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# Commercial Real Estate Needs a Digital Transformation



By Philippe Bouvier , Managing Partner, Urban Value Creation Consulting (PhD, INSEAD GEMBA '14D)

**From landowners to urban residents, all stakeholders would benefit from bringing digital, collaborative and transformational elements together in the traditional real estate value chain.**

Planned sustainable cities, like those in the Middle East, are models for a new approach to the real estate value chain, with a detailed systemic urban strategy aiming to create value for all stakeholders.

Real estate is divided into three markets: land ownership itself; the primary market which plans and creates buildings; and the secondary market which subdivides the buildings and estate developments into homes and offices.

Now the real estate value chain starts with a public or private landowner, who sells land to a master developer who designs the area, divides the land into plots and builds the urban infrastructure. The plots are then sold to sub-developers who build assets on them and sell them to customers (i.e. asset owners like funds or owner associations). These customers then manage the assets and sell or rent properties (inside these assets) to end-consumers on

the secondary market.

At each transfer of ownership, the value chain is broken and new ROI criteria are defined for the benefit of the new shareholders. Inevitably, some value creation opportunities fall through these gaps in the chain.

### **End-to-end thinking**

Large real estate companies which are involved in multiple stages of the value chain have seen how making an investment in overall design can improve the efficiency of its maintenance operations, such as cleaning, maintenance and access. The capital expenditure (CAPEX) involved in thoughtful design has a significant impact on the company's operating expense (OPEX). With the understanding that they will be implicated further down the chain, these companies plan as stakeholders who will be responsible for operating properties for end-consumers.

When a company operates further along the value chain, more challenges arise. For example, facilities management companies have a fixed monthly fee and to increase their revenues they must reduce costs, such as improving operational efficiency and transport strategy, thus gaining only a marginal revenue.

In Abu Dhabi, the government-owned Mubadala Development Company has established a subsidiary, Masdar, a commercially driven renewable energy company. One of the business units of Masdar is Masdar City, the master developer of an ambitious city project of the same name.

Masdar City also acts as a sub-developer along with Tristar Engineering, Chic Residence, Reportage Real Estate, and many others. In addition, Masdar City owns an asset management company. The infrastructure is managed by Masdar City itself, Abu Dhabi Distribution Co., Abu Dhabi Department of Transport, and other organisations. The city will have 10,000 residents and jobs, and plans to grow following market demand. Masdar City is present in each market to ensure that value is created, captured and transferred among stakeholders in order to support the initial vision of a sustainable city. But even if best real estate practices are applied, greater value can still be created.



Figure: Traditional Real Estate Value Chain

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## The systemic real estate value chain

More value could be achieved by defining a digital transformation strategy from the beginning of an urban development project and considering the full life cycle of all its assets.

Landowners could increase the land's value if they could 1) define a global urban strategy that will create value for all investors along the value chain; 2) bring on board all utilities stakeholders to support and agree to share infrastructure, operations and data, thus defining the use of infrastructure's data across the value chain; 3) seek government support to align future stakeholders to adhere to the initial objectives. In feasibility studies, it is important to include how the use of new technology and collaborative

operations between stakeholders could optimise the CAPEX and long-term OPEX.

The master developer could 1) define a detailed systemic urban strategy to create value for all stakeholders; 2) centralise the urban management and design an asset to operate it; 3) use “Internet of Things” (IoT) technology in the infrastructure; and 4) define rules of operations between stakeholders. By leveraging the data from the infrastructure, the master developer could introduce new revenue streams by creating new **human-centred** urban services. This would improve the quality of life, the environment and the sustainability of the land. Agreements with utility companies could optimise the CAPEX of land infrastructure, and reduce the OPEX for infrastructure management. Such development should attract sub-developers seeking an optimised infrastructure that will increase their ROI.

As an example, Qatar’s Lusail Real Estate Development Company is working on the design of a city platform to improve the quality of life by managing all urban infrastructure operations in the master planned city of **Lusail** from a central command centre. LREDC, the master developer of Lusail, is responsible for overseeing the complete development of the city and the quality of its operations. Lusail is one of the venues for the 2022 FIFA World Cup. The city is being completed in phases; it is expected to be finished in 2030.

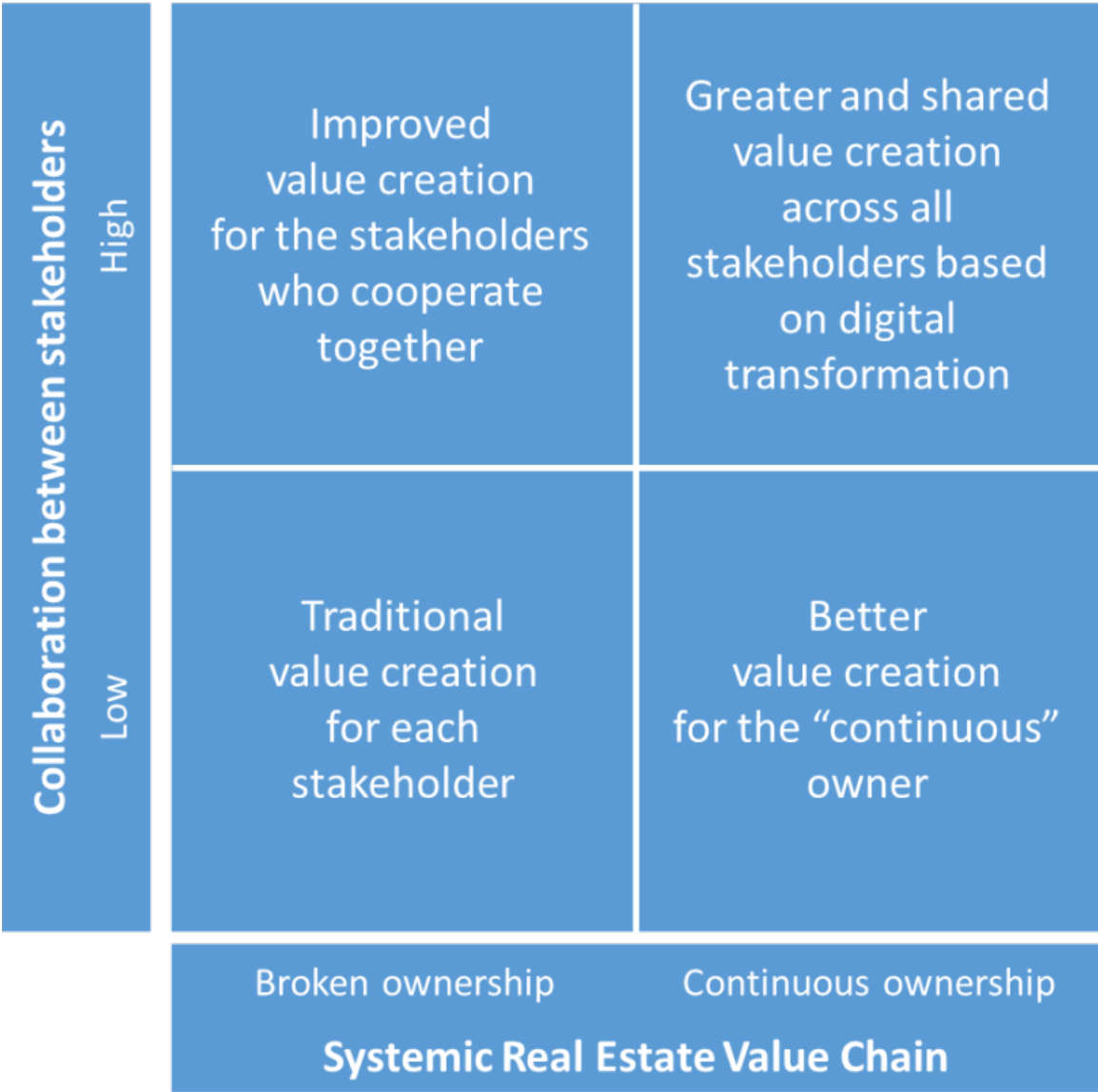
A sub-developer could 1) centralise the management of its assets; 2) reduce duplication in data collection, in collaboration with the master developer; 3) develop a collaborative Concept of Operations; and 4) design and operate its assets. Sub-developers could also generate new urban revenues through new services. They could then institute **innovation business models** bridging multiple areas such as transportation, commercial and residential property. (cf. the ‘rail plus property’ model in Hong-Kong).

Customers could 1) contribute in the design of the assets; 2) integrate assets management; and 3) operate the assets from a centralised maintenance centre. They could then create greater asset and properties value. By using external data to value an asset, customers can also innovate and propose new human-centred services.

## **Buyer power**

At the beginning of the real estate value chain, stakeholders are driven by CAPEX while at the end of the chain they are driven by OPEX. But in this

chain, the main force is the buyer power from asset owners, real estate investment funds, etc. as well as end-customers, particularly owner associations. On the horizon is a new breed of informed buyers, who understand that operations could be simplified and new revenues could be generated if the sub-developers designed and built more collaborative assets. The sub-developers would, in turn, ask the master developer to design and build a more efficient initial property infrastructure.



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Matrix of value creation in a systemic real estate value chain

This [collaboration and coordination](#) between stakeholders should reject the silo perspective and consider the overall value chain in order to optimise the value created and captured in the ecosystem. When a dominant company or organisation is present in each market of the real estate value chain, it should assume responsibility for convincing all stakeholders and coordinating their efforts using digital tools and technologies. The end result of such systemic management would be a more sustainable real estate development or city from which all stakeholders would derive tangible and intangible added value.

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