



## Automated Road Modelling

AI AND LIDAR 3D 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% automatic, 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

Already available on



Contact us

contact@thecrossproduct.com



### Products

#### Railway

#### Highway

#### Industrial site

Classification	Semantic & Panoptic	Semantic & Panoptic	Available soon
Vectorisation	Rails and track axis	Ground markings, safety barriers	Available soon
Professional application	Clash detection	Reverse engineering	Available soon

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# The Cross Product

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