

TRU-SALES
USA

Designed to be prepared at all times
4SAFE

3D URBAN SCANNING & STRUCTURAL DIGITIZING

Comprehensive 3D solutions for urban and infrastructure projects, including soil studies, pipeline mapping, and structural analysis of buildings, bridges, and roadways.

Our services support maintenance, safety assessments, and BIM data integration across diverse environments —from cities and real estate developments to trains, airports, and seaports.



RCU
Believe in Futures

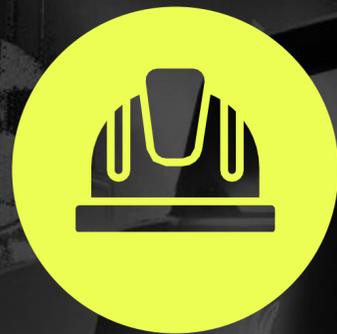


4 Safe Solutions, along with its affiliated companies and the engineering and technology team based in Miami FL and Mexico City, brings over 30 years of experience delivering services to government and private sector clients across Mexico, the United States, Central America, the Caribbean, and South America.

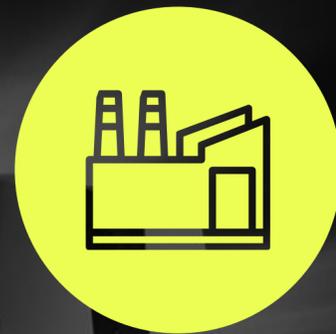
We proudly serve clients such as:



Tailored services across multiple sectors



Architecture
Engineering
Construction
Industry



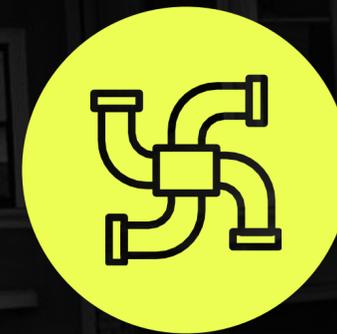
Power Plants
Industrial
Facilities
Oil and Gas
Industry



Monument
Preservation
Historical
Heritage
Archaeology



Multimedia and
Entertainment



Water and
Wastewater
Treatment
Plants





RCU
Believe in Futures



Combining cutting-edge technology with our own proprietary survey methods, we deliver accurate and efficient results



LEICA P40
EXTERIORS



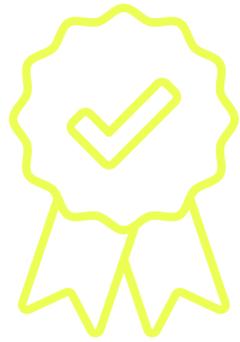
LEICA RTC36
INTERIORS



LEICA BLK2GO
HARD-TOREACH
PLACES



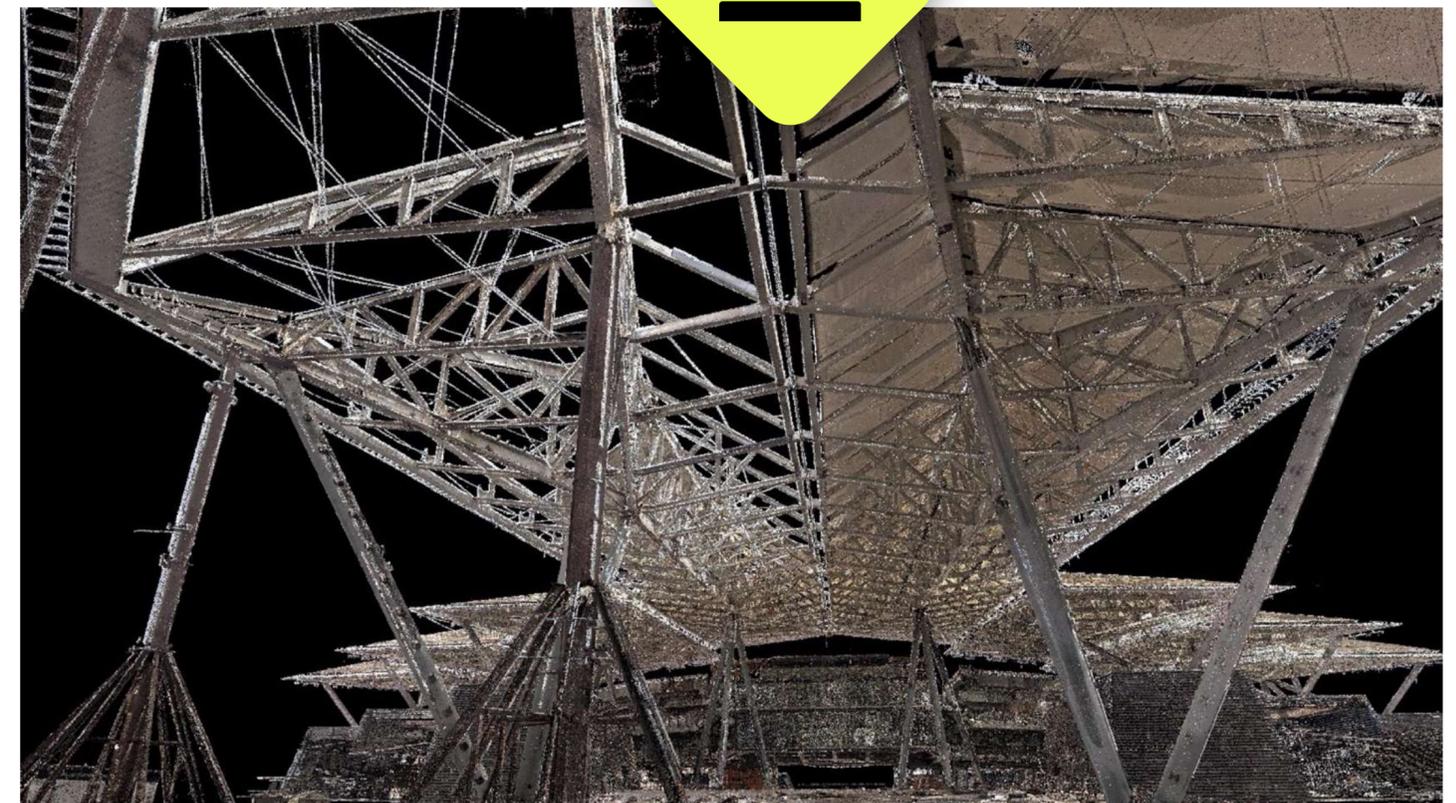
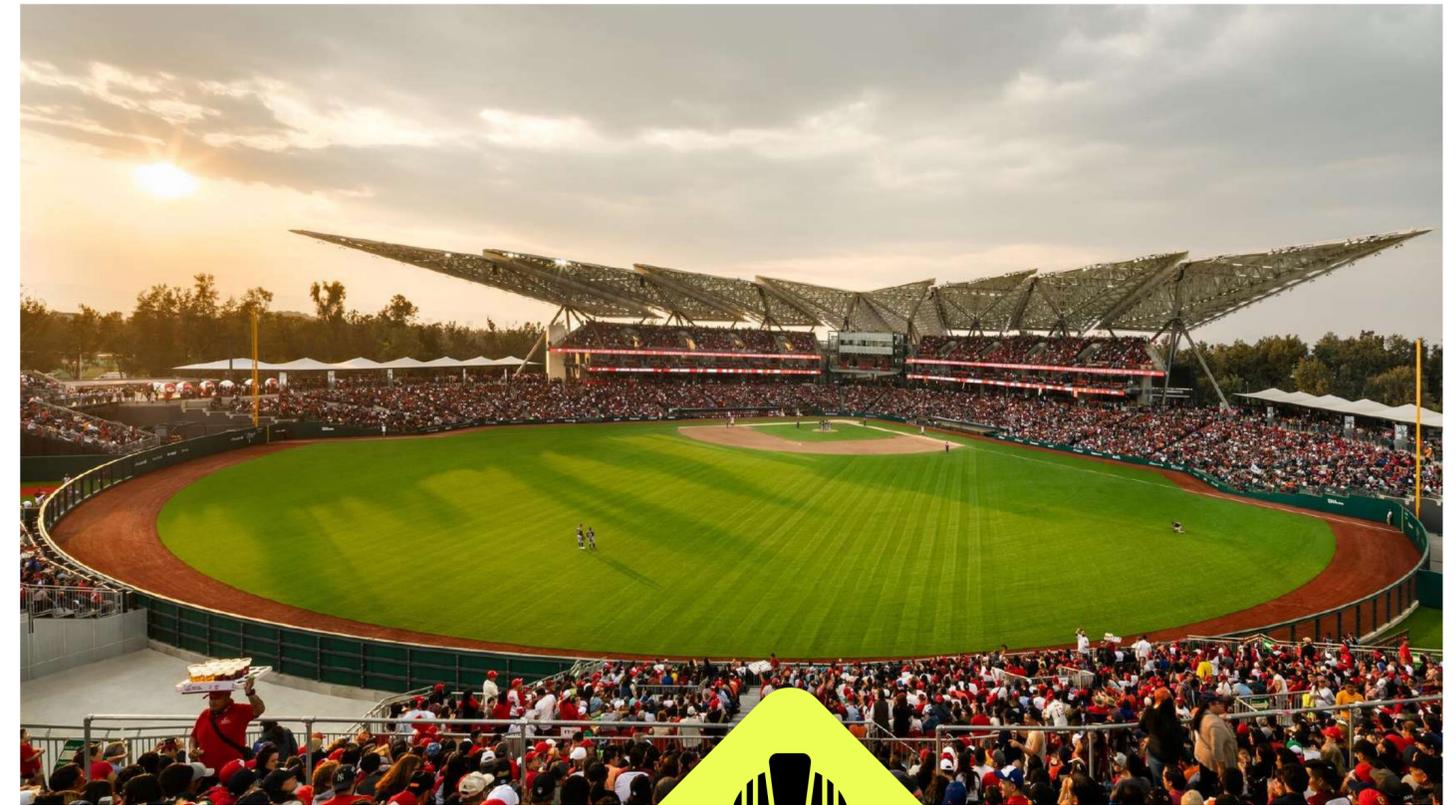
LEICA TRK700
ROAD MAPPING
AND
DIGITALIZATION



Structural surveys & success stories

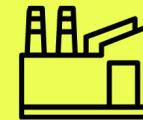
The MLB - Harp Stadium and the Future of Mobile Digitalization: Georeferenced 3D Point Clouds for Stadiums and Arenas of All Sizes.

We digitized the Alfredo Harp Helú professional baseball stadium, making it the world's first fully digitalized stadium for comprehensive structural evaluation and optimized evacuation route planning.



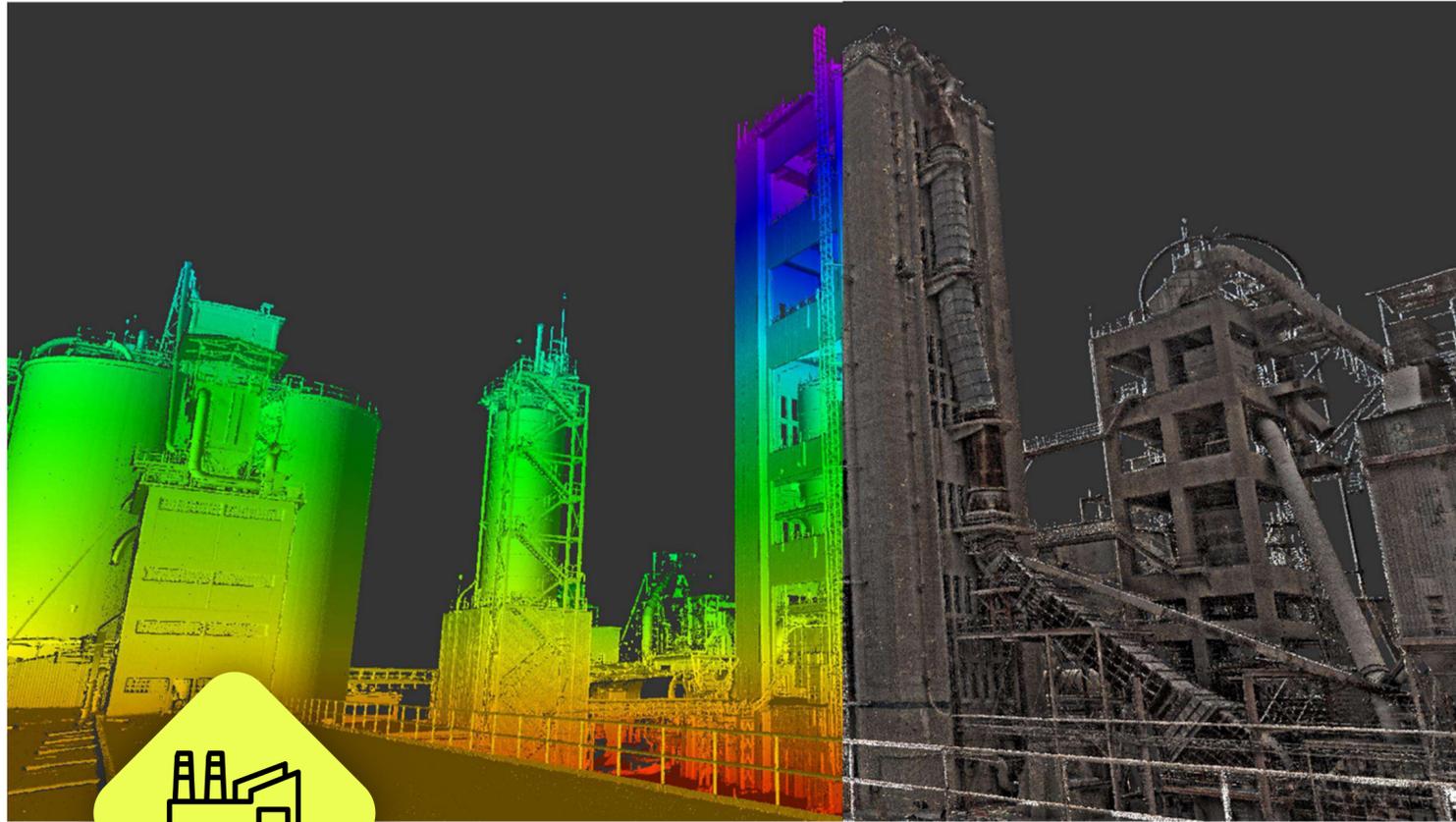


4 Safe Solutions / RCU Sistemas and its team based in FLORIDA, USA, and Mexico City with over 30 years of experience have extensive expertise in scanning and digitalizing structures. Recently, we have contributed to structural assessments and surveys following hurricanes in Acapulco, Mexico, Houston, Texas and earthquakes in Mexico City and various countries across Latin America and the Caribbean. Our work is certified and endorsed by the College of Engineers and Architects of UNAM.



The National Association of Chemical Engineers (ANIQ) has enabled us to engage with multiple sectors and companies within the Chemical and Petrochemical industry, delivering Structural Safety Reports in:

- PFIZER LABORATORIES AND PLANTS
- CEMEX PLANTS
- BACHOCO PLANTS
- BBVA FACILITIES

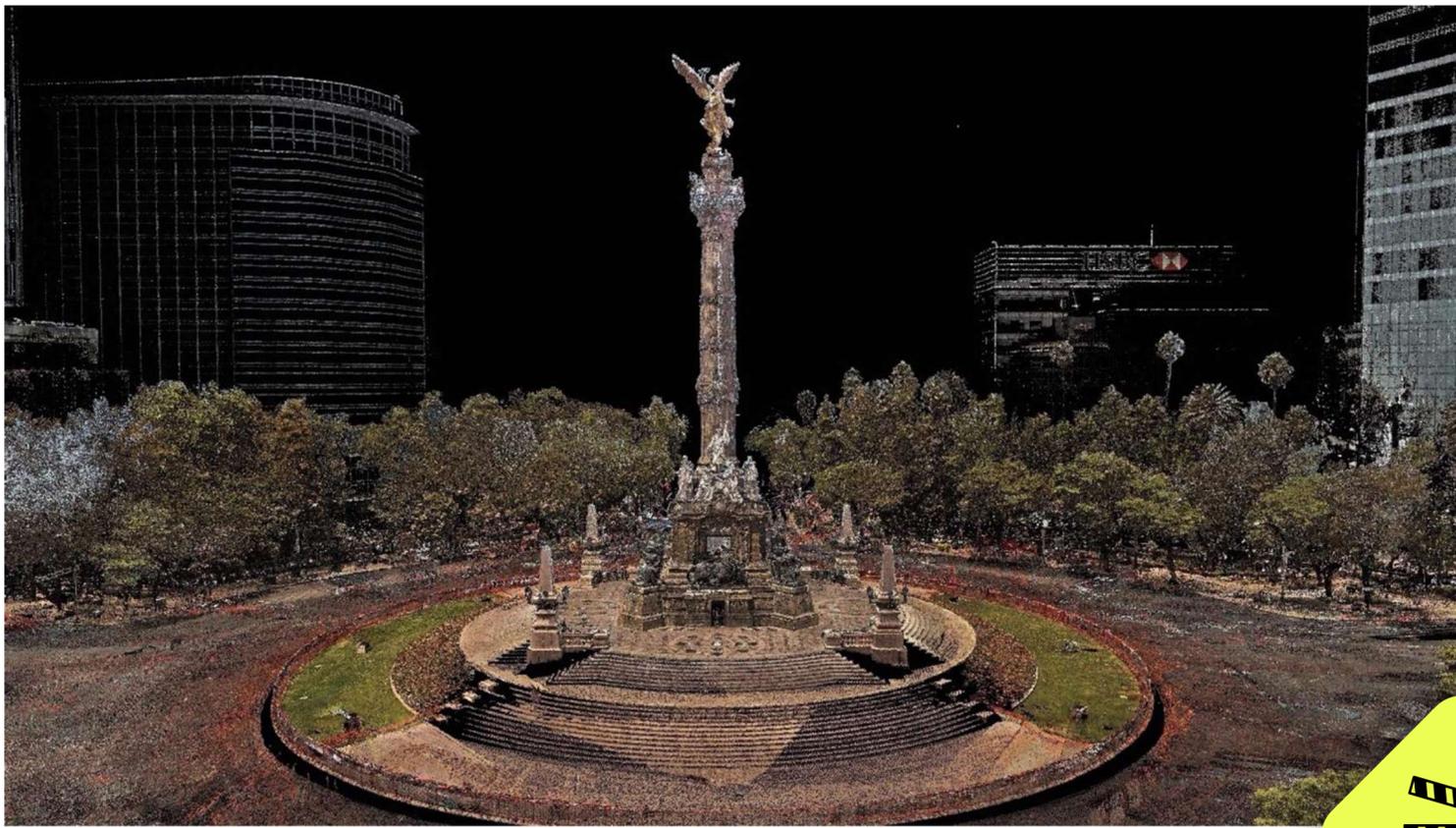


Industrial plant surveys and safety assessments.



Heritage and registered building digitalization:

- As-Built Documentation
- Structural and Architectural Plans
- Structural Evaluation Reports
- Subsidence Monitoring
- Preservation in Point Cloud Format



Angel of Independence

Widely considered one of the most iconic monuments in Mexico, it was scanned as part of a Structural Safety Report. Using a combination of advanced technologies, including LiDAR, the survey revealed an 8 mm deviation in the internal staircase located within the column used for ascending and descending the tower.

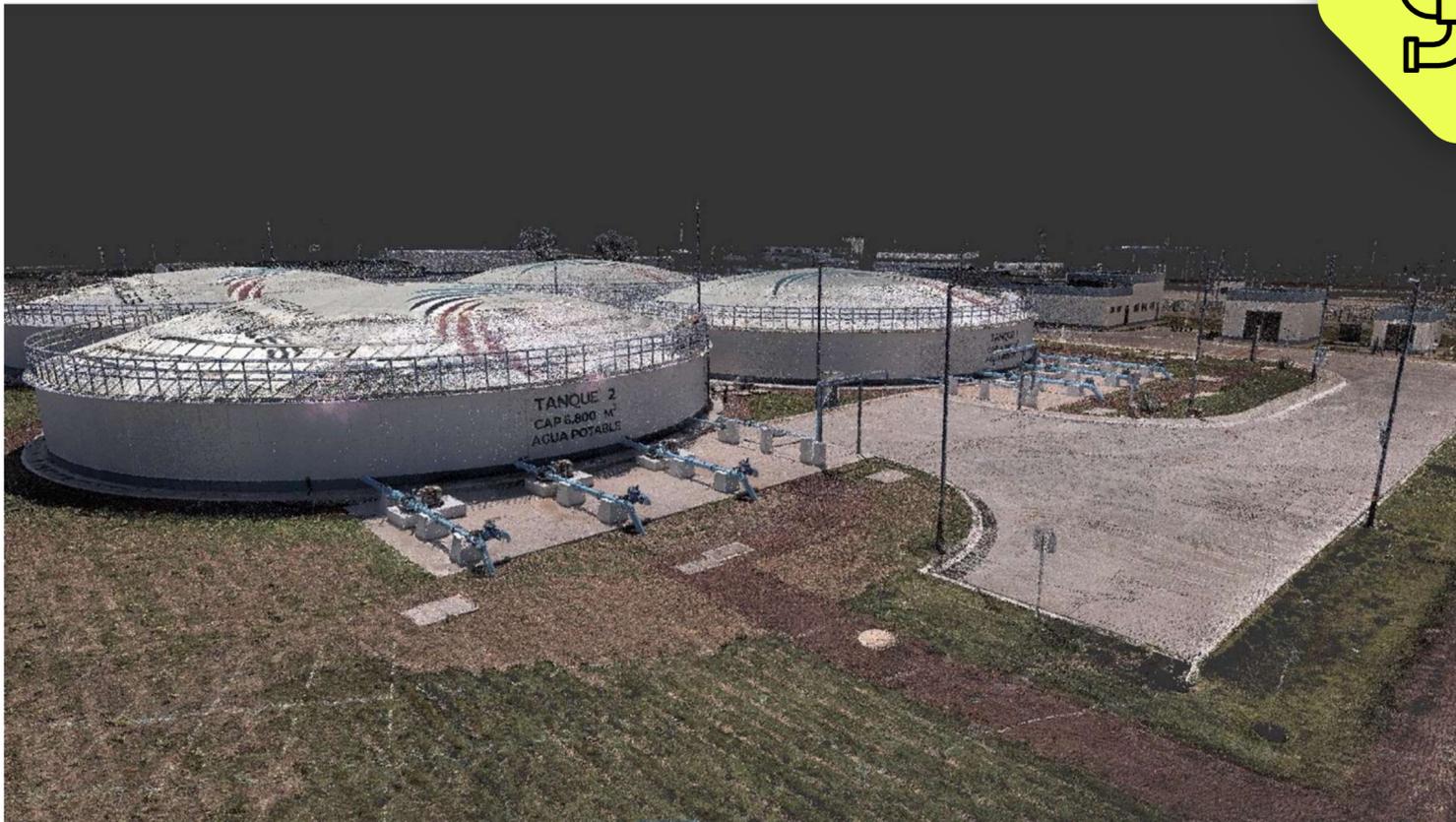
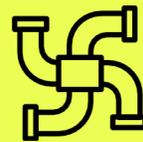


Historic Center

By combining advanced scanning and point cloud technologies, we have become a leading provider of digital surveying and structural safety assessments for registered monuments and historic buildings, many of which are recognized as cultural heritage sites of humanity.



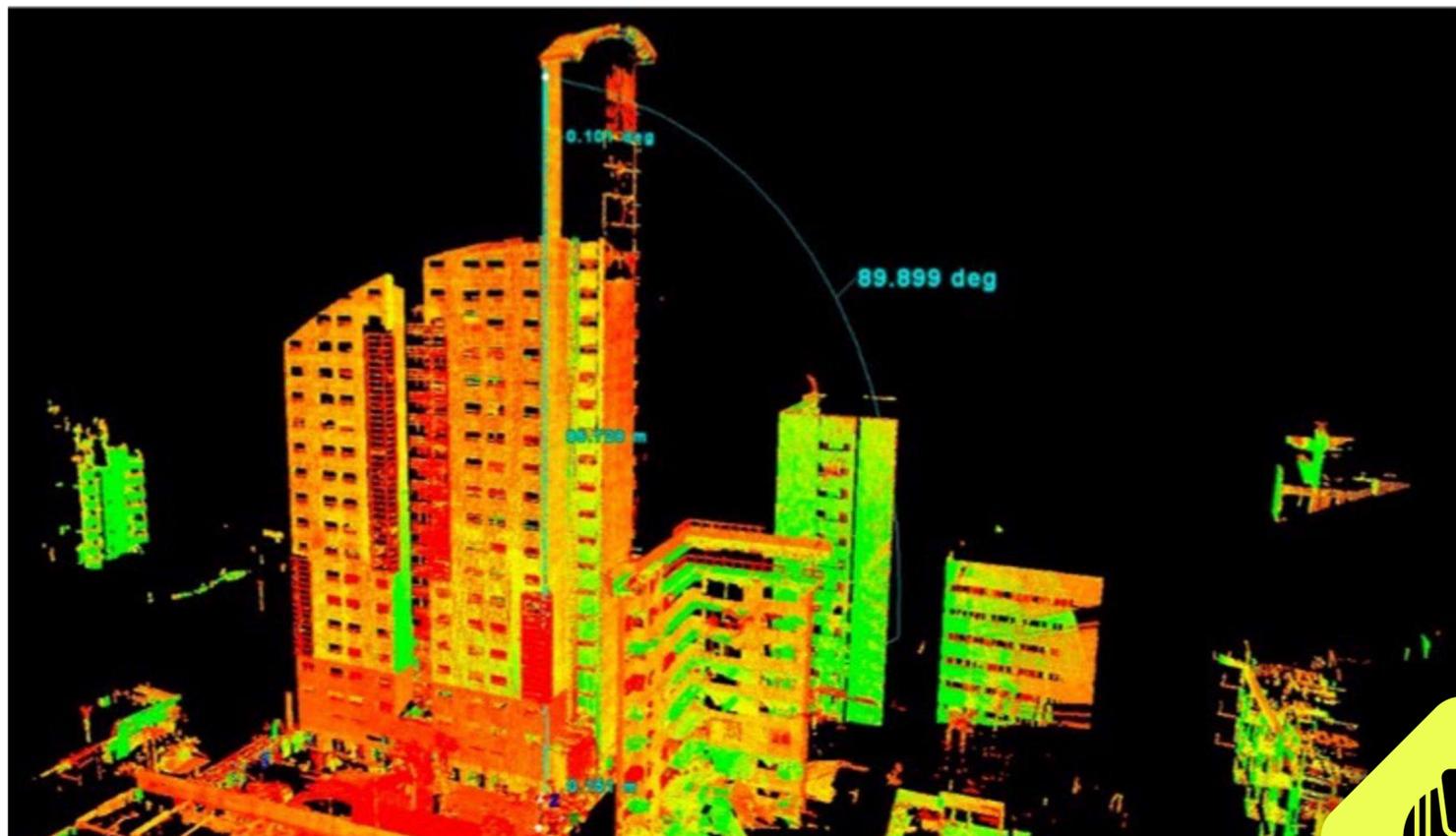
We collaborate with CFE and PEMEX on expansion projects by delivering detailed as-built documentation, architectural plans, safety reports, and infrastructure modification plans using interference detection technology. These solutions have led to significant cost savings and enhanced safety for employees and technical personnel.



CEMEX (Cementos Mexicanos)

Across all levels of the industry, we have successfully implemented and optimized evacuation methods and routes by up to 60% thrc.

Additionally, we have enhanced protocols for the safe disposal of toxic waste, improving both efficiency and safety standards.



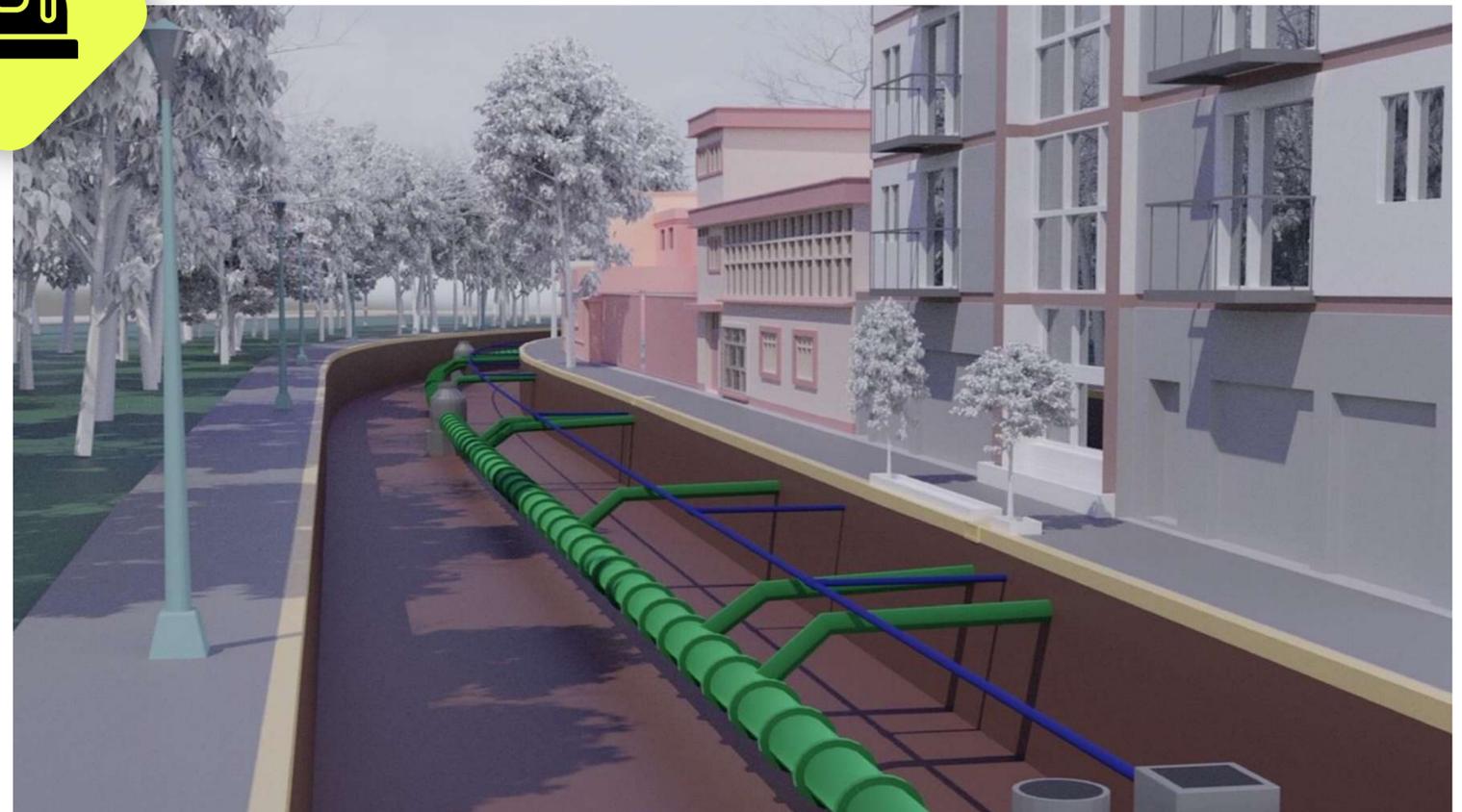
Emergency Response: Structural Scanning After Natural Disasters

Following Hurricane Otis in Acapulco, Mexico, our engineering team conducted structural assessments on over 60 buildings to evaluate damage and identify potential weaknesses that could compromise occupant safety.



Network registry:

- Pipeline mapping
- Detection of illegal connections
- Registry census
- Pothole counting and georeferencing by street
- Delivery of pipeline mapping in DWG, 2D, and 3D formats



Solutions We Provide

OUR TECHNICAL DESIGN & MAPPING SERVICES INCLUDE:

- SEWER Detection and Pipeline Layout and Design Plans
- Structured Cabling Network Schematics
- Fiber Optic Infrastructure Planning
- Industrial-Scale System Analysis
- Comprehensive Pipeline Mapping Delivered in DWG, 2D, and 3D Formats

Advanced Stream Ground Penetrating Radar (GPR) Technologies Provider in LATAM and the Caribbean.

APPLICATIONS OF STREAM GPR TECHNOLOGY:

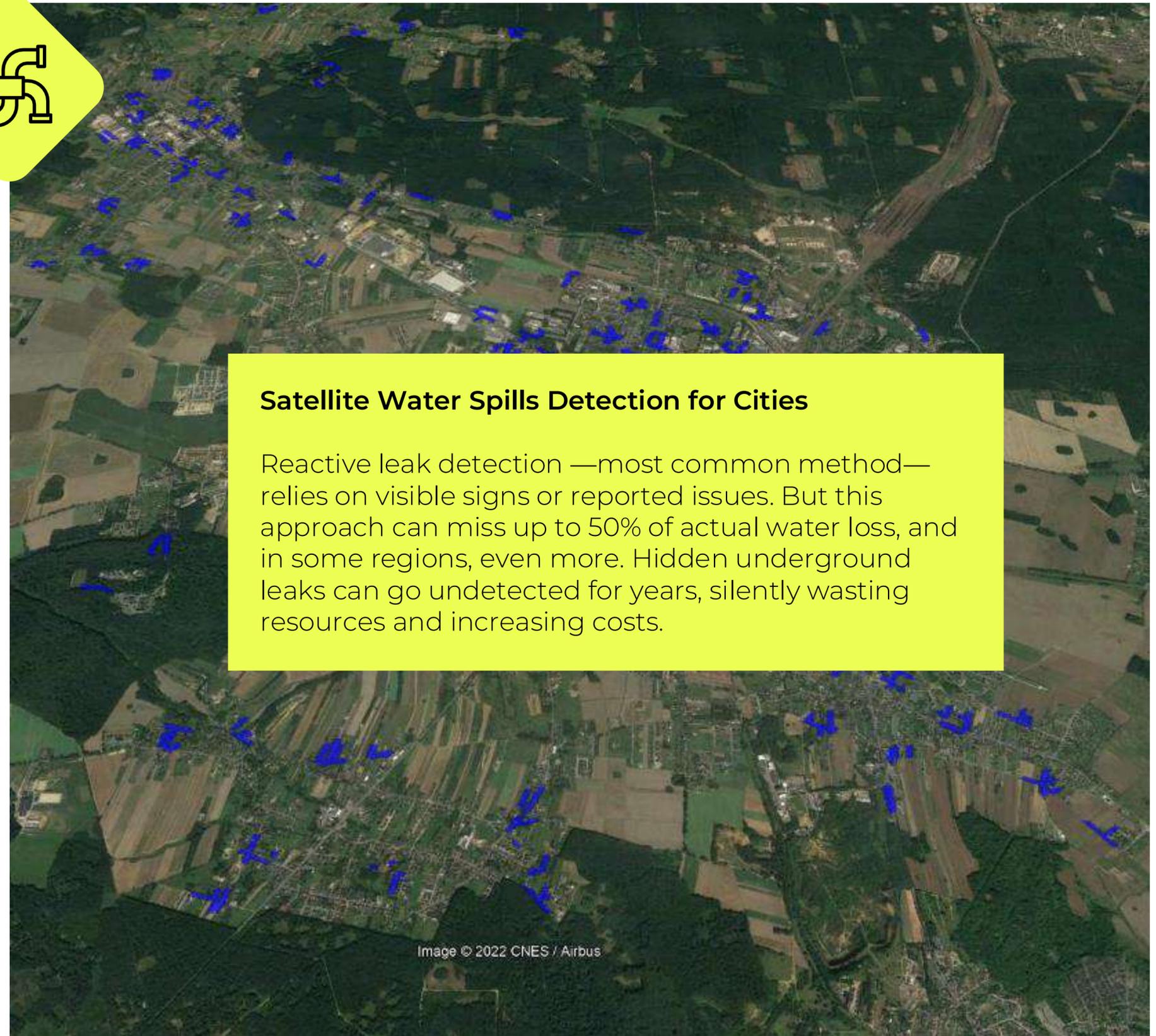
- Subsidence Monitoring
- Sinkhole Detection
- Soil Structure Analysis
- Underground Leak Detection
- Water Theft Identification
- Subsurface Pipeline Mapping
- Pothole Georeferencing and Documentation

Pothole Repair and Monitoring with Georeferenced Tracking

We provide pothole patching using high-quality cold asphalt, combined with satellite-based supervision through GNSS antenna technology. Each repair is georeferenced and logged into a centralized database, capturing:

- Exact location (via satellite)
- Date and time of repair
- Contractor responsible for the work

This system ensures traceability, quality control, and data-driven infrastructure management.



Satellite Water Spills Detection for Cities

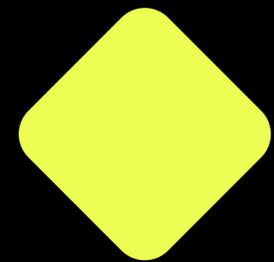
Reactive leak detection —most common method—relies on visible signs or reported issues. But this approach can miss up to 50% of actual water loss, and in some regions, even more. Hidden underground leaks can go undetected for years, silently wasting resources and increasing costs.

Image © 2022 CNES / Airbus

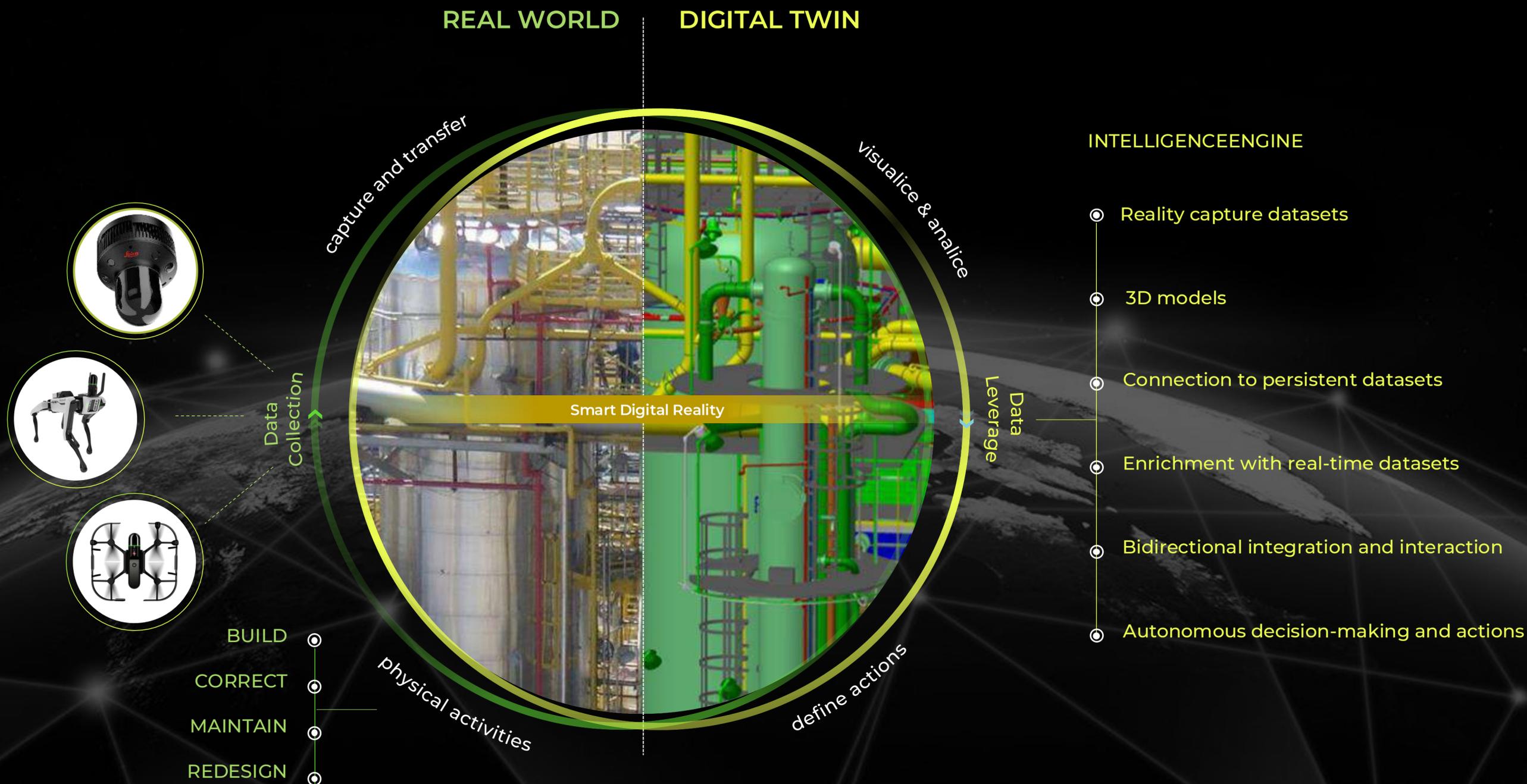
Roadway Scanning for Property Cadastre Using Laser Scanning

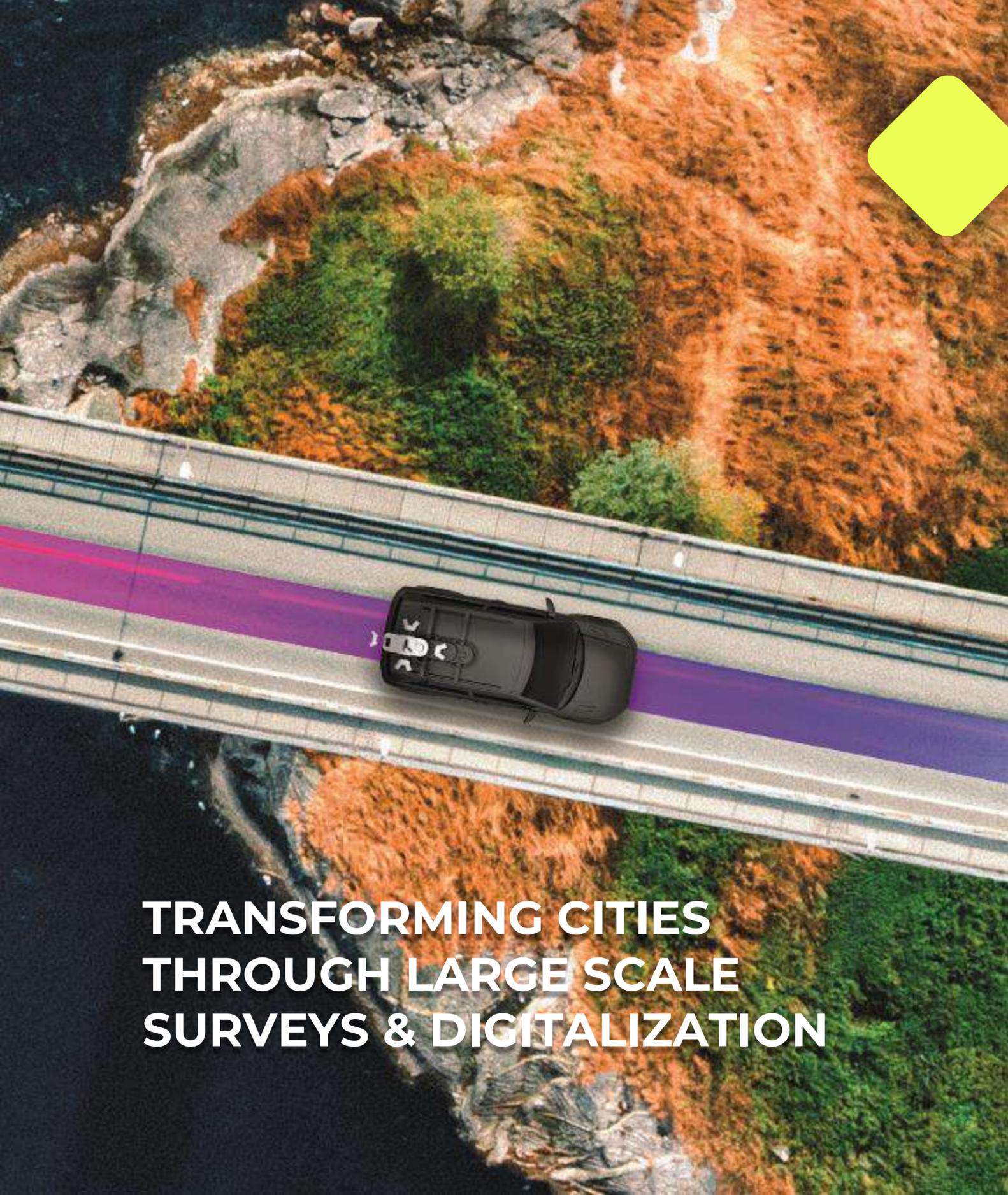
Laser scanning is an innovative technology that captures highly accurate, detailed 3D data of road infrastructure and property boundaries. This enables the creation of precise digital models of highways, streets, sidewalks, potholes, trees, lighting fixtures, building facades, and many other features—providing comprehensive insight into the real world for better planning and management.





Smart Digital Reality for Next-Gen Infrastructure

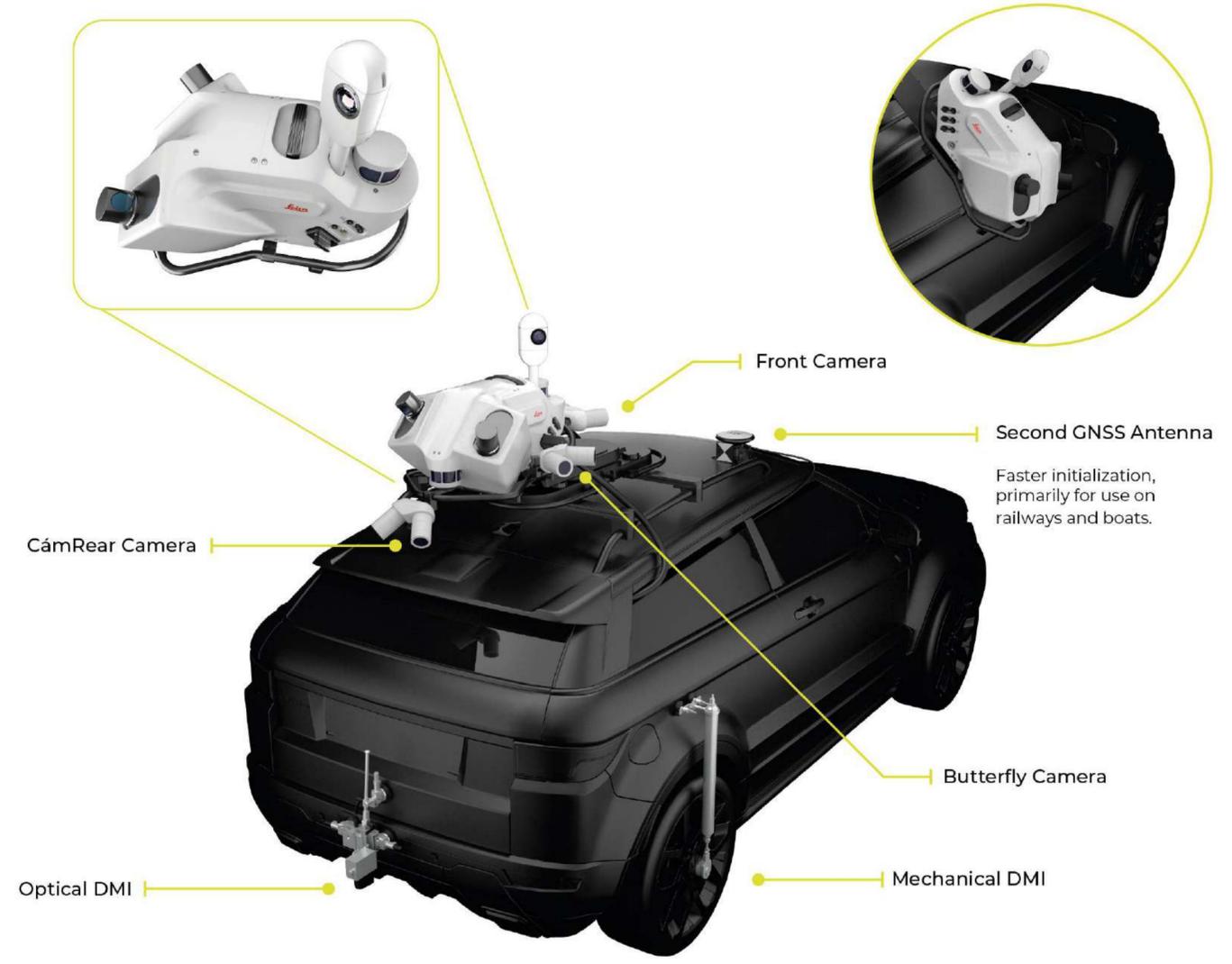




**TRANSFORMING CITIES
THROUGH LARGE SCALE
SURVEYS & DIGITALIZATION**

Endless Opportunities and Versatile Applications

Our advanced operating platforms and camera systems, featuring TRK and P50 equipment, deliver unmatched precision and flexibility for all your surveying needs. Experience cutting-edge technology designed to tackle diverse applications with ease and accuracy.





Advanced Maritime Mapping and Monitoring



Advanced Tunnel Mapping Solutions



Advanced Highway Surveying



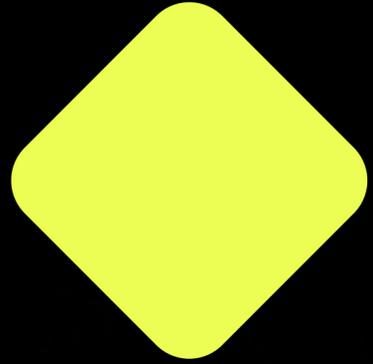
Beach Mapping and Environmental Assessment



Mexico City Metro - Underground Surveying and Mapping



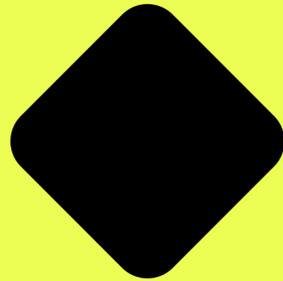
Comprehensive Surveying of Streets and Avenues



Advanced Reality Capture Services

Georeferenced Utility Mapping & Comprehensive Digitalization of Public Infrastructure





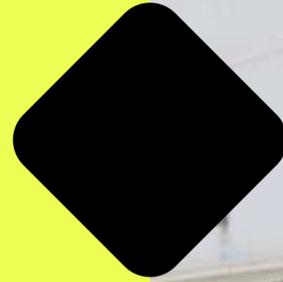
We transform physical infrastructure into precise digital records, making public management simpler, more efficient, and future-ready.

Efficient public infrastructure management is a core responsibility for any government dedicated to sustainable territorial development. Our specialized Reality Capture services provide the comprehensive technological solutions public administrations need to create a complete utility network registry and fully digitize their infrastructure assets.

Using cutting-edge technology and expert methodologies, we transform complex physical facilities into accurate, digitized technical documentation. This empowers governments with the essential tools to advance toward modern, efficient, and sustainable resource management.

Leading the Transformation in Public Administration

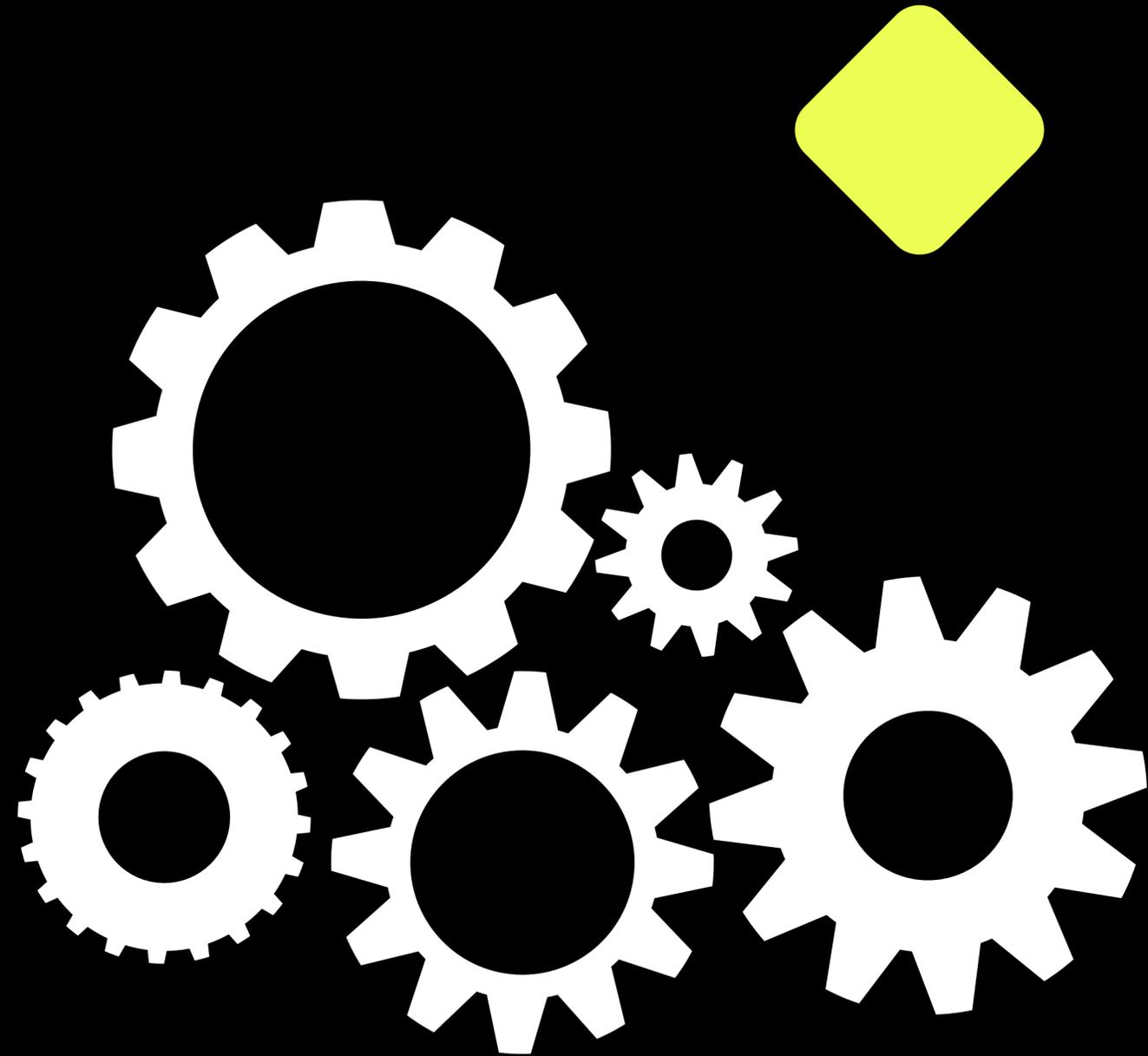
The implementation of our services leads to a comprehensive optimization of public budgets through the precise documentation of all existing infrastructure. This accuracy eliminates emergency expenditures and significantly reduces operating costs, freeing up resources that can be redirected toward new public projects.





The Complete All-in-One Solution

Our cutting-edge technology combines Robotic Total Stations and STREAM Ground Penetrating Radar with advanced Reality Capture systems to fully digitize facilities with millimeter-level precision, including non-visible underground elements.

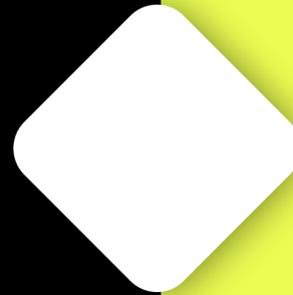


Our Five-Phase Methodology:

From the initial site assessment to the final delivery of complete technical documentation, our process includes data capture using advanced Reality Capture technology, expert data processing, and ongoing specialized support to ensure project optimization.

Specialized Services:

- **Electrical Infrastructure:** Single-line electrical diagrams, detailed documentation of substations, and emergency power systems.
- **Communication Systems:** Voice and data schematics, fiber optic network layouts, and telecommunications infrastructure.
- **Structural Documentation:** Detailed architectural drawings and precise surveys of public buildings.

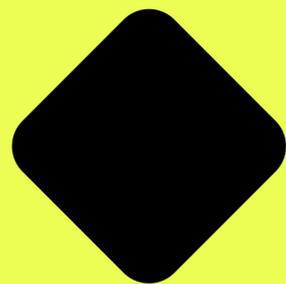


Value-Added Services:

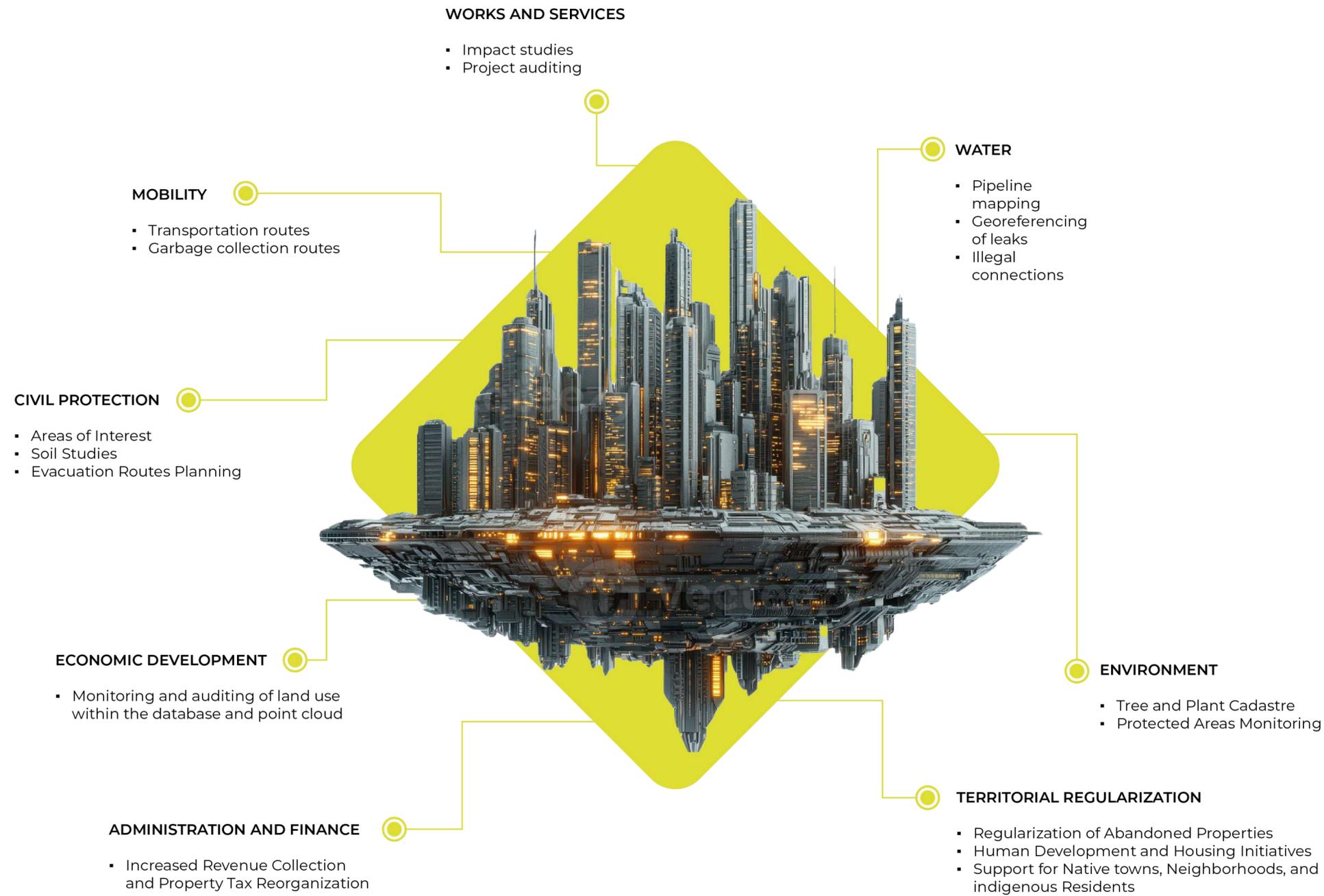
- **Security and Surveillance:** Security assessments, surveillance system installations, and vulnerability analyses available upon request.
- **Emergency Management:** Optimization of evacuation routes, point cloud-based simulations, and process improvements to enhance comprehensive emergency management.

Delivering Value to Government

Our specialized expertise, combined with precision technology, delivers comprehensive technical support that maximizes the value of public investment. Our flexible solutions adapt fully to the unique needs of each government project, while transparency remains central to our process through accurate estimates and detailed quotations.



Advanced Point Cloud Solutions



Key Benefits

Standardized surveys with a unified database supporting diverse applications and outcomes.

Conclusions and Impact of the Research

- Optimize costs and time across all sectors
- Prevent sinkholes and analyze asphalt layers
- Plan suburban municipalities effectively
- Resolve and optimize routes for:
 - Public transportation
 - Freight transport
 - Garbage collection
- Reorganize mobility among the 34 suburban municipalities
- Conduct comprehensive census of billboards, advertisements, traffic lights, signage, potholes, trees, lighting, and more
- Provide accurate property measurements and maintain individual data records
- Capture precise height measurement data for properties, trees, and other elements
- Deliver detailed data feedback by zone, department, and service type
- Monitor and analyze protected areas, monuments, and registered buildings



Thank you!

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