

ASECAP DAYS



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LiDAR – Mobile Mapping

**Digital Twin-Based Maintenance and Monitoring
for Road Infrastructure Solutions**

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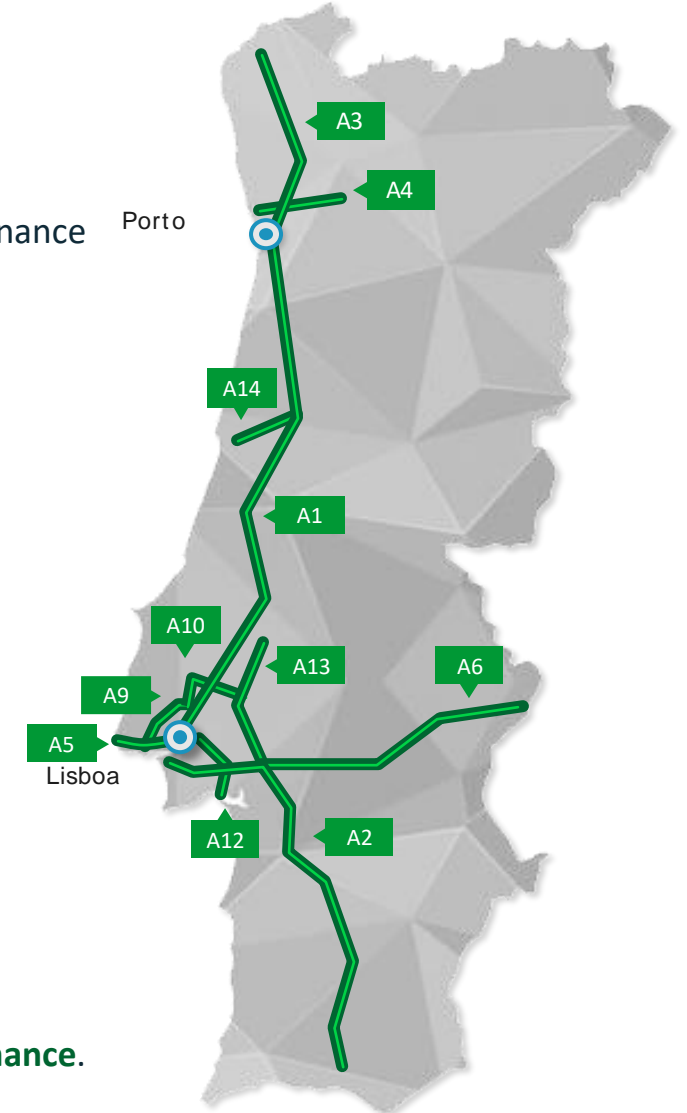
- Context
- LiDAR technology
- Objectives
- Vision
- Roadmap
- Projects
- Conclusions

Context

- **Our network** is distributed throughout the national territory, from north to south, with greater predominance in the central and northern coastal zone.

- **A1** (Lisboa / Porto) – 297,4 km
- **A2** (Almada / Algarve) – 234,8 km
- **A3** (Porto / Valença) – 112,8 km
- **A4** (Porto / Amarante) – 51,3 km
- **A5** (Lisboa / Cascais) – 25 km
- **A6** (Marateca / Caia) – 157,9 km
- **A9** (Circular Regional Exterior de Lisboa) – 34,4 km
- **A10** (Bucelas / Benavente) – 39,8 km
- **A12** (Montijo / Setúbal) – 30,9 km
- **A13** (Almeirim / Marateca) – 78,7 km
- **A14** (Figueira da Foz / Coimbra) – 39,9 km

- In the year 2000 was created a holding company dedicated to the technical areas, **operation** and **maintenance**.



Context

The Brisa Group's vision is to be a **leader in Portugal and a world reference**, with a growing international presence, in the **management of transport infrastructures** and **highly efficient and sustainable mobility solutions**.

Pillars



Transformation levers

| | |
|-------------------------------|---|
| Financial management | Optimize the capital structure |
| Digital and innovation | Step up digital transformation and innovation |
| Sustainability (ESG) | Achieve ESG objectives, anchored to Brisa's culture and business model |
| Organization and capabilities | Prepare the macrostructure, governance, talent/capabilities and organizational health |



Context

Geospatial Department: Who are we?

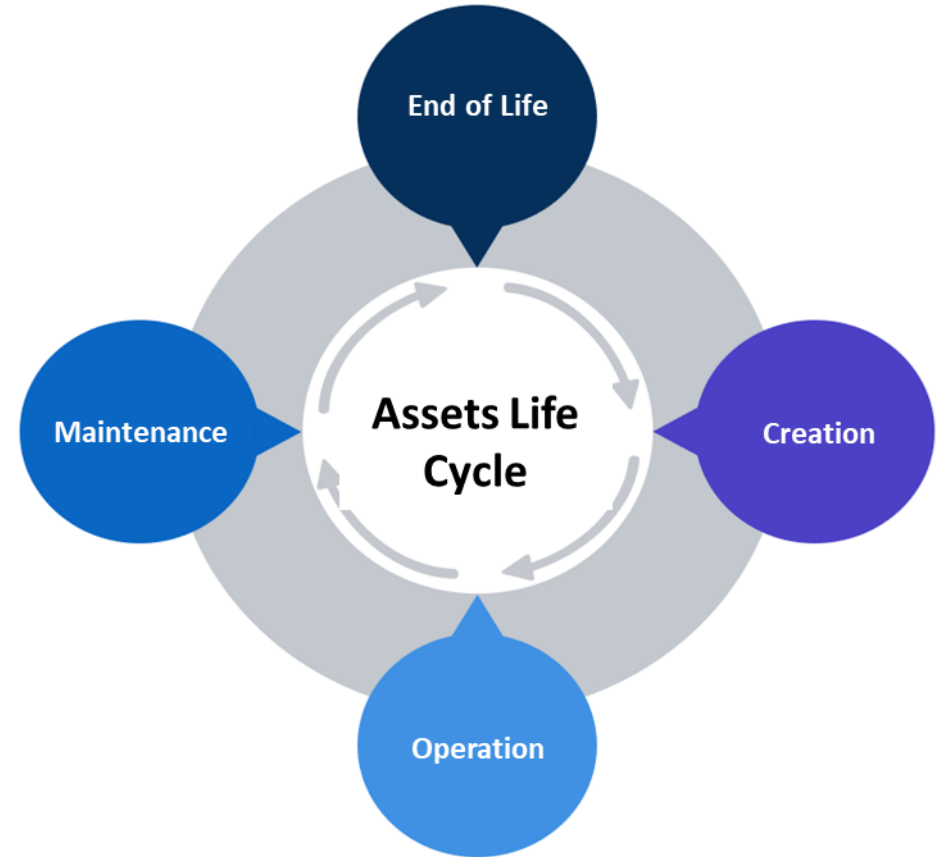
Our goal is to collect, manage and share **geospatial information**.



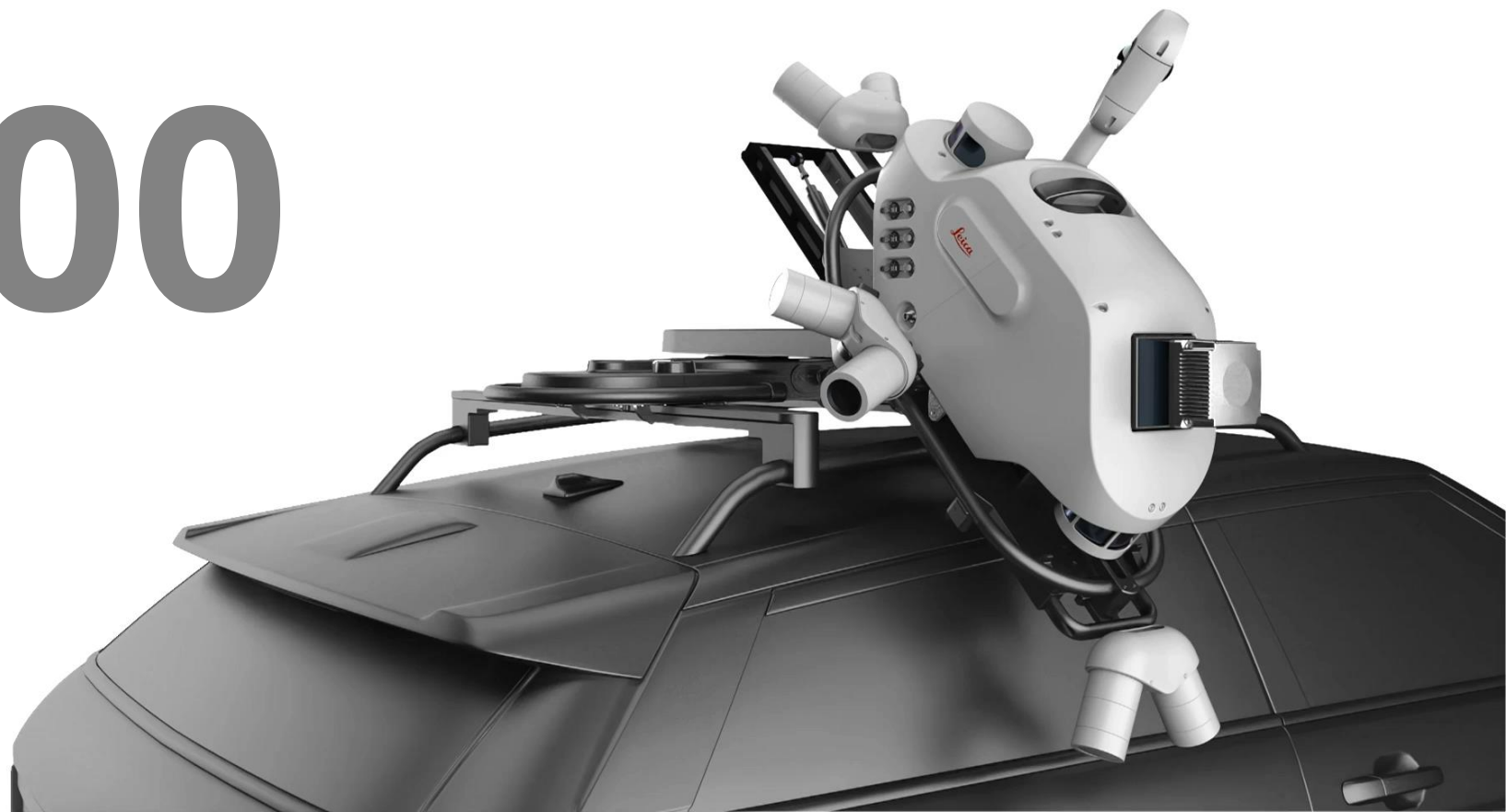
Context

Geospatial Department: What do we do?

We contribute to Brisa Group's asset management strategy, based on **infrastructure digitalization.**



Leica TRK700 NEO





Leica RTC360

SCAP DAYS



024

partnership between:



Leica BLK2GO



Improving digital transformation and innovation

CURRENT STATUS

Georeferenced 2D asset inventory, available for consultation. Manual information updates, based on final blueprints.



GAP

KEY STEPS MISSING

DESIRED STATUS

Dynamic and cyclic information updates, integrated with the Field Service Management strategy. Development of 3D and predictive models of managed road assets, as well as **digital twin models**.



Consistent data acquisition method.

Periodic collections for comparative and predictive analysis of information.

Digital copy of the asset (twin) to reduce human presence on the road.

Objectives

Contribute to **simple, safe and sustainable mobility**

Focus on reducing human presence on the road

IDENTIFY



MAPPING

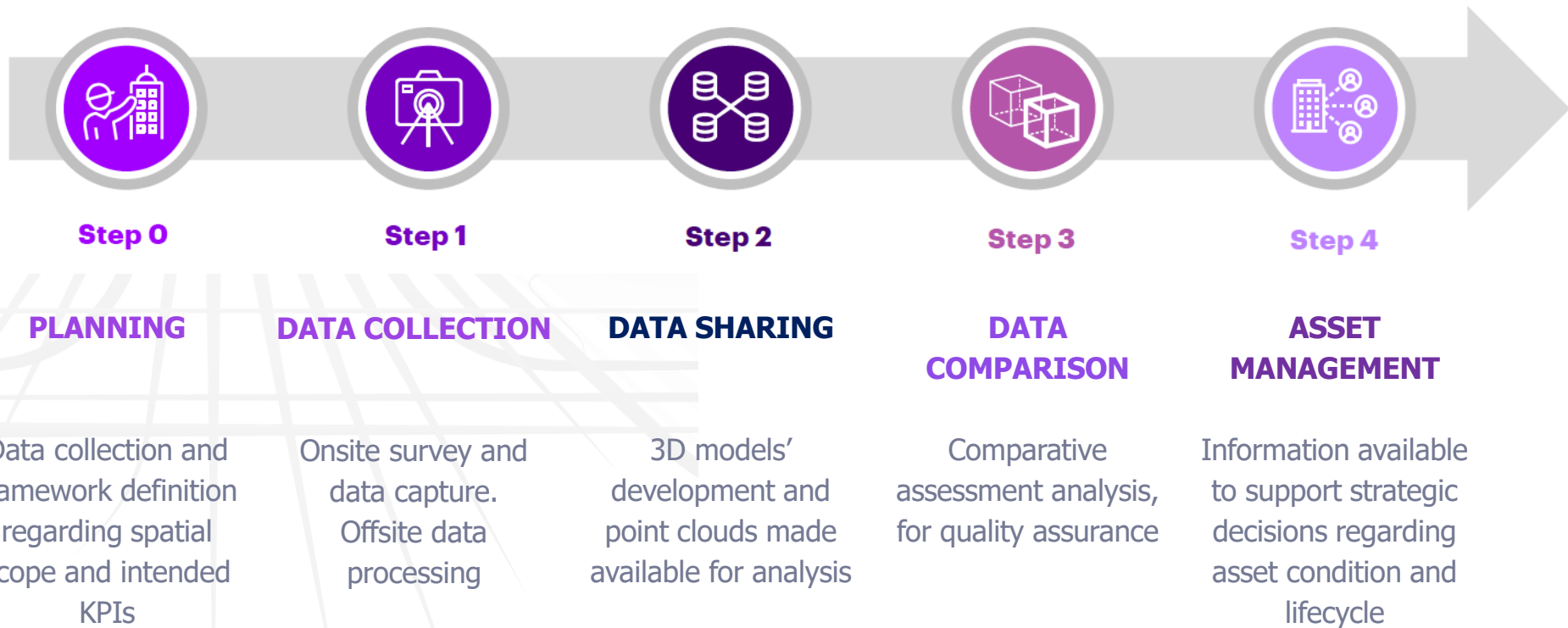


INNOVATE



MANAGE





Lenght

34,5 km

Data collection using LiDAR

2h30m

Volume

995GB collected

536GB after automatic data processing

Data collection using traditional methods

30 days (field work)



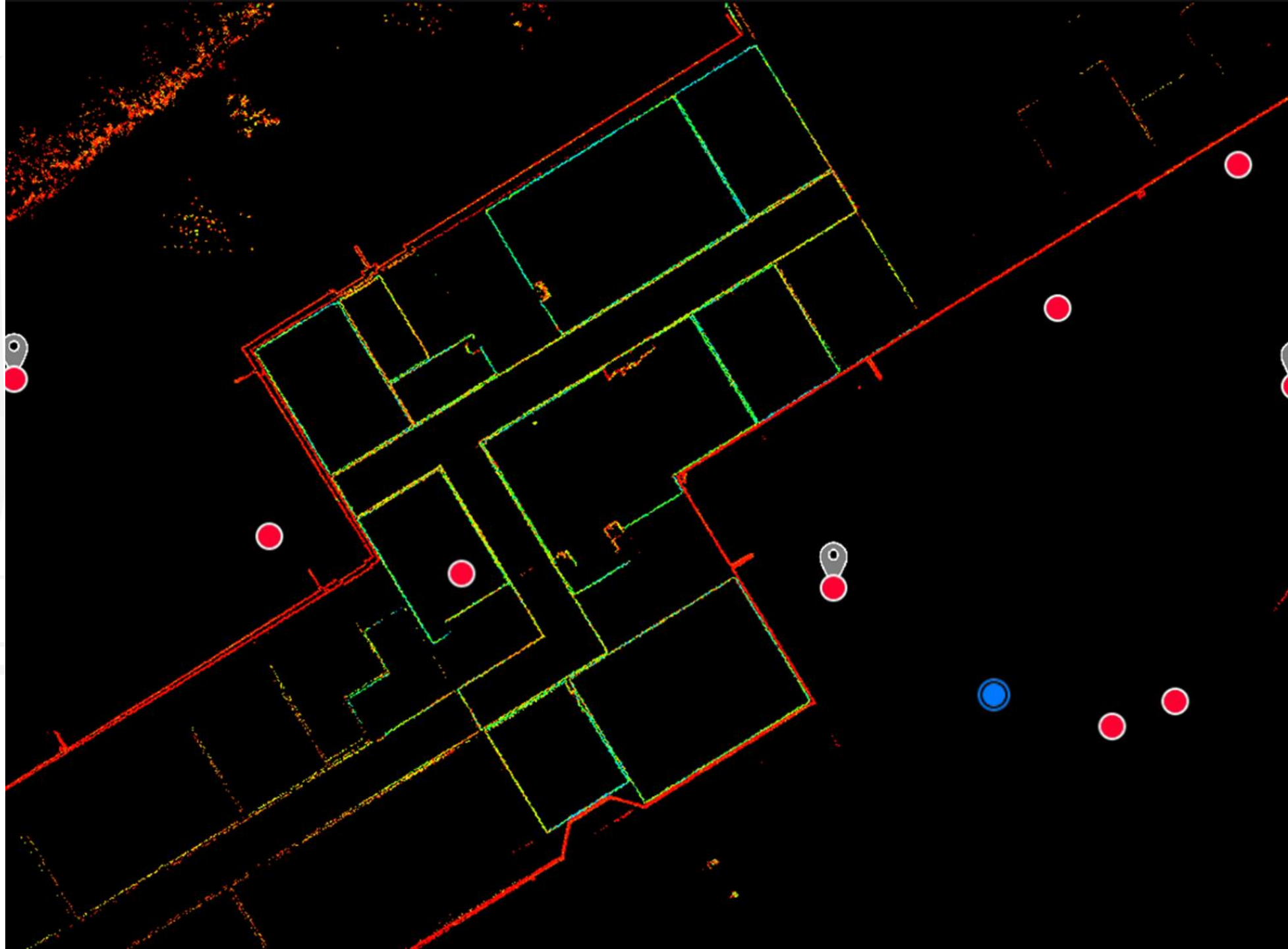


TRK700 NEO





Leica BLK2GO



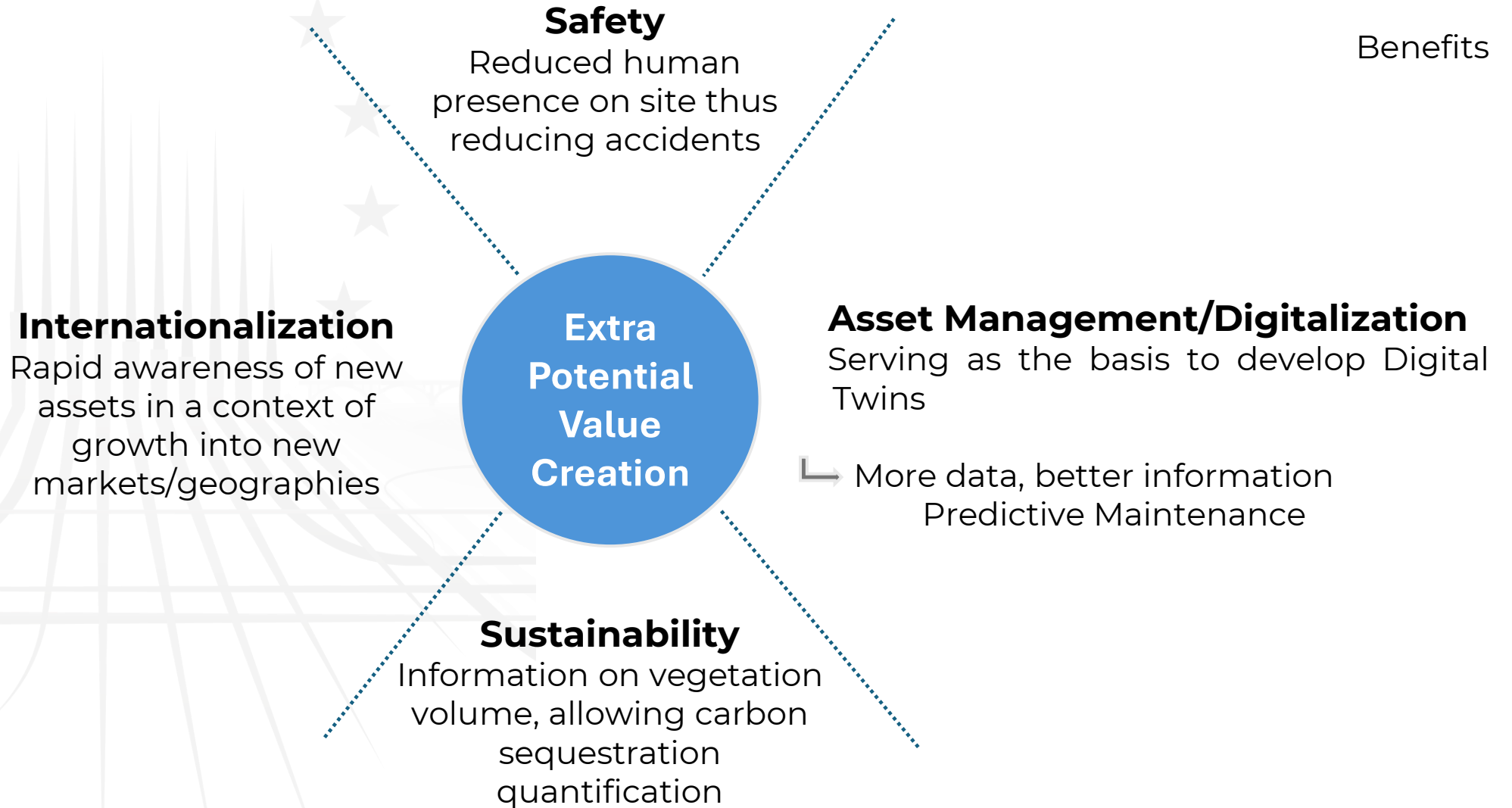
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Project with added value and potential for value creation

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THANK YOU

GRAZIE

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