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ARCHITECT AS THE BRIDGE BETWEEN THE PHYSICAL AND VIRTUAL WORLD

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For centuries, architects have been leading the construction of physical worlds. Now, modern community is witnessing a major shift from the real economy to the digital one, and the integration of these two has been accelerated drastically since the global pandemic. And one of the clearest examples of this trend is the development of the metaverse, in particular its use in architecture.

It is known architects have already faced the identity crisis in the physical world. They used to be the master builders, having all the knowledge and techniques of construction. However, in the modern industrial society, many majors like design composition, mechanics, electricity, budgeting, construction management have been separated from architecture discipline. The remaining part is mostly form-making, visualization, collaboration, and so on. Architects act as project managers to work with other consultants, engineers, contractors, clients, government officials to make a project happen.

Unfortunately, architects are lack core technology that is advancing, and tech “outsiders” are aiming to refactor or revolutionize the AEC (Architecture, Engineering and Construction) industry. Metaverse is a new playground that architects could take part in together with other stakeholders. Instead of providing one-to-one services, architects could reinvent the business model to provide

products or services that can scale, solutions that can be reused and can benefit millions of users, not just one client.

With the trend of creating Digital Twin in the practice in the AEC industry, architects can act as the bridge between the physical and virtual world. According to Autodesk, a digital twin in construction, engineering, and architecture is a dynamic, up-to-date replica of a physical asset or set of assets — whether it's a building, a campus, a city, or a railway — that brings together design, construction, and real-time operational data. Digital twins simulate, predict, and inform decisions. Architects could run simulations to create real-world scenarios virtually to “test drive” unbuilt structures.

Architects always face the problem of finding good clients that fully support their creative ideas and pay the bills on time. Most of the designs will stay on the paper forever, they could be rejected for all sorts of reasons, and most of the “paper architecture” is valueless as it is not recognized by the client. For architects, the metaverse is a virgin territory full of possibilities, and an utopia without the constraints of the physical world. Architects can also build digital assets like cities, buildings, furniture, sculptures, point clouds, textures and sell them multiples times to virtual worlds, games, and movies.

As it's well known, architecture is the manifestation and expression of culture. They try to understand a given cultural setting that involves languages, the memory of place, and lifestyles prior to conceptual design. While the metaverse is not location-specific, the users are coming from different cultural backgrounds, and we could design “vernacular” metaverses that are full of varieties and cultural inclusion. According to the requirements of their profession, architects are good listeners and communicators. They begin with a lot of listening to understand what clients and communities want. Besides serving clients, architects tend to put the social impact and responsibility at first to serve a community as a whole.

In conclusion, the question of whether architects need to define new values of architecture in the digital age is open today. "Architecture is a profession that takes an enormous amount of time. The least architectural effort takes at least four or five or six years, and that speed is really too slow for the revolutions that are taking place". Rem Koolhaas' words, the Pritzker Prize-winning Dutch architect, pointed the shortcoming of the profession, how it could adapt to the changing social and technical climates of today. From industry to academia, professionals need to change to adapt. The better our society can define and implement the value of architecture; the better masters can architect a great unmaterial metaverse.

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