

Digital
Futures

No. 25

Running Future Cities on **Blockchain**

Distributed ledgers, smart contracts, and other blockchain technologies embed integrity and provenance in every digital asset and transaction.

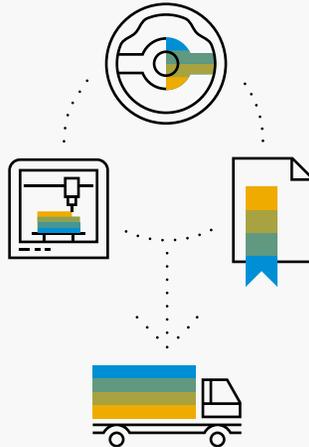
That could make blockchain the ideal foundation on which to combine and scale other exponential technologies — with revolutionary results for cities and the entire economy.

Some experts say these seemingly far-future speculations about combining technologies using blockchain are both inevitable and imminent:

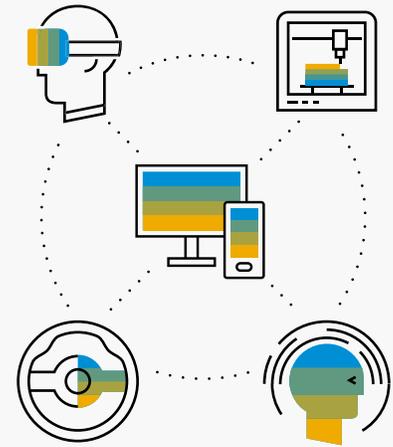
Democratizing design and manufacturing by enabling individuals and small businesses to buy, sell, share, and digitally remix products affordably while protecting intellectual property rights



Decentralizing warehousing and logistics by combining autonomous vehicles, 3D printers, and smart contracts to optimize delivery of products and materials and even to create them on site as needed



Distributing commerce by mixing virtual reality, 3D scanning and printing, self-driving vehicles, and artificial intelligence into immersive, personalized, on-demand shopping experiences that still protect buyers' personal and proprietary data



The City of the Future

Imagine that every agency, building, office, residence, and piece of infrastructure has an entry on a blockchain used as a city's digital ledger. This "digital twin" could transform the delivery of city services.

For example:

- Property owners could easily monetize assets by renting rooms, selling solar power back to the grid, and more.
- Utilities could use customer data and artificial intelligence (AI) to make energy-saving recommendations and smart contracts to automatically adjust power usage for greater efficiency.

- Embedded sensors could sense problems (like a water main break) and alert an AI to send a technician with the right parts, tools, and training.
- Autonomous vehicles could route themselves to open parking spaces or charging stations and pay for services safely and automatically.
- Cities could improve traffic monitoring and routing, saving commuters' time and fuel while increasing productivity.

Every interaction would be transparent and verifiable, providing more data to analyze for future improvements.

Welcome to the Next Industrial Revolution

When exponential technologies intersect and combine, transformation happens on a massive scale. It's time to start thinking through outcomes in a disciplined, proactive way to prepare for a future we're only just beginning to imagine.