

Critical Governance Role: Every successful case features strong governance: SOLIDEO in Paris, Expo City Dubai Authority, integrated Shanghai planning. Failures correlate with weak, fragmented governance. Dedicated legacy authorities with clear mandates, multi-stakeholder representation, and long-term funding are essential infrastructure as important as physical buildings.

Expo City Dubai: Future Model: Expo City Dubai exemplifies transformation potential with over 80% of Expo 2020 buildings serving permanent purposes, museums, innovation hubs, cultural centers, housing, and public spaces. The infrastructure investment integrated with the Dubai Urban Plan 2040 demonstrates strategic alignment. Sustainability certifications, crisis management capabilities, and human-centric design offer replicable models for future-focused urban districts.

Integrated Framework for Action: This white paper presents integrated framework built on eight guiding principles, comprehensive indicators across four dimensions, lifecycle approach spanning bidding to long-term evaluation, and governance mechanisms ensuring accountability. The framework synthesizes global case study lessons and expert insights into actionable guidance.

Collaborative Action Requirements: Achieving sustainable mega-event legacies requires collaboration across all stakeholders: governments establishing dedicated legacy bodies, integrating events into masterplans, protecting communities; organizers adopting circular principles, maximizing reuse, engaging local enterprises; communities participating meaningfully, monitoring commitments, shaping programming; international organizations developing standards, facilitating learning, providing technical support; private sector adopting ESG criteria, supporting long-term value, committing to ethical practices.

SDG 11 and New Urban Agenda Acceleration: Mega-events can accelerate progress toward SDG 11 (Sustainable Cities and Communities) and New Urban Agenda when designed as policy laboratories, investment catalysts, and governance platforms. They offer opportunities to prototype solutions at scale, build institutional capacity, and demonstrate sustainable urban development in practice.

Continued Dialogue and Implementation: This white paper marks a beginning, not a conclusion. UN-Habitat and partners commit to ongoing knowledge sessions and learning exchanges, detailed implementation toolkit development, technical assistance for cities planning mega-events, research on emerging practices and innovations, advocacy for international standards and commitments, and monitoring and evaluation of legacy outcomes across multiple events.



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