



How environmental, social, and governance principles can breathe LIFE back into cities

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EXECUTIVE SUMMARY

Fast-growing cities in the Middle East and North Africa (MENA) region have the opportunity to overcome the challenges caused by economic development, population growth, and, in some places, urban decay. Already, some two-thirds of the MENA region's population of around 322 million live in urban areas,¹ and the numbers are expected to increase. Urban development has resulted in substantial CO₂ emissions; the building and construction sector accounts for about 37 percent of energy-related emissions (a record high in 2021).²

The MENA region's ambitious development goals present a chance for governments to improve quality of life by aligning urban regeneration with environmental, social, and governance (ESG) principles. This effort can preserve cultural and historical heritage, thereby contributing to national identity. ESG-infused urban regeneration can stimulate an urban renaissance, reviving cities and making them more attractive to both residents and investors, as well as to visitors as part of the region's tourism ambitions. The combination of ESG and urban regeneration also can create sustainable economic growth.

ESG and urban regeneration are natural companions and can be implemented through the LIFE approach. The four phases of LIFE are:

- **Learn (and listen)**, considering the socioeconomic, cultural, and historical characteristics and community needs
- **Integrate**, by embedding ESG principles in every phase and aspect of the project, from exploratory conversations and planning to design and implementation; from ongoing operations to managing the assets over the long term
- **Fix**, by setting ESG targets and other key performance indicators (KPIs) that translate the commitment into a tangible, measurable effort
- **Earn** the rewards, with community members enjoying renewed quality of life and the public-sector and private-sector sponsoring partners ultimately reaping the payback of the effort.

THE URGENT NEED FOR URBAN REVIVAL



By the late 1980s, 40 years of depopulation and housing stock deterioration had left the central city district of Santiago, Chile, in disrepair. Investors fled for opportunities at the city's periphery, where they saw the hope of better returns. A program begun in 1990 set out to reverse the decline—but not in the usual way. Rather than simply dangling incentives to entice developers, city leaders formed a partnership between the public and private sectors and brought together residents, local businesses, and other stakeholders. Together, they formulated a holistic strategy to revitalize the district's neighborhoods, one in which quality of life, historical and cultural values, and environmental considerations were intrinsic to the project's goals. To facilitate funding, the government kicked in subsidies, relaxed terms and conditions, and ran pilot projects to limit risk. Today, the Santiago municipal district is one of the most vibrant residential areas in the entire country.

Many cities in the Middle East and North Africa (MENA) region face the predicament Santiago once did. Rapid, unfettered expansion that focused on high-end development has fueled sprawl and left urban cores to decay. Such a path is untenable in the MENA region, in which two-thirds of the population—over 330 million people—live in urban areas.³ By 2050, there will be more than 440 million people in MENA cities⁴—equivalent to the entire regional population in 2020. Considering that operational CO₂ emissions in the building and construction sector represent about 37 percent of energy-related emissions (a record high in 2021) and that the sector accounts for some 34 percent of global energy demand (in volume), it is clear that major interventions in the existing built environment are urgently needed.⁵

Santiago's approach to urban regeneration is already underway in some MENA locations, notably Jeddah's Al Balad district in Saudi Arabia and downtown Sharjah in the United Arab Emirates (UAE). Urban regeneration differs from traditional development. It is the process of breathing new life into old districts in a way that balances social, economic, and environmental considerations with the need to generate positive economics for the private- and public-sector sponsoring entities. It involves solving planning problems (repairing the housing stock, addressing traffic and infrastructure) and reviving the local economy (including encouraging traditional commercial activity). More recent instances incorporate new trends in urban planning that enhance livability, such as digital solutions and “the 15-minute neighborhood,” designed for people to live, work, and play within walking distance of amenities. At the same time, it involves conserving or restoring culturally and historically important sites, protecting the social fabric, and connecting the younger generations to their national heritage. Urban regeneration efforts seek a better asset mix with affordable options for fostering social cohesion, while aiming to improve access to services such as education and healthcare.

However, regeneration programs come with steep challenges, for governments and developers alike. Rebuilding below-standard, or environmentally inefficient, infrastructure and building stock is relatively straightforward; regeneration requires striking a deft balance between improvement and gentrification (which has traditionally been a safer bet for developers and investors as it replaces lower-income residents with wealthier inhabitants). Improving socioeconomic conditions while preserving the authentic social and economic fabric of a place can be a tall order. Doing so sustainably, from construction through the end of the asset's life, can be an even taller one.

Although every regeneration program comes with unique challenges and priorities, they all must reconcile the priorities and assets of the local communities with the ambitions of other key stakeholders, which could be at odds.

Any major regeneration program is a complex undertaking, requiring deep research and a well-articulated strategy and project organization to carry it out. These challenges, and the long-term nature of such projects, call for a systematic approach. We believe that ESG principles, widely adopted for financial investing, are tailor-made for the complexities of urban regeneration. When these principles are applied to each project phase, they can boost the odds of success: from identifying needs and goals to aligning interests, from guiding planning and management to implementation and achieving the multifaceted goals. ESG is a way to breathe life into urban regeneration—and ensure that the projects breathe life into their cities.

THE URBAN REGENERATION OPPORTUNITY

Housing conditions and living standards for a significant portion of the MENA region's population are substandard. In 2018, about 31 percent of all city dwellers in the Arab world lived in decaying neighborhoods under substandard conditions.⁶ According to our own calculations, the cost of renovating a sample of 15 such districts throughout the region (Saudi Arabia, the UAE, Qatar, Egypt, Iraq, Syria, and Jordan) could well reach US\$500 billion. It could also improve the lives of millions of residents, directly or indirectly.⁷

In Cairo, an estimated 40 percent of the population lives in informal settlements (that is, settlements that are unplanned or on illegally occupied property).⁸ However, this problem is hardly limited to the region's poorer counties. Some 40 percent of Makkah's population of 2.1 million lives in 65 informal settlements throughout zones comprising roughly 40 percent of the city's total land area. By 2040, if no remedial action is taken, the population in Makkah's informal settlements could exceed 1.5 million. As of 2021, Jeddah had 1 million people living in more than 60 informal settlements situated on 20 percent of the city's land area, until the government took action.⁹

In Riyadh, the low-density urban development pursued in many neighborhoods has exacerbated the pressure for housing. The outward movement of people to more recently developed districts has come at a cost: the expansion of inefficient infrastructure, and the neglect of older parts of town. Now, given Saudi Arabia's goals to double¹⁰ the population of Riyadh by 2030 and boost tourism, regenerating those older core areas has become a necessity.

Along with boosting housing and commercial space, the other rationale for urban regeneration is the contribution to sustainability. The MENA region accounts for approximately 9 percent of global greenhouse gas emissions (3.2 billion tons in 2018),¹¹ half of which can be attributed to building materials, construction, and operations.¹² That means that a reduction in emissions from all aspects of the built environment will be central to meeting the net-zero pledges of countries in the region. Beyond environmental improvements, an abundance of historically and culturally important zones and sites merit restoration. For example, central Riyadh is home to numerous national heritage buildings. Egypt has approximately 6,500, according to the Civilization Coordination Organization.¹³



WHY AN ESG-BASED URBAN REGENERATION STRATEGY MAKES SENSE

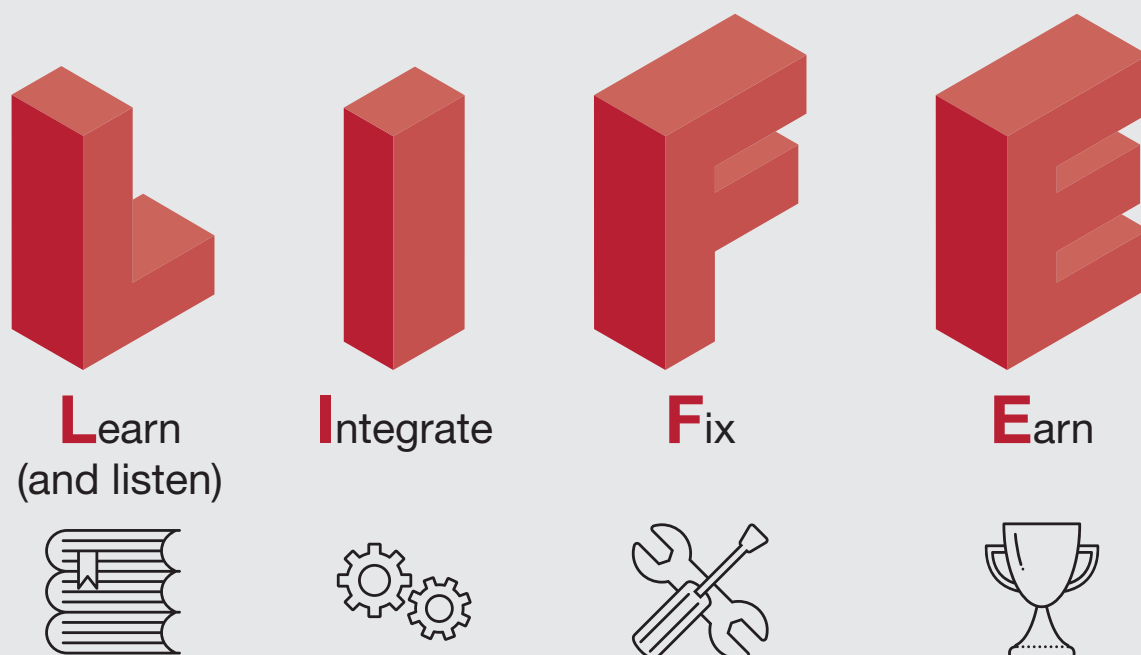
Aligning urban regeneration efforts with ESG principles provides a powerful tool with which to overcome the common challenges of regeneration. Sustainability, whether it involves improving infrastructure, increasing efficiency in construction, or making buildings more energy efficient, is central to the environmental goal. Countries such as Bahrain, Saudi Arabia, and the UAE have pledged their commitment to a net-zero target in the coming decades. Preserving the social fabric and engaging communities in the regeneration effort fosters the social agenda. Providing transparency and enforcing the right values establish a sound basis for governance.

Urban regeneration in line with ESG principles provides two additional benefits. First, regeneration programs based on ESG principles conform to the growing demand from investors and financiers for ESG compliance, and they should thus lead to further financing opportunities and foreign direct investment. Second, such urban regeneration offers an attractive opportunity for countries in the Gulf Cooperation Council (GCC).¹⁴ These countries aim to preserve their rich history and cultural heritage to benefit residents, restore old city districts, add back vital housing and commercial space, and develop tourism.

Urban regeneration requires a new mindset

Embedding ESG principles into an urban regeneration project calls for a particular mindset, one embodied in the metaphor (and acronym) of breathing LIFE into the project in four phases (see *Exhibit 1*).

EXHIBIT 1 The LIFE phases for urban regeneration



Source: Strategy&

Learn (and listen)

Every project must begin with a period of learning and listening, to understand the socioeconomic, cultural, and historical characteristics and community needs of the area. It is important for all stakeholders to communicate their needs and expectations and to understand the project in the broader context of the whole city.

Integrate

ESG principles must be embedded in every phase and aspect of the project, from exploratory conversations and planning to design and implementation; from ongoing operations to managing the assets over the long term.

Fix

Projects need to fix ESG targets and other KPIs that translate the commitment into a tangible, measurable effort.

Earn

As a result of these actions, community members earn rewards—enjoying a higher quality of life—and the public- and private-sector sponsoring partners ultimately reap the payback of the effort.

The LIFE phases of urban regeneration

LIFE is a series of phases that guide an urban regeneration project.

Phase 1: Learn (and listen)

To define the overarching strategy and objectives of the program, and to embed ESG principles in it, leaders must first gain a comprehensive picture of the project area's past and present. That includes traditional physical analysis of the regeneration target area (location, submarket assessment and asset mix, conditions of the built environment). They must also assess the area's infrastructure and technical characteristics: water, electricity, telecommunications, roads and traffic, general accessibility, waste management, security, and current levels of efficiency.

Learning must also include listening to local residents, businesspeople, and property owners about their needs and aspirations. It is important to take stock of the social, economic, and psychological indicators that reflect quality of life. In addition, project members need to learn about the district's history, urban morphology and forms, and heritage building typology and architectural forms, along with such cultural elements as customs, traditions, lore, and celebrations.

Taking all stakeholder interests into account is a vital part of governance. For that reason, it is important for project leaders to share their aspirations, and for everyone to understand the objectives of the financiers, developers, and investors along the ESG dimensions. Doing so will help in forging project objectives, managing expectations, and executing the project. Sharing these aspirations and objectives up front is essential in paving the way to integrating ESG principles into the regeneration program, from design to ongoing operations. It will also help establish transparency in communication, which can go a long way toward bridging differences and forging consensus.

Phase 2: Integrate

The integrate phase includes three elements: design, delivery, and asset management and operations.

Design

In the design phase, the ESG principles provide a framework for target setting and help stakeholders stay focused on these commonly established goals and priorities (see *Exhibit 2*).

EXHIBIT 2**Environmental, social, and governance principles applied to design**

- Design an efficient infrastructure
- Introduce circular economy principles
- Enhance walkability, green spaces, and wellness areas
- Improve building efficiency and maximize adaptive reuse

- Build a clear and transparent governance organization
- Define clear roles and responsibilities
- Compose effective boards
- Consider commercial viability



Source: Strategy&

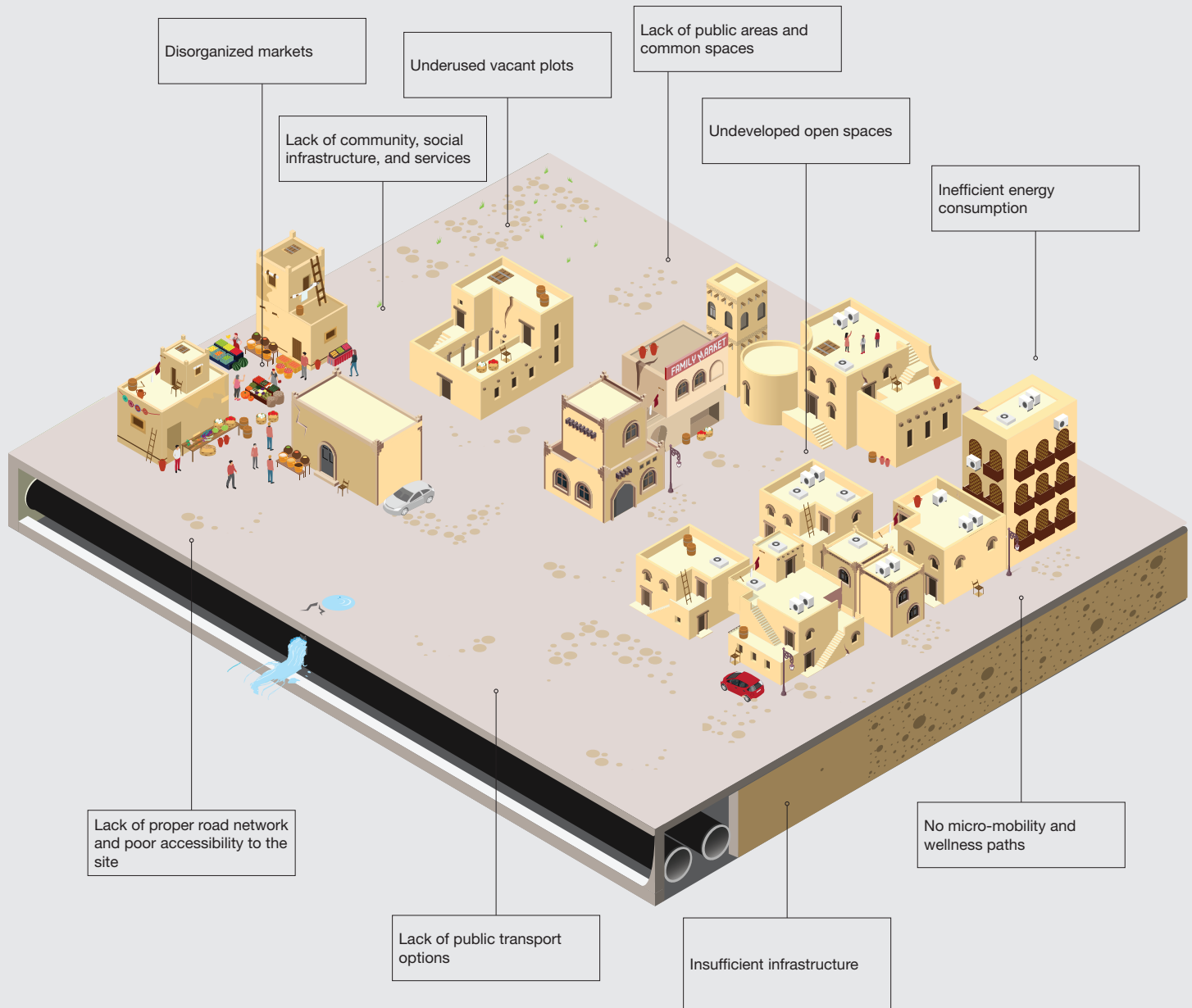
Environmental considerations

A sustainability-driven design starts with the infrastructure. Efforts should be focused on improving the efficiency of the existing infrastructure. Important elements include enhanced walkability and more green spaces, both of which are central to the concept of the 15-minute neighborhood. Green areas and improved public spaces also increase urban biodiversity, enhance microclimates, and boost overall sustainability. Other elements include a utility network that minimizes waste and supports a circular economy, and an efficient waste management system, once work is completed and the project is fully operational.

Building superstructures should be layered with passive design elements, for example, natural shading, wind tunnels, and natural lighting. Building efficiency improvements are also important; these might include better insulation for heat dissipation and district cooling systems,¹⁵ and the use of sustainable materials in accordance with explicit material guidelines such as reusing construction debris during construction or using recycled plastics during operations. Adaptive reuse is another important strategy. It involves either improving existing buildings or repurposing them in a way that preserves their current character and reduces reliance on new construction (see Exhibit 3, pages 10 and 11).

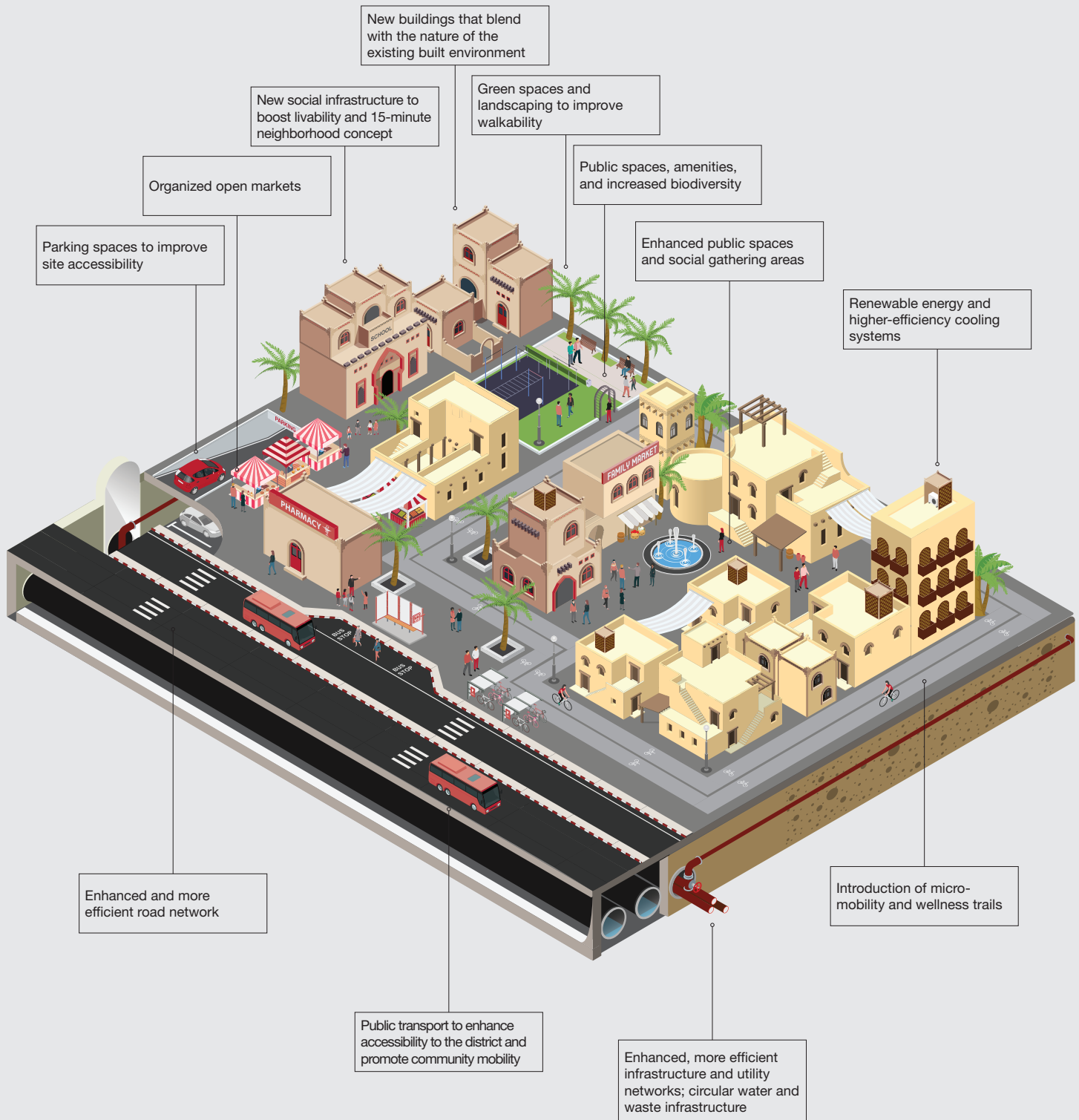
EXHIBIT 3
Bringing cities back through LIFE

BEFORE LIFE REGENERATION



Source: Strategy&

AFTER LIFE REGENERATION



Social considerations

The design should strive to preserve the social fabric, in some cases restoring what has been frayed. Local community members must be involved from the beginning so that their wishes are understood and so the restoration can avoid gentrification. The community's interests can be addressed during the design of the master plan. It is important to propose an asset mix and building clusters that promote the community's distinct cultural character and maintain current economic activity. These must be based on the project vision, real estate market projections, project positioning, and profit expectations. Preserving the existing social fabric, for example, would require offering assets that interest community members and that they can afford.

It is important for leaders to craft a detailed temporary displacement strategy for residents that ensures their well-being during construction. Such a strategy helps foster trust among the tenants, government, and other development entities.

Governance considerations

The overarching governance of the project should be hammered out in the early stages, in parallel with design. A transparent governance structure should be adopted, one that clearly defines and delineates the roles and responsibilities of the regulator and ensures the regulator is separated from the roles and responsibilities of the development company and the operating company of the urban area.¹⁶

Typically, project sponsors start by focusing on the master plan, the development approach, and the funding, while postponing the institutional setup—which is a mistake. The setup is critical because it includes the roles, responsibilities, and interactions of all the participating entities, such as the master developer, building partners, city services providers, infrastructure developers, asset managers and operators, and regulators. As a result, the fundamental concept and purpose of the project can get lost.

The institutional model, the organizational structure of the regeneration program, should be designed so that key principles—transparency, effective board composition, and clear roles and responsibilities—are enforced. The model should also consider the development's commercial viability and how cost and profit centers will be allocated to the different players. This level of transparency is beneficial in attracting private-sector participation.

Delivery

In the delivery phase, projects need to consider material and equipment (the environmental element), labor and community (the social element), and program management (the governance element) (see *Exhibit 4, page 13*).

EXHIBIT 4**Environmental, social, and governance principles applied to delivery**

- Deploy creative construction methods
- Minimize construction waste
- Reuse materials where possible; for new materials, choose sustainable materials
- Adopt modularity and use localized and efficient supply chains

- Foster strong business ethics
- Ensure transparent management of contracts
- Ensure compliance



Source: Strategy&

Environmental considerations

Minimizing construction waste through creative delivery methods should be a top priority. That can be achieved through carefully dismantling existing assets in order to reuse materials or by relying on a more localized supply chain in order to minimize overall carbon emissions. Sustainable materials as well as modular and precast construction can help offset the program's carbon footprint when new assets are built. Incentives incorporated into the master plan, along with targets and measures, can encourage the use of more sustainable materials and equipment that will reduce embodied carbon and emissions related to operations.

Social considerations

In this stage, the social agenda should focus on two components: labor and the community. Workers' welfare and strict adherence to health, safety, and security regulations are essential. It is vital to ensure that residents and visitors have access to the site during construction. It is also important to include residents and owners in project development. For example, developers should encourage local owners to redevelop their own properties in a way that is faithful to the master plan and program goals.

Governance considerations

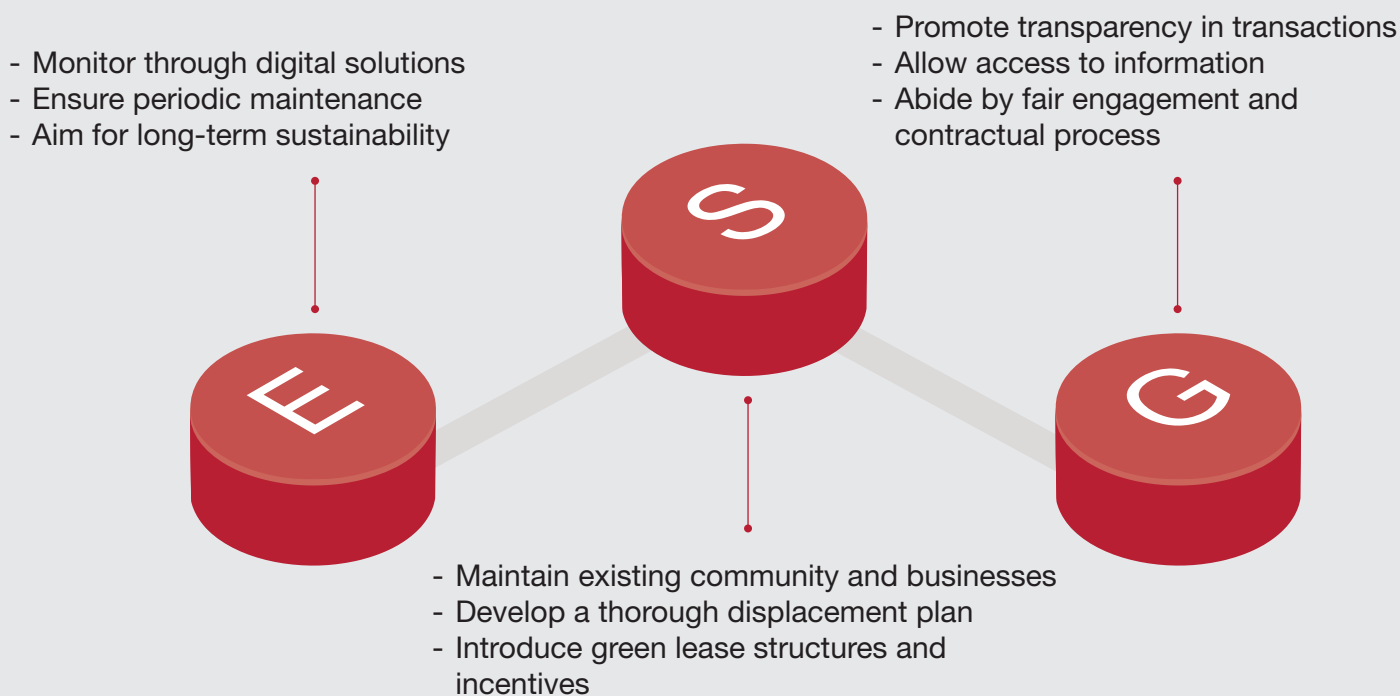
Governance considerations include issues as varied as overseeing community members' temporary displacement, ensuring contractors and entities in the broader ecosystem carry out their contractual roles and responsibilities, and maintaining business ethics. The environmental and social mandates must be clearly articulated in all contracts. For instance, a clear and transparent bidding process should be adopted and supervised by the project owner to ensure fair-market competition and avoid bid-rigging. Contracts will vary in nature (lump-sum, cost-plus, incentive scheme, and so on) depending on the project owner's level of involvement; nonetheless, it is essential to introduce the right mechanisms contractually to ensure compliance along all contracting layers (owner, general contractor, subcontractors, vendors, etc.).

Asset management and operations

With any project, it can be difficult to maintain the goals, standards, and physical integrity of the site once the active work is done and stakeholders such as project sponsors turn their attention elsewhere. In the asset management and operations phase, the ESG principles can counteract this tendency (see *Exhibit 5*).

EXHIBIT 5

Environmental, social, and governance principles applied to asset management and operations



Source: Strategy&

Environmental considerations

Once construction is completed, assets need to be constantly monitored to ensure their long-term sustainability. Digital solutions can play an important part: for instance, sensors that monitor asset performance (by measuring humidity levels, air quality, and water loss, for example) allow preventive maintenance and assessment of sustainability levels. It is also important to engage property and facility managers experienced in managing and maintaining assets using a sustainability mindset.

Social considerations

Post-development, community engagement is crucial for maintaining neighborhoods' social fabric—including retaining existing residents and businesses to the extent possible. To secure and sustain community support for the ESG agenda, sponsors need to provide communication and education on the efficiencies and benefits of the project. During this stage, incentive-based green tenancy agreements, which encourage sustainable practices, could be introduced.

Governance considerations

Ensuring transparent transactions and tenancy agreements with clear terms and maintaining fair market rates for leased assets are among the overarching objectives of governance. Again, property and facility managers need to abide by the program's goals of supporting the right tenant mix and properly maintaining assets.

Phase 3: Fix (targets and metrics)

Ambition comes with a cost. In the near term, some of the choices tied to supporting an ESG agenda might seem costlier. That is why it is important for sponsors to keep the long-term benefits in sight. Fixing targets and setting KPIs can help them monitor progress and ensure sound ESG-faithful execution throughout every project phase. Such targets and metrics are also essential for institutional investors with a sustainability agenda. In general, projects will need to define KPIs for each ESG pillar. The project should also link KPIs to the different stakeholders in the ecosystem.

For example, KPIs for the environmental pillar would track such factors as greenhouse gas emissions; energy management; water, waste, and hazard management; and compliance with regulations. Today, Leadership in Energy and Environmental Design (LEED) certification and the WELL Building Standard are the globally recognized standards for residential and commercial construction. Both emphasize environmentally friendly, energy-efficient construction designed for human well-being. LEED for Neighborhood Development goes beyond buildings by creating connected and sustainable communities. International reporting standards such as the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) are also useful. Metrics for the social component would include labor practices, employee health and safety, nondiscrimination and equality, along with training and education. Typical governance metrics include business ethics, systemic risk management, executive compensation and accountability, and procurement practices. Many quality of life and urban resilience metrics are inherent in various ESG metrics (for example, building quality and pollution and safety levels) and are thus designed into a regeneration program that follows the LIFE model.

Phase 4: Earn the rewards

Urban regeneration programs infused with ESG principles yield benefits beyond those of traditional urban renewal projects. Community members gain an enhanced quality of life and enjoy higher real estate values. Cities and their development partners are eligible for more funding opportunities. Regeneration enables growth and revitalization because the ESG principles apply to the development throughout its operational life. The impact goes beyond minimizing negative social and ecological impacts, by promoting positive effects on people and the environment.

THE IMPACT OF URBAN REGENERATION

A successful urban regeneration project improves quality of life and brings in long-term funding that sustains the revival.

Enhanced quality of life

At its core, urban regeneration aims to breathe life into neglected communities, restoring their historical, cultural, and commercial heritage while enhancing amenities. It empowers local people throughout the decision-making process. The point is not to turn these areas into living museums, but to revitalize them, by spurring economic development, attracting businesses, and reducing crime rates.

The regeneration of Santiago, Chile's municipal district, focused on enhancing the quality of life by promoting green spaces, walkability, security, and overall environmental conditions. Over a 10-year period, the district's air quality improved by 30 to 50 percent, housing stock nearly doubled, and its population and municipal revenues grew 55 percent.¹⁷ Other examples demonstrate the many benefits of ESG-based urban regeneration (see *"Urban regeneration successes"*).

Increased funding potential

An emphasis on ESG principles could unlock more funding channels for urban regeneration programs. Over the last decade, the investor appetite worldwide for green and socially oriented financing instruments has grown rapidly. In 2021, more than \$1.6 trillion in sustainable debt was issued, 33 percent of which was tied to achieving ESG targets.¹⁸ Indeed, ESG compliance is now often a requirement; many institutional asset managers will not provide financing or hold assets in ventures that do not align with ESG principles.

To fully benefit from ESG-based financing instruments, governments need to adopt the ESG principles and ensure that they cascade down through the project requirements of the private developers involved in the program. The result is a win-win: more options available to finance the development and greater odds of achieving the ESG objectives of the project and sustaining the urban revival.

URBAN REGENERATION SUCCESSES

Copenhagen

The need to address environmental problems drove Copenhagen to regenerate a section of its waterfront. Over a period of more than 15 years, the city invested millions of dollars to clean up the water, create pedestrian-only zones, and transform the harbor into a public park. It offered incentives to the private sector to develop the waterfront real estate. Ultimately, property values increased by 60 to 120 percent.¹⁹

Singapore

The Singaporean government invested some \$2.25 billion to develop the Marina Barrage over a more than 20-year period. About 50 percent of the land was allocated to public use, including green spaces, walkability options, and cultural and entertainment offerings. The government built housing in another location to accommodate residents displaced by the project. Property values increased by 50 to 120 percent.²⁰

Boston

Boston's urban regeneration involved improving sewer infrastructure and developing water treatment plants, along with creating public green spaces and promenades. The private sector owned most of the land, but developed it according to the government's master plan. The more than 30-year, \$5 billion project ultimately yielded property value increases of between 30 and 120 percent.²¹

Washington, DC

The Wharf is revitalizing Washington, DC's, southwest waterfront. Completed in 2017, this mile-long, 24-acre development on the Potomac River includes residences, retail and office space, hotels, cultural venues, public parks, promenades, and docks. The public-private partnership behind the project sought to create an attractive destination that would also provide economic opportunity for residents. The city government offered approximately \$200 million in "tax increment financing." The Wharf spent \$1 million in job training for local residents. The aim was for the Wharf to generate close to 6,000 permanent positions and to contribute around \$94 million every year in direct tax revenues to the city.²²

CONCLUSION

Urban regeneration holds great potential to manage the impact of the MENA region's rapid population growth, control urban sprawl, and reverse inner-city decay. Using the LIFE approach to infuse ESG principles throughout the project is the most effective way to manage the complexities of programs that are designed to serve socioeconomic, cultural, quality of life, sustainability, and other goals. The result will be improved lives, bustling cities, and public-private funding to promote continued urban revival and economic development.





ENDNOTES

1. The World Bank, “Population, total—Middle East & North Africa” (<https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ZQ>).
2. Global Alliance for Buildings and Construction, UN Environment Programme (<https://globalabc.org/>).
3. The World Bank, “Population, total—Middle East & North Africa” (<https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ZQ>).
4. Total population across the Middle East and North Africa from 1990 to 2050 (in millions), Statista (<https://www.statista.com/statistics/978535/mena-total-population/>); Urbanization and Urban Risks in the Arab Region, UN-Habitat 2013 (https://www.preventionweb.net/files/31093_habitataqabaurbanresillience.pdf).
5. Global Alliance for Buildings and Construction, UN Environment Programme (<https://globalabc.org/>).
6. Population living in slums (% of urban population)—Arab World, United Nations Human Settlements Programme (UN-HABITAT) (<https://data.worldbank.org/indicator/EN.POP.SLUM.UR.ZS?locations=1A>).
7. Strategy&.
8. Ian Wallace, “The Campaign to Reshape Egypt’s Cityscapes and Eliminate Informal Housing,” Jadaliyya, May 24, 2021 (<https://www.jadaliyya.com/Details/42781>).
9. UN-Habitat, Islamic Development Bank Group, “Informal Settlements in the Arab Region,” February 2020 (https://unhabitat.org/sites/default/files/2020/02/1-200210_regional_is_report_final_4.0.pdf).
10. Matthew Amlôt, “Saudi Crown Prince Reveals Plan for Riyadh to Be Top 10 Largest City Economy in World,” Al Arabiya English, January 28, 2021 (<https://english.alarabiya.net/News/gulf/2021/01/28/Vision-2030-Saudi-Arabia-s-Riyadh-will-be-one-of-largest-city-economies-Crown-Prince>).
11. Global Carbon Atlas (<http://www.globalcarbonatlas.org/en/CO2-emissions>).
12. “Why the Built Environment,” Architecture 2030 (<https://architecture2030.org/why-the-building-sector/>).
13. Dr. Hussein Duqeil, “Demolition of Egypt’s Heritage: Reality and Dangers,” Egyptian Institute for Studies, September 8, 2020 (<https://en.eipss-eg.org/wp-content/uploads/2020/09/Demolition-of-Egypt-s-Heritage-Reality-and-Dangers.pdf>).
14. The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
15. George Sarraf, Dr. Raed Kombargi, and Jad Moussalli, “Cooling Our World: How to Increase District Cooling Adoption Through Proven Regulation,” Strategy&, 2019 (<https://www.strategyand.pwc.com/m1/en/reports/2019/cooling-our-world.html>).

16. Karim Abdallah, Ramy Sfeir, Charly Nakhoul, and Fady Halim, “Managing the \$1 Trillion Wave of GCC Real Estate Megaprojects: The Institutional Setup,” Strategy&, 2020 (<https://www.strategyand.pwc.com/m1/en/reports/2020/real-estate-megaprojects.html>).
17. The World Bank, Urban Regeneration, Santiago (<https://urban-regeneration.worldbank.org/Santiago>).
18. Veronica Henze, “Sustainable Debt Issuance Breezed Past \$1.6 Trillion in 2021,” Bloomberg NEF, January 12, 2022 (<https://about.bnef.com/blog/sustainable-debt-issuance-breezed-past-1-6-trillion-in-2021/>).
19. Bruce Katz and Luise Noring, “The Copenhagen City and Port Development Corporation: A Model for Regenerating Cities,” The Brookings Institution, 2017 (https://www.brookings.edu/wp-content/uploads/2017/05/csi_20170601_copenhagen_port_paper.pdf); Arup “Copenhagen—Solutions for Sustainable Cities,” 2022 (<https://www.arup.com/perspectives/publications/research/section/copenhagen--solutions-for-sustainable-cities>); Strategy& analysis.
20. The World Bank, Urban Regeneration, Singapore (<https://urban-regeneration.worldbank.org/node/72>).
21. Kyle Paoletta, “On the Waterfront: An Oral History of the Seaport,” *Boston Magazine*, June 23, 2020 (<https://www.bostonmagazine.com/news/2020/06/23/seaport-oral-history/>); Massachusetts Water Resources Authority (<https://www.mwra.com>); City of Boston (<https://www.boston.gov/>); Strategy& analysis.
22. Government of the District of Columbia, “Mayor Bowser Highlights Economic Impact of the Wharf,” October 12, 2017 (<https://mayor.dc.gov/release/mayor-bowser-highlights-economic-impact-wharf>).



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