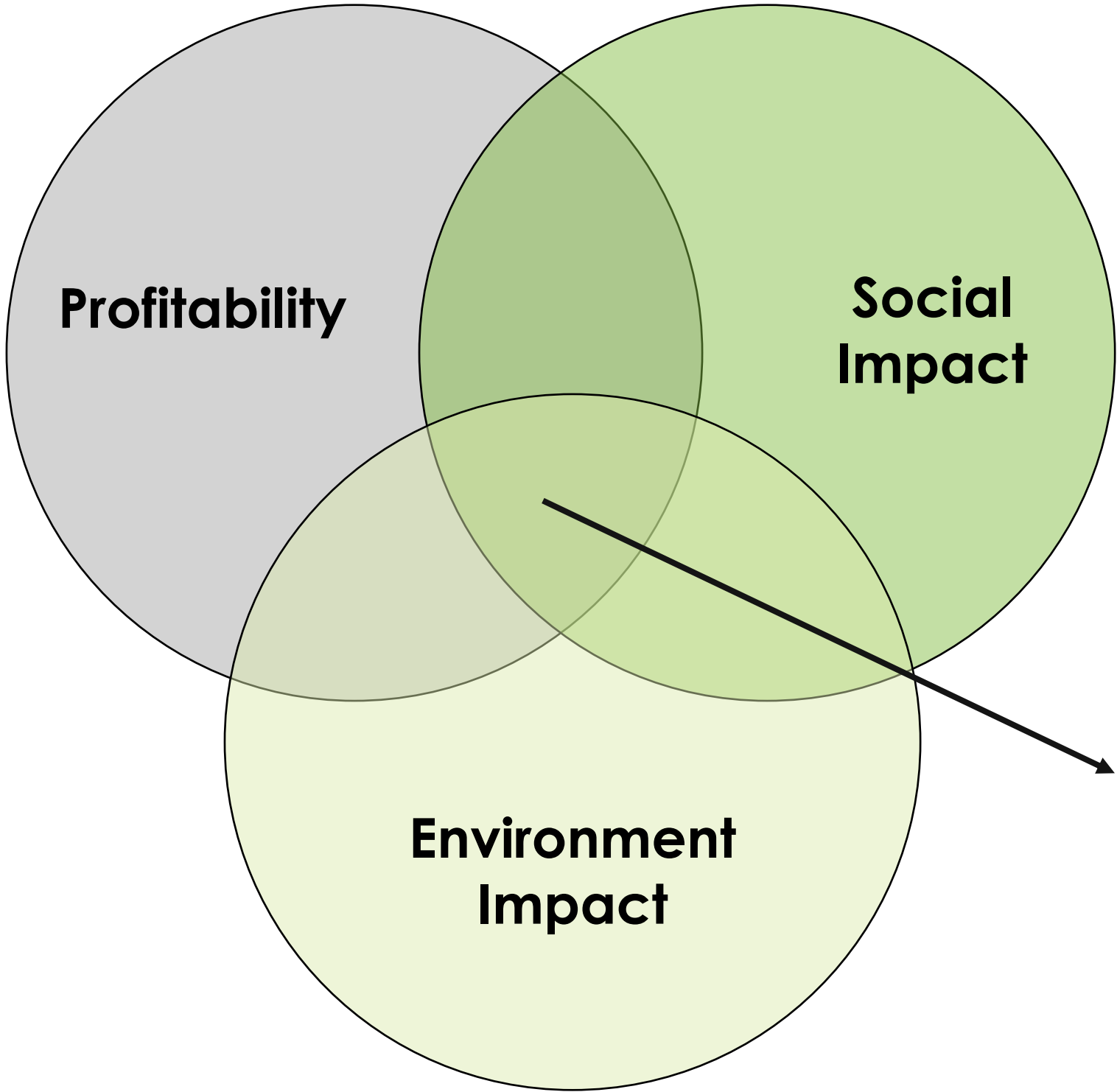


Building  
Sustainable Cities  
Through IoT  
Solutions

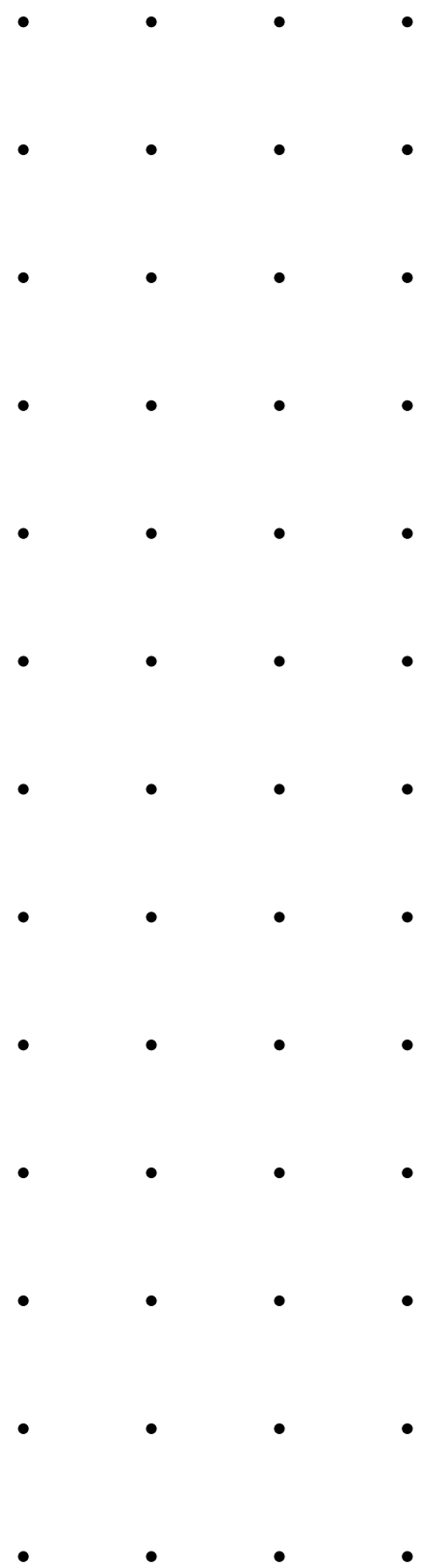
December 2021

**Quantela**

# Can we deliver social impact and be profitable? . . . .



**Is there a sustainable business opportunity ?**



# Let us talk about our Cities..

**2%** | Occupied Surface Area of the World

**50%** | World's population

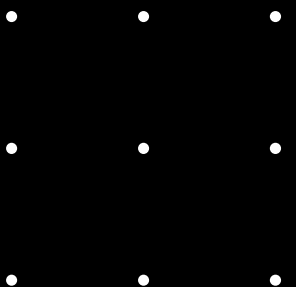
**75%** | Green house Gases contribution

**80%** | Global GDP contribution

**If we made our cities little bit efficient; We can make a major global impact !**



# Challenges Faced by Cities



## SOCIAL

- Rapid urbanization - **2.5 billion people will move to urban areas by 2050**
- Increased challenges - traffic congestion; increased pollution; increased crime rates; demand for efficient public services

## ENVIRONMENT

- Cities contribute to 75% of the global GHG, yet they occupy only 2% of Earth's surface
- Increased natural disasters and crises – flooding, pollution, landslides, draught

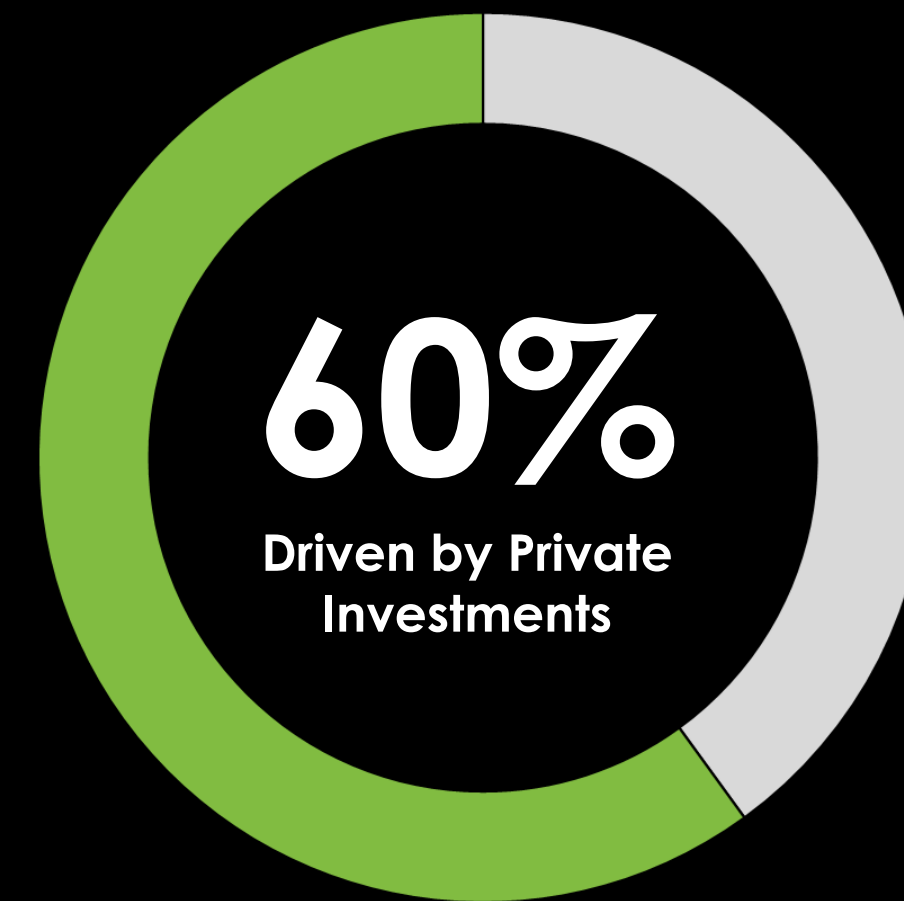
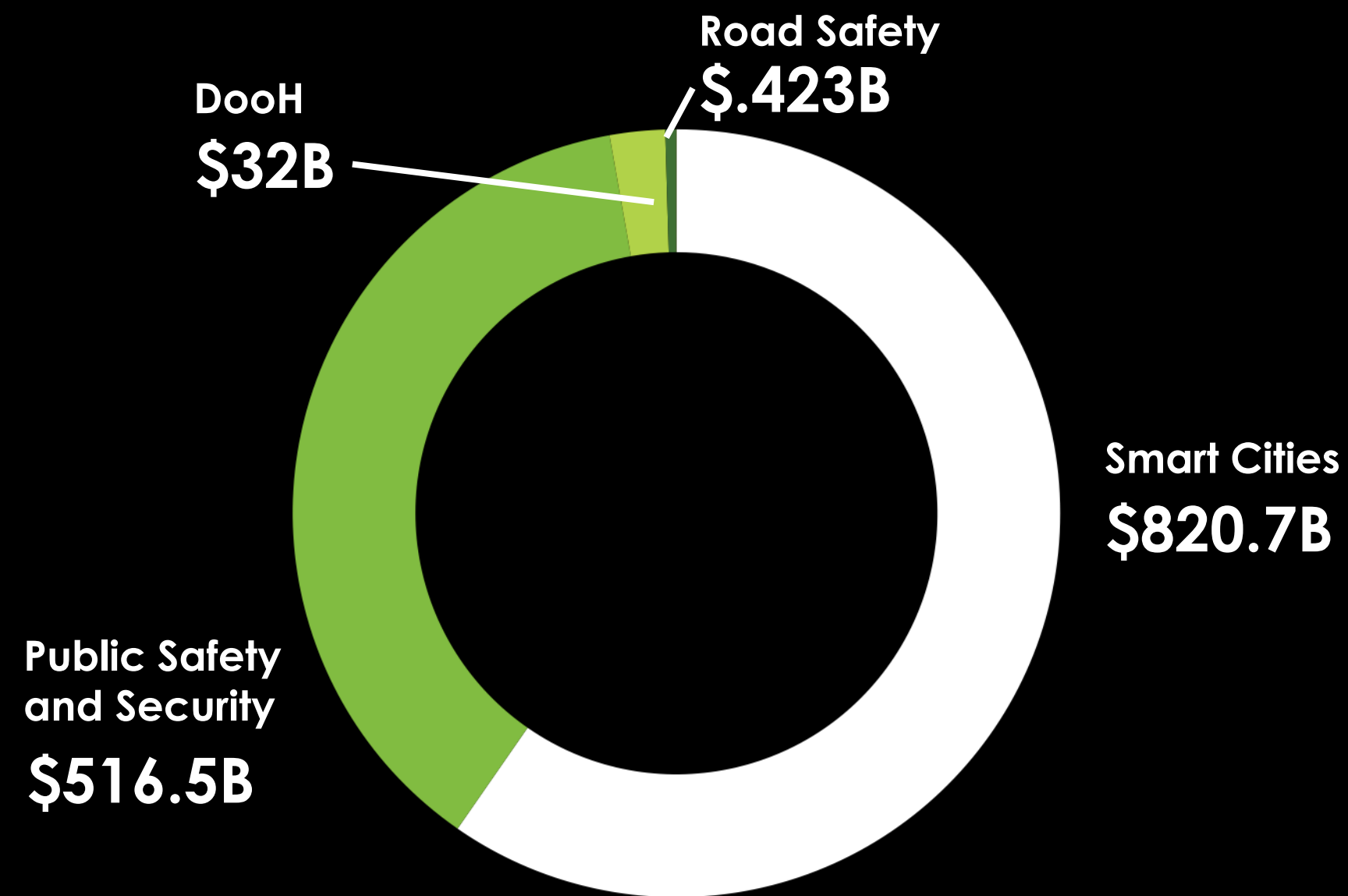
## ECONOMIC

- City Administrations are faced with doing more with less resources – India alone needs India needs around USD 700 billion to boost its urban infrastructure
- Navigating geo-political issues
- Complex processes and procurement policies

# Smart City Development: A Trillion Dollar Opportunity

2025 Market Size \$1.37T

▲ **23%**  
Year on year growth in  
Market size is estimated



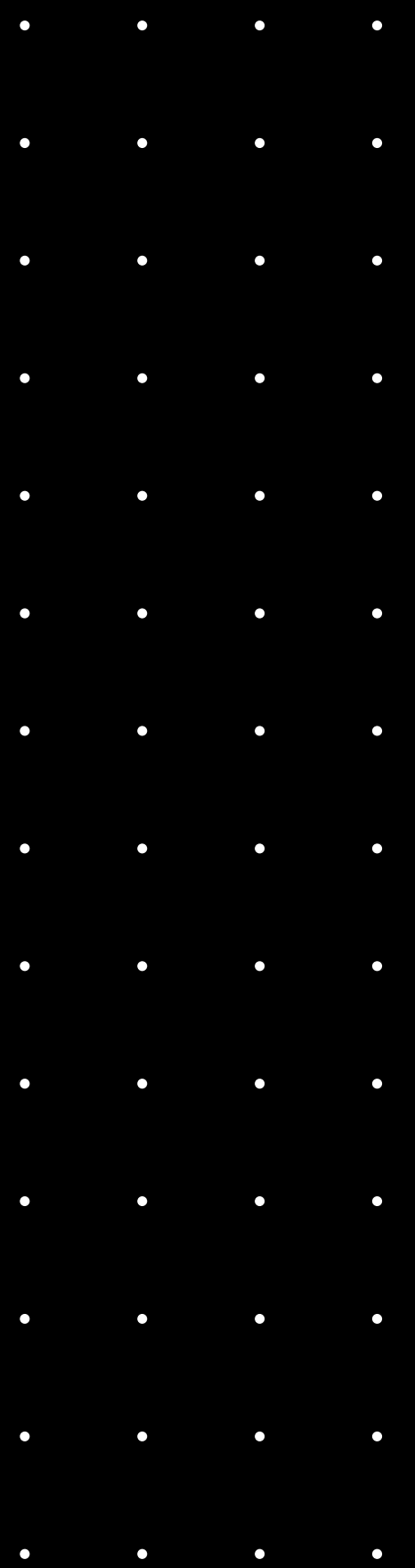
# Who is Quantela?

We are a technology company that offers outcomes business models to empower societies with the right digital infrastructure to deliver greater economic, social, and environmental outcomes for its constituents, changing the world of tomorrow.



# **We Don't Sell. We Solve.**

**Instead of selling technology to customers and leaving them with the burden of achieving their objectives; at Quantela, we hold ourselves accountable to deliver the outcomes they are seeking.**



# Delivering Outcomes Through Our Offerings

## Our Customers

(Cities, Governments, Public Spaces, Campuses, Utilities, Ports)

want to deliver outcomes that  
add value for their constituents

### Monetizable Outcomes

- > Reduce Costs
- > Generate Revenue



We'll digitize and monetize your existing city/community infrastructure through our **Quantela Citizen Services offering**.

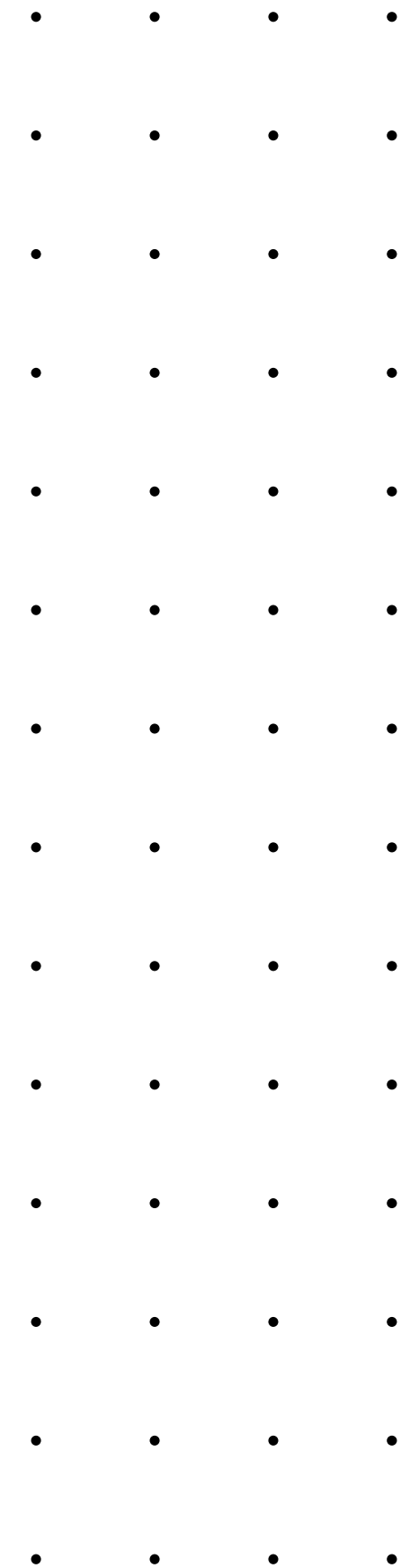
### NON-Monetizable Outcomes

- > Save Lives
- > Smoother Traffic; Cleaner Air
- > Citizen Engagement
- > Better Experience



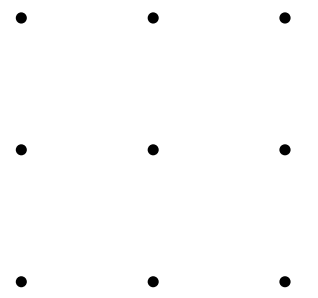
We will digitize and monetize alternative assets to help you deliver your outcome(s) through our **Quantela Lighting; Quantela Traffic or Quantela Digital Advertising offerings**

**Your Outcomes, Assured.**





# 100+ Global City Deployments Across Six Pillars



## Public Safety

Empowering law enforcement agencies **through surveillance, video and data analytics, and AI capabilities** to predict & avert urban crime and reduce response time in postvention

Hyderabad Smart City Project – Video Analytics Deployment

## Waste Management

Enable **litter-free neighborhoods by providing efficient waste collection.** Improves citizen health through air and water monitoring.

## Water Management

**Measure and monitor the quality of wastewater discharge** to improve the health of water bodies in the city in compliance with pollution norms

## Traffic Management

Optimize & organize traffic to **reduce travel time** and increase safety of the commuters

## Lighting

Solutions **reducing streetlight energy usage by up to 30% through adaptive dimming;** improve operational efficiency through effective asset monitoring and management, reducing maintenance cost by up to 50%

1.2 Million Connected street Light solutions to over 200+ cities

## Parking

Our parking management solution **reduces time spent locating available parking spaces, reducing time spent in traffic;** thereby reducing carbon emissions



# Safe Kerala

## Challenge

- **Upgrading State Highways on par with National Highways**
- Overall investments that can pay for itself
- Reduce incidents on the road and improve turn around time of patrolling and medical units

## Quantela Solution

- 14 District control centers
- 4 mobile speed violation systems; Better enforcement through – deploying AI cameras allover Kerala in 700+ locations.
- Cameras will capture violations and automatically report to server and issue challan.

## Quantela Outcomes Delivered

- ✓ Partnered with KELTRON & Motor vehicles department of Kerala to develop in house tech
- ✓ Over 70% of the Cameras are installed;
- ✓ Automatic challan issue has reduced violation trends
- ✓ Improved response time of ambulances and patrol units in case of incidents

**14**

District  
Control  
Centers

**700+**

AI based  
Cameras  
Installed

**4**

Mobile Speed  
Violation



Specific customer names removed

# Traffic & Safety solutions in Middle East

## Challenge

City wanted to ensure better traffic flow and safety of school children in a city

## Quantela Solution

Quantela helped mount cameras on top of school buses. Through video analytics we helped integrate, analyze and provide real time ticketing of violators around the school buses. Quantela also digitized selected traffic corridors to understand the traffic density patterns, providing solutions to increase the speed and reduce the journey times.

## Quantela Outcomes Delivered

Reduced incidence of violations, improvement of traffic flow during morning peaks and reduced traffic accidents

**100,600**

Violations Reported

**95%**

ANPR

**2000+**

Active Units



Specific customer names removed

# City solutions in the USA

## Challenge

The Federal Govt. had earmarked certain areas for economic development. Children were scoring low grades due to lack of internet and connectivity. Residents too had limited opportunities for growth

## Quantela Solution

Quantela designed the strategic placement of sensors in 8 earmarked areas for development to improve internet access. As part of the deal, savings from smart lighting as well as Federal grants were ploughed to pay for the set up of Wi-Fi.

## Quantela Outcomes Delivered

In June 2020, the city received \$40 million worth of Opportunity Zone investments from Erie Insurance and the Erie Community Foundation backed Arctaris Impact Investors. The city has also received a \$500,000 grant from the Appalachian Regional Commission for the project post the deployments.

**8**

Earmarked  
Areas

**160**

Access points

**\$40 M**

Opportunity Zone  
Investments

**\$ 500,000**

Additional Grants from  
Regional Commission



# Unlocking the Value of Data

Data sharing and management across multiple IoT sources using the same IP to reduce development costs and time to market.



Data Governance and Management

Integration on both common or specified domains and applications

“Command and Control” Center

Access to real-time data

Predictive Analytics



# Quantela Platform – Key Components

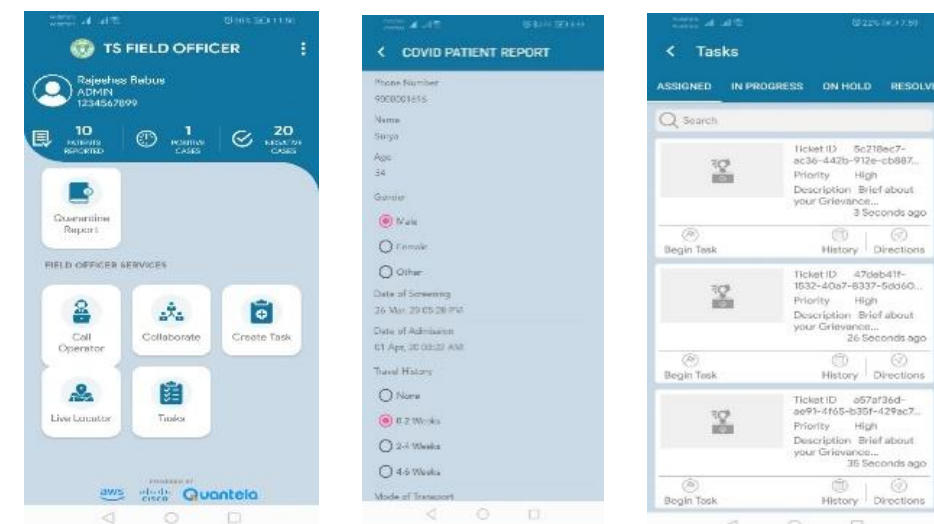
## Automation Engine & Recommendation Engine



- Real-time Dashboards
- Video Analytics
- Standard Operating Procedures
- Alerts & Notifications

- AI based Recommendations
- Orchestration and Integration of multiple data sources
- Bi-directional communication
- Business Intelligence

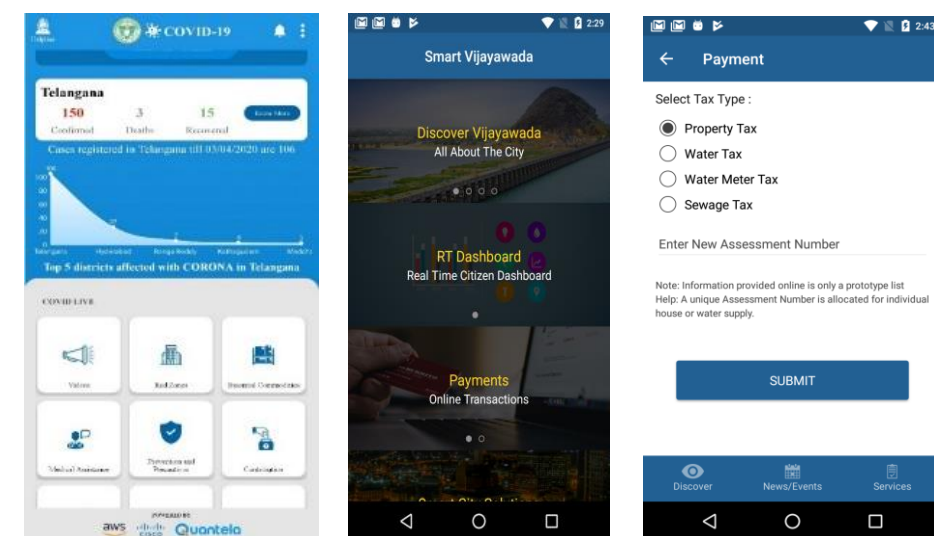
## Field Officer



- Real-time interactions with command centre
- Incident handling
- Workflows & Standard Operating Procedures

- Collaborate
- Receive Alerts & Notifications
- Ground situation report
- Collect Data offline and online

## Citizen



- Emergency helplines
- Complaints and grievances
- Utilities payment
- City Announcements
- News and Events

- City Tourist Guides
- Smart Solutions
- Government Services
- Offers and Deals
- Notifications

\* Quantela Products Example is attached in the Backup Slides



# Quantela: Technology Evolution

2015

## Dashboards

- **Atlantis Platform** in developing Data Dashboards for macro decision making
- Integrated Command and Control Centers (ICCCs) for centralized decision making

2016

## OEM

- **Engagement with CISCO and Systems Integrator** in designing and developing customized solutions on a common platform

2018

## Service Now & Purpose Built

- Customer Centric solutions development. **Employing a flexible technology core** to instantly adapt to customer requirements.

2019

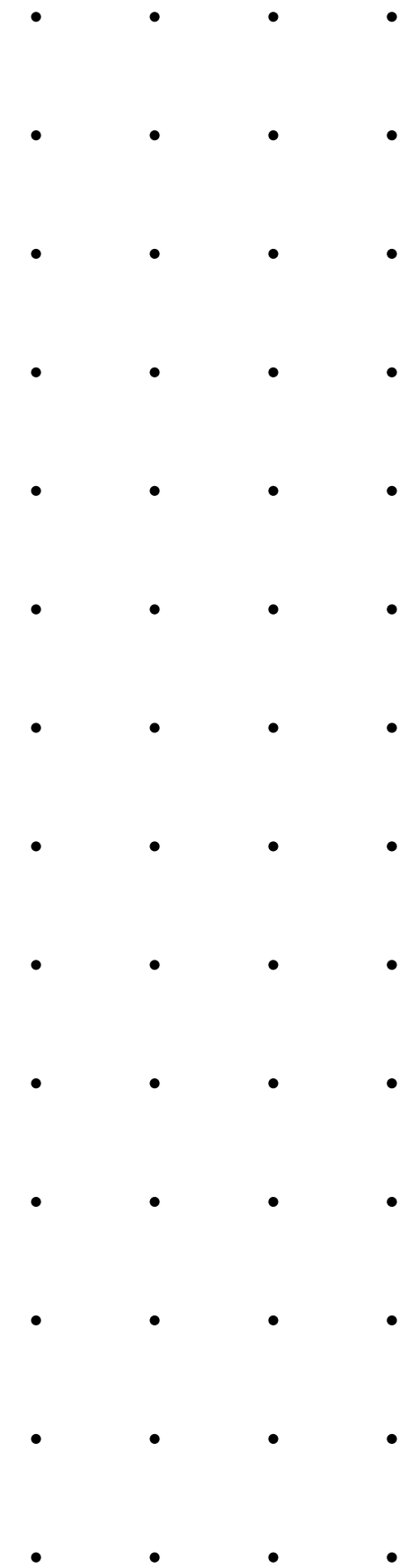
Recognized as the **“Technology Pioneer”** by the **World Economic Forum**

- Successful deployments in over 100 Cities.

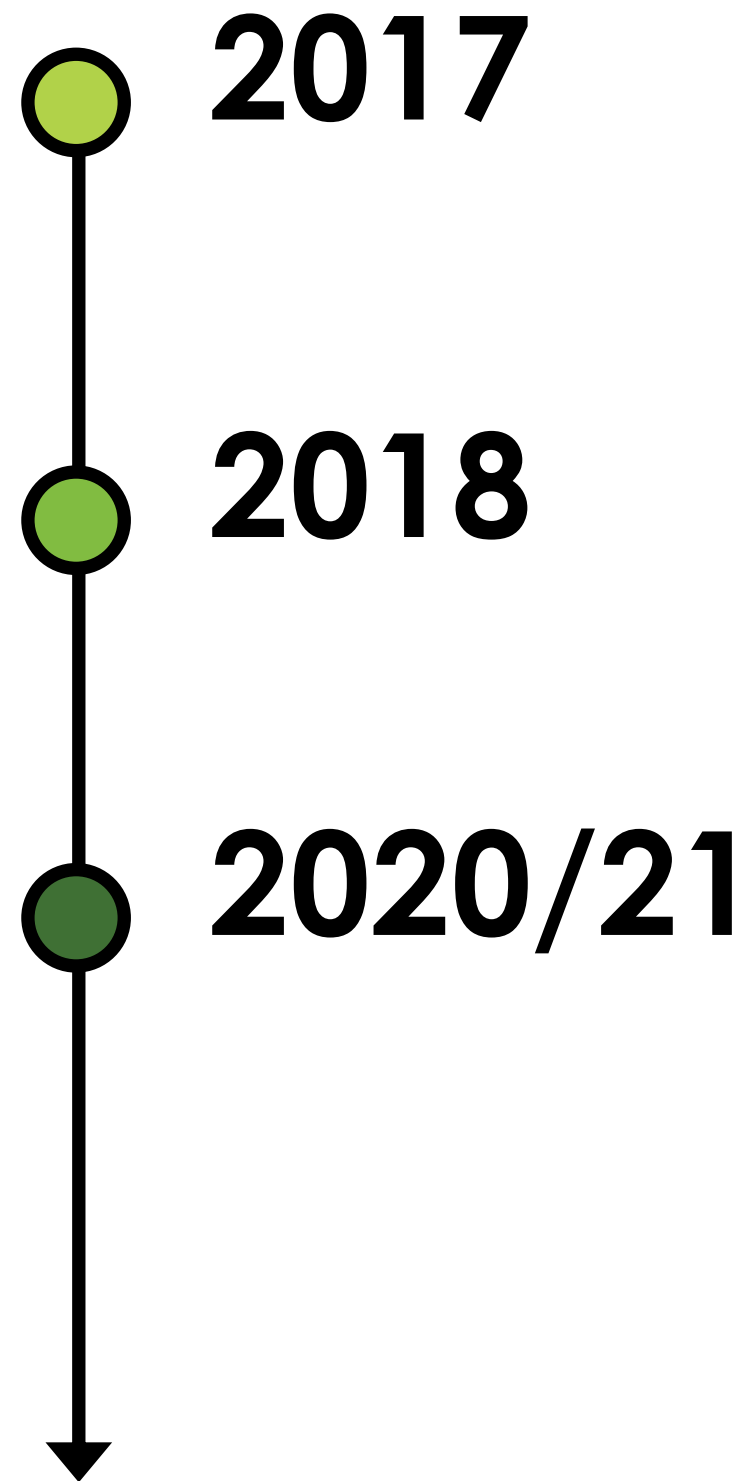
2020

## Outcome based Solutioning

- **Real time Video Analytics** for prediction and faster turn around Acquired **Controlling stake in a Video Tech company** to deploy video analytics drive solution to support Police administration and municipal administration
- **Edge level processing** to decentralize decision making & improve latency
- Cloud solutions to reduce hardware dependency on the administrative agencies



# Quantela: GTM Evolution



2017

## Services

- Partnering with OEMs to deliver software solutions for support

2018

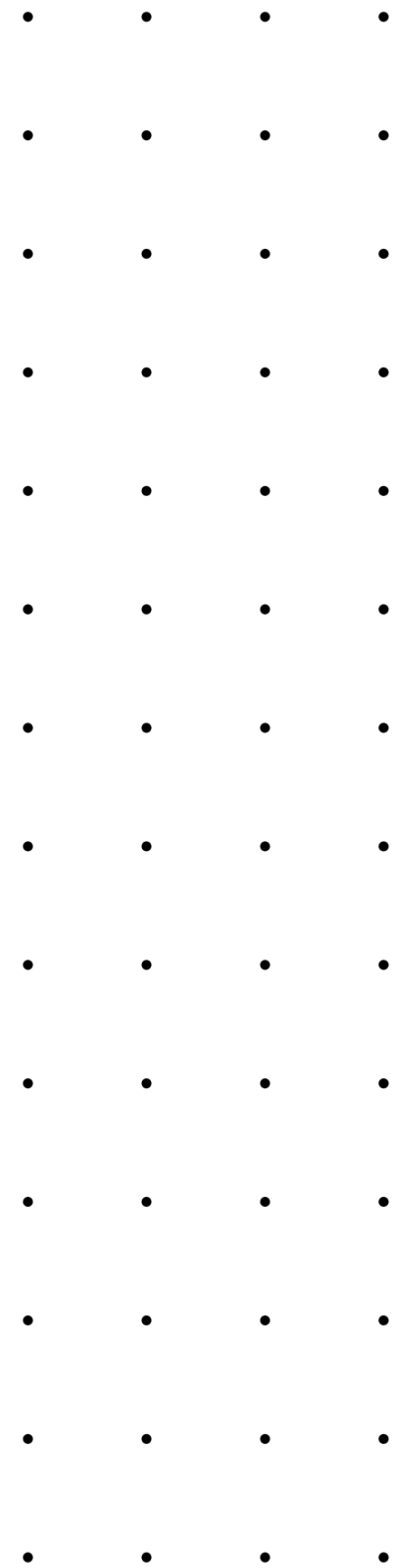
## SI , Urban Operators & Telecom Operators

- Develop capabilities of systems integrator and deployed CISCO's hardware solutions
- Partnered with Urban Telecom Operators
- Acquisition of System Integrator & developed capability to design and deploy Software & hardware

2020/21

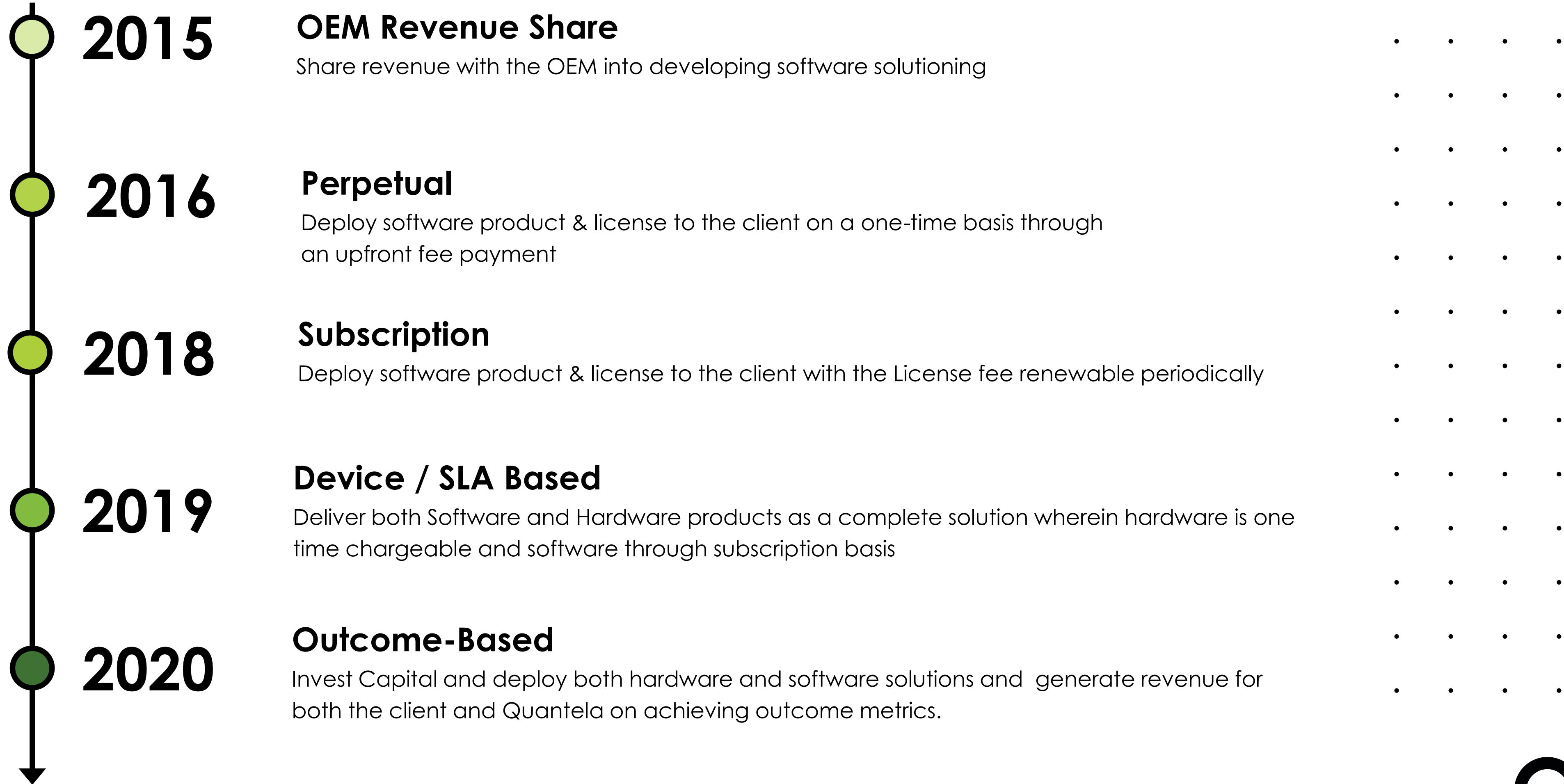
## End-to-End Outcome based Solutions

- The One stop shop for Smart city solutions : Develop capabilities across the smart city infrastructure sector
- Acquisition of a leading company into of Digitization of Land records across Urban and Rural areas for efficient management & maintenance of land use
- Digital Out Of Home (DOOH) Advertising through targeted AI based video analytics





# Quantela: Pricing Evolution



# The future?



# Quantela

 @Quantelainc

 /quantelainc