

## **Modular Solar Kiosks, Microenterprise Infrastructure and Sustainable Urban Services: Introductory Note to the Cubic Style Presentation**

The Cubic Style presentation introduces a modular solar kiosk concept intended for a wide range of commercial, service and public-facing uses, including retail, crafts, marketing, exhibitions and entertainment. As presented by the author, Eldin Mušović of Musovic Design, the Cubic Style kiosk is conceived as a universal, modular and solar-powered unit combining modern design, functional adaptability and environmental performance. The basic module is described as a cube-shaped structure of  $240 \times 240 \times 280$  cm, with the possibility of joining several modules to reach up to  $22 \text{ m}^2$ . The construction is described as steel-based, stable and suitable for different weather conditions, with adjustable feet for installation, transport by truck with crane, waterproof and fire-resistant composite panels of 4 to 6 mm, CNC-based production, and a solar system with 12 panels per kiosk and 600 W of stored energy. The presentation further states that the expected finished-kiosk price would be between EUR 10,000 and EUR 15,000 on the EU market, with initial production planned at one to two units per week and possible cooperation through joint venture, licensing, purchase of the project and industrial design, or another partnership model. These elements should be read as the project proponent's design and business proposition, not as independently verified commercial, technical or certification data.

The broader relevance of the project lies in the way it brings together several themes that are increasingly important for local economic development: small-scale commercial infrastructure, modular construction, renewable-energy integration, urban flexibility and microenterprise support. Unlike large infrastructure projects, modular kiosk systems belong to a more decentralised category of investment. Their purpose is not to transform a whole sector through a single major facility, but to provide replicable, movable and relatively low-cost units that can support small businesses, municipal services, event activity, seasonal commerce or tourism-related services. In this sense, the Cubic Style concept is not simply a product-design proposal. It is also a small-infrastructure proposition, aimed at enabling commercial activity where permanent construction may be too costly, slow, inflexible or administratively demanding.

This makes the project particularly relevant to discussions of public space and local economic activity. UN-Habitat has long argued that streets and public spaces are not merely residual urban areas, but drivers of urban prosperity, social interaction and economic life. Public space supports mobility, exchange, visibility and access to services. It can also enable small-scale commerce when managed through clear rules, design quality and appropriate location planning. This is relevant to kiosk infrastructure because kiosks often operate at the boundary between private enterprise and public or semi-public space. Poorly regulated kiosks can contribute to visual clutter, congestion or informality. Well-designed and properly located kiosks can improve public-space activation, support microenterprise, serve residents and tourists, and create more flexible uses of urban land. The design question is therefore inseparable from the governance question. A modular kiosk is useful only where urban authorities, investors and operators can agree on siting, maintenance, service connections, accessibility, safety, aesthetics and public-interest conditions.

The project also connects with the literature on pop-up environments and temporary urbanism. Bertino et al. (2019) argue that pop-up environments can serve as integrative tools in urban planning by offering temporary solutions that respond to changing needs without permanently locking urban space into a single use. This is a useful theoretical lens for Cubic Style. A movable and modular kiosk may be deployed for seasonal retail, tourism peaks, markets, public events, cultural activities, local food distribution, crafts, information points or pilot testing of new business locations. Such flexibility has value in small and medium-sized cities, tourism destinations and peripheral areas where permanent commercial premises may be financially unrealistic or poorly matched to seasonal demand. The same logic also applies to municipalities seeking to test new services before making permanent infrastructure commitments. In that sense, modular kiosks can reduce entry barriers not only for entrepreneurs, but also for local governments experimenting with service delivery and public-space activation.

From a retail and SME perspective, the concept fits into a wider shift away from rigid physical retail models. Research on pop-up shops notes that temporary retail formats can help firms generate customer interaction, test products and brands, and explore new markets without the high capital cost of permanent stores. This is particularly relevant for start-ups, crafts producers, food vendors, seasonal operators and local brands that require visibility but cannot immediately carry the burden of long leases or larger premises. A modular kiosk can therefore operate as a low-threshold business platform. It gives the entrepreneur a recognisable point of sale, while giving the

municipality or site owner a controllable unit that can be installed, removed, relocated or replicated. The practical value of such units is highest where they are linked to a clear operating model, including permits, hygiene and safety standards, energy management, waste collection, branding rules, and maintenance responsibilities.

The solar dimension of the project gives it additional policy relevance. The International Energy Agency reports that distributed solar photovoltaic applications, including residential, commercial, industrial and off-grid projects, account for a substantial part of global PV expansion, and that distributed solar with storage is growing in contexts where retail electricity prices are high or electricity grids are unreliable. In small commercial infrastructure, this matters for two reasons. First, solar integration may reduce operating costs and dependence on grid connection, especially for kiosks placed at temporary, remote or event-based locations. Second, it may shorten deployment time by reducing the need for electrical infrastructure before use. The Cubic Style presentation explicitly presents the kiosk as self-sustaining through solar panels and stored power. This claim would need technical verification in practice, including load analysis, seasonal performance, battery autonomy, appliance requirements and safety standards. Nevertheless, the general direction is consistent with the growing use of distributed renewable energy in small commercial applications.

The construction and production model also deserves attention. Modular construction is increasingly discussed in relation to sustainability, productivity and circularity. The World Green Building Council's circular built environment material notes that modular elements can support higher sustainability performance and make buildings easier to adapt, reuse and disassemble. The European circular-economy literature similarly identifies modular construction, material reuse and more efficient lifecycle planning as important trends in the built environment. For Cubic Style, the use of a standardised modular unit, CNC-based production and replaceable or repeatable components could support manufacturing efficiency and quality control. The economic logic is straightforward: standardisation can reduce production complexity, support serial manufacturing, and improve maintenance. However, the environmental logic depends on material selection, durability, repairability, end-of-life reuse and the real energy performance of the unit. A kiosk that is modular in form is not automatically sustainable. Sustainability would need to be demonstrated through lifecycle thinking, material documentation, repair strategy and recyclability.

For Bosnia and Herzegovina, the project is relevant not because it is technologically complex in the same way as aerospace or advanced desalination, but because it may be industrially and commercially scalable. The OECD's 2025 assessment of Bosnia and Herzegovina's private-sector reform agenda stresses the importance of access to finance, innovation support, business registration, licensing, and conditions that allow firms to invest in new technologies, scale operations and improve productivity. A modular kiosk project sits squarely within this SME and light-manufacturing space. It requires design capability, metal fabrication, panel processing, solar-component integration, logistics, assembly, quality control, sales channels and after-sales service. These are not exotic capabilities. They are precisely the type of productive activities that can be built through small and medium-sized enterprise cooperation, local supplier networks and gradual export positioning.

The investment proposition should therefore be understood as a light-industrial and design-led manufacturing opportunity. Unlike a one-off building or a single retail outlet, Cubic Style is presented as a replicable product. This changes the investment logic. Investors would not primarily be investing in one kiosk, but in a production model, intellectual property, industrial design, market access and potential distribution networks. The presentation proposes several possible forms of cooperation, including joint venture, licensing, purchase of the project and industrial design, or another form of partnership. Each option implies a different risk profile. A joint venture would require production planning, supplier management and sales development. Licensing would require clear protection of design rights, manufacturing standards and quality control. A purchase of the design would require due diligence on intellectual-property ownership, market demand, certification needs and production cost. In all cases, the key question is whether the concept can move from an attractive prototype or product idea to a repeatable, certified and marketable unit.

The market potential also needs to be framed carefully. Modular kiosks may appeal to municipalities, tourist sites, event organisers, service providers, retail operators, craft producers, food vendors, marketing agencies and public institutions. Their value is strongest where mobility, modularity and low infrastructure requirements matter. Potential use cases include seaside and mountain tourism locations, public events, seasonal markets, university campuses, transport nodes, parks, local-product promotion, mobile administration or information services, and emergency or temporary community services. Yet the market is also sensitive to regulation and urban policy. Even a well-designed kiosk may face obstacles if municipalities lack clear rules for public-space

concessions, temporary structures, advertising, utility use, hygiene, fire safety or visual standards. The project's commercial success would therefore depend not only on production cost and design appeal, but also on the ability to work with local authorities and site managers.

This is where the policy value of the project becomes visible. Small commercial infrastructure can support formalisation when it provides entrepreneurs with compliant, visible and regulated operating space. Informal and semi-formal street vending often exists because people need low-cost access to customers, but lack affordable and lawful premises. WIEGO's work on street vendors emphasises that vendors provide access to goods and services in public spaces and represent a significant part of urban informal employment in many countries. Cities Alliance has similarly argued that public space is a productive asset for the livelihoods of many urban informal workers, particularly street vendors, and that regulated access to such space can support inclusive urban economic development. A modular kiosk system, if implemented fairly and transparently, could contribute to this kind of formalisation by giving small operators a standardised, safer and more acceptable commercial format. It should not be understood merely as a design product, but as a possible instrument of inclusive local economic management.

At the same time, there are risks. If kiosk deployment is poorly governed, it may privatise attractive public space, favour better-capitalised operators, displace existing informal vendors, or create visual and spatial clutter. If solar performance is overstated, operators may face unexpected costs or unreliable service. If production standards are weak, the units may deteriorate quickly or fail to meet safety requirements. If the business model depends entirely on low production cost, it may struggle in the EU market against established modular and container-based vendors. For these reasons, a credible next step would be to develop a demonstrator unit with clear technical documentation, cost breakdown, electrical and fire-safety specifications, material certificates, maintenance plan, lifecycle assessment, and a pilot deployment with a municipality, tourist site or event organiser. Such a pilot would turn the design claim into operational evidence.

The Cubic Style presentation is therefore valuable because it represents a different type of FDI proposition from the larger and more technically complex projects in the proceedings. It is modest in scale but potentially replicable. It combines design, modular construction, small-scale manufacturing, renewable energy and microenterprise support. Its strongest contribution to the investment discussion is not that it promises a single large transformation, but that it points to a practical product category through which Bosnia and Herzegovina could develop design-led light

manufacturing and serve local, regional and EU-adjacent markets. If supported by proper product validation, municipal partnerships and a clear manufacturing model, such a project could become part of the wider discussion on how smaller economies create exportable value through practical, sustainable and adaptable products.

For the proceedings, the presentation that follows should therefore be read as a design-led SME and light-manufacturing proposal with wider urban and sustainability relevance. It illustrates how investment opportunities need not be limited to large infrastructure, heavy industry or high-technology sectors. In some cases, the more realistic opportunity lies in product standardisation, repeatable production, clever design, decentralised energy use and the creation of tools that allow smaller entrepreneurs to operate more effectively. That is the wider economic significance of Cubic Style.

### **Presentation: Cubic Style**

The following presentation is included in Bosnian, as presented at the event *Potentials of Bosnia and Herzegovina: Business Environment, Investments, Trade and Partnerships*, held at Jable Castle, Mengeš, on 11 December 2025.