



## Digital Twin



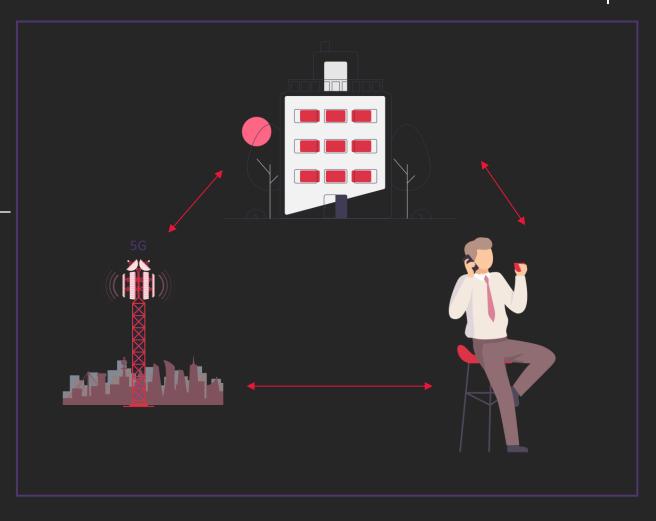




# Network Digital Twin

## Shorter reaction times, smarter decisions

- Ingesting real time data through IoT sensors & real time analytics(Optional)
- Incorporating ground clutter & customer data(Optional)
- Visualizing interaction of network with surrounding through ray tracing
- Running simulations in offline mode to test for flaws & blind spots
- Monitoring the twin in connected (online mode) for potential outages & network challenges



**Faster development cycle** due to real time testing & training of telecom products like beamforming

Better network optimization by simulating various coverage & strength scenarios

Swifter networks due to faster delivery of insights into what products to install where

VR enabled visualization of city model at 1:1 scale, for tuning the parameters, antenna & "seeing" the effects – things that aren't visible in real life.



## **Business Benefits**

Value unlocked across lifecycle

### Site Capturing

## Model Building

#### **Continuous Operations**

- 80+% time saved inventorying tower components
- 6mm measurement accuracy at 120m distance

- 70% reduction in time during network design phase
- 80% reduction in design document errors and omissions
- 50% cost saving in obtaining & validating tower rollout projects

- **95%** reduction in asset and location data creation
- **15+%** reduction in overall lifecycle costs

- ✓ Comprehensive, real-time and reliable 360-degree view into the site and asset environment
- ✓ Monitors grid, fuel, battery and renewable energy consumption in real-time to manage and track energy consumption optimally and save operational costs.
- ✓ **Prediction of procurement cycles** saves almost 15-20% of CAPEX