



## Automated Road Modelling

AI AND 3D LIDAR FOR  
INFRASTRUCTURES

**Why choose *The Cross Product*?**



### PRECISE TOOLS

High precision an advantage over manual solutions



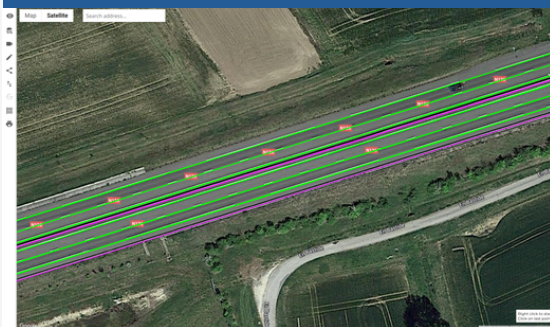
### SPEED OF EXECUTION

Automation representing costs reduction and time saving



### CLOUD PLATFORM

Integration into processing chains. Calculations performed on the cloud



PROPOSITION PREPARED BY  
**THE CROSS PRODUCT**

# A SOLUTION ADAPTED TO YOUR BUSINESS

## Responding to your needs

- Study what exists and provide an accurate and complete **vectorization of marking road and safety barriers**.
- Analyze and compare the polylines to **study the geometry** of lanes, safety barriers and road axis.
- Perform **automated calculations**: slope, radius of curvature, lane width, lane tilt, safety barrier height,...

We propose an algorithm combining **artificial intelligence** and **professional knowledge** to accurately recognize road marking and safety barriers to find their positions in 3D space.

The vectorized elements can be transferred to utilize a Geographic Information System (**GIS**) or Building Information Model (**BIM**) application.

Our solution is **100% automated, reliable** and **fast** to meet the needs of predictive and corrective maintenance.

An algorithm adapted to the **linear networks**, capable of processing multiple sections in parallel and concatenating the results to obtain a **global view**.

### Input Data

- 3D point cloud (LAS/LAZ/E57 format)
- Indication of the road to be vectorised

### Output Data

- 3D polylines of lanes (SHP/DXF)
- 3D polylines of concrete barriers (SHP/DXF)
- 3D polylines of metal barriers (SHP/DXF)

### Compatibility

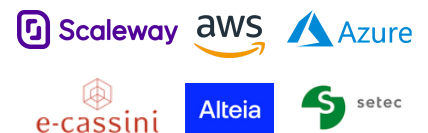
- Platforms (API)
- Any device with a web browser and an internet connection

Can be integrated into point cloud processing platforms

Large-scale use throughout highway network

Pricing by kilometer or by subscription

Accessible on:




Contact us



contact@thecrossproduct.com

Products	Railway	Highway	Industrial Site
Classification	Semantic & Panoptic	Semantic & Panoptic	Semantic & Panoptic
Vectorization	Rails and Track Axis	Ground markings, safety barriers	Overhead wires and equipment
Professional Application	Clash Detection Reverse Engineering	Clash Detection Reverse Engineering Compliance of safety barriers	Safety distance verification

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