# BLACKPRINT.AI "Leading the way in innovative property mapping solutions for a brighter future"





# INTRODUCTION

At BlackPrint Technologies, our team is composed of experts in AI, geospatial technology, and land registry practices. We understand the challenges municipalities in emerging economies face when it comes to property mapping and land registry, and we are dedicated to providing innovative solutions to address these issues.

We have developed cutting-edge solutions that use satellite imagery and Artificial Intelligence to create digital twins of cities and landscapes. Our solutions provide accurate and up-to-date information for land management, property tax collection, and urban planning. Not only will our solutions empower underprivileged individuals and municipalities with the tools and knowledge they need to create a brighter future, but they will also help improve public services, promote economic growth and contribute to social development.

Our goal is to be your go-to partner for all your property mapping needs, with our efficient and cost-effective solutions and our commitment to providing the best customer service. With BlackPrint Technologies, you can trust that you're getting the most advanced technology and the best value for your investment.

# PROBLEM

- Lack of access to accurate and efficient property mapping solutions in emerging economies, leading to improper land registry practices and a lack of access to property ownership rights, judicial security, and socioeconomic benefits of real estate for underprivileged individuals.
- High costs associated with traditional mapping methods, such as aerial imaging and LIDAR-based land mapping, drone photogrammetry, and hand-drawn polygon and measurement extraction.
- The time-consuming and labor-intensive process to update the cadastral registry using traditional methods.
- Inadequate technology and human resources to keep up with the mapping needs of fast-growing and changing urban areas.
- Difficulty in collecting property taxes in areas where the land registry is not up-to-date and accurate.









# **BLACKPRINT SOLUTION**

We offer a mapping-as-a-service product that uses satellite imagery and AI to create digital twins of cities and landscapes. This product provides accurate and up-to-date information for land management, property tax collection, and urban planning in emerging economies.

Our team uses cutting-edge technology, such as MLbased semantic segmentation and computer vision algorithms, to extract a polygon-based representation of buildings and properties, making the process more efficient and cost-effective.





# BENEFITS

## Advanced Technology

### **Cost-effective**

**Time-saving** 

**BLACKPRINT.AI** 

BlackPrint Technologies uses the most advanced technology and human resources to keep up with the mapping needs of fast-growing and changing urban areas.

BlackPrint utilizes ML-based semantic segmentation of satellite imagery to extract a polygon-based representation of buildings and properties, cutting costs and time to deliver by orders of magnitude.

Utilizing satellite imagery and AI to extract geospatial data at scale, enabling efficient and time-saving property mapping and land registry updates, compared to traditional methods such as aerial imaging, LIDAR-based land mapping, drone photogrammetry, and hand-drawn polygon and measurement extraction.

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# **PROCESS DEMONSTRATION**



### **1.- Satellite Imagery Extraction**

This step involves acquiring high-resolution satellite images of the area of interest. These images are then processed and analyzed to extract relevant information such as the location, shape, and size of buildings and properties.

### 2.- Land Cover Segmentation

In this step, the acquired satellite images are processed using machine learning algorithms to segment the image into different land cover classes such as buildings, roads, vegetation, etc. This step enables the extraction of a polygon-based representation of buildings and properties.

### 3.- 3D Digital Twin

This 3D digital twin provides a detailed and accurate representation of the area, which can be used for land management, property tax collection, and urban planning. The 3D digital twin can be also used for visualizing, monitoring, and analyzing the area in a virtual environment.



# **APPLICATION AND USE CASES**







### **Property Tax Collection**

BlackPrint's digital twin and property mapping solutions can be used by municipalities to improve property tax collection by detecting changes in properties, such as new construction, renovations, and land use changes.

### **Public Safety**

The digital twin can be used by emergency services and public safety agencies to simulate, plan, and respond to emergencies and disasters.

### Transportation

The digital twin can be used by transportation agencies to plan and optimize transportation networks, such as roads and public transit.



### **Infrastructure Planning**

BlackPrint's digital twin can be used by infrastructure agencies to plan and design new infrastructure projects, such as roads, bridges, and buildings.



# CONCLUSION

BlackPrint Technologies is addressing the lack of access to accurate and efficient property mapping solutions in emerging economies, which leads to improper land registry practices and a lack of access to property ownership rights, judicial security, and socioeconomic benefits of real estate for underprivileged individuals.

By leveraging AI and geospatial technology, BlackPrint provides innovative solutions for property mapping, land management, property tax collection, and urban planning. We thank you for considering BlackPrint Technologies as your partner, and we are excited about the opportunity to empower emerging economies with our cost-effective and timely solutions.

Phone: +1 (510) 610 5481



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