

Miles ahead.

2022 brochure

INSPECH
AUTOMATED ROAD INSPECTION



Automated Road Inspection

Infrastructure authorities spend billions per year on maintaining roads, traffic signs, street lights, and constructions. Visual inspection is a time-consuming task requiring a significant amount of human effort. Delays lead to more significant problems such as costly repairs, traffic congestion, and even accidents.

Early issue detection resulting from faster and more frequent inspections addresses issues before they cause severe damage. Digital road inspection saves time and money while improving public safety.



LONGITUDINAL CRACK

What we see is what you get

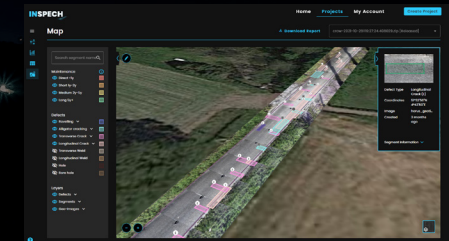
INSPECH is a highly accurate and consistent **Digital Inspector** who takes over repetitive human inspection tasks.

INSPECH rapidly analyzes captured video images of road surfaces and classifies detected defects according to local standards. All insights obtained can then easily be viewed and edited. Your experts only have to perform a last mile check for verification.

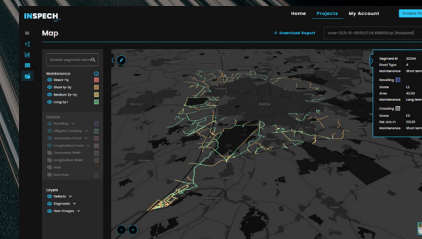
The **INSPECH Viewer** is easy-to-use feature rich software that allows inspectors to share interactive reports with their end-customers.

INSPECH significantly reduces the workload of your human road inspectors and brings back the time that inspections take from several weeks to merely hours.

After the road is scanned with specialized camera equipment, images with GPS coordinates are imported into **INSPECH** and prepared for processing.



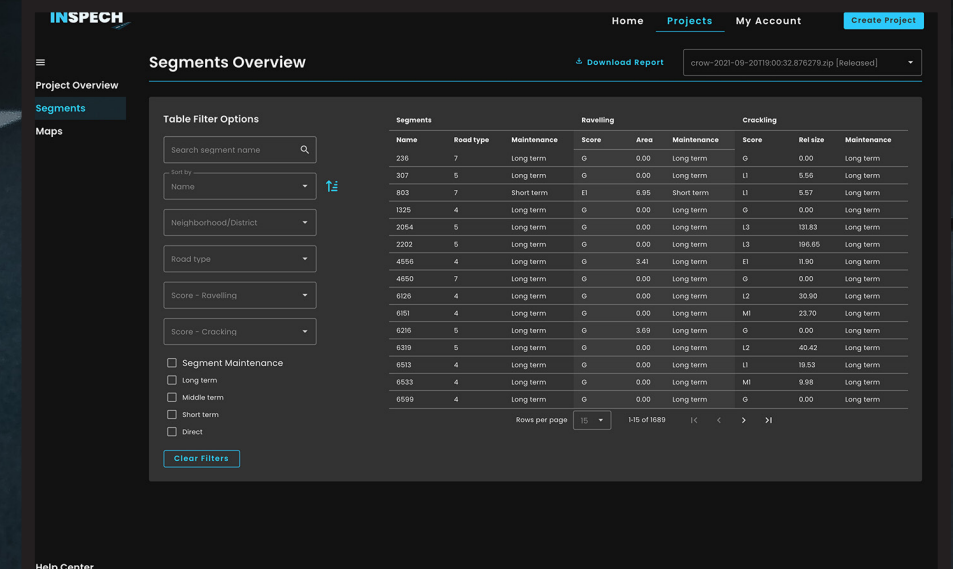
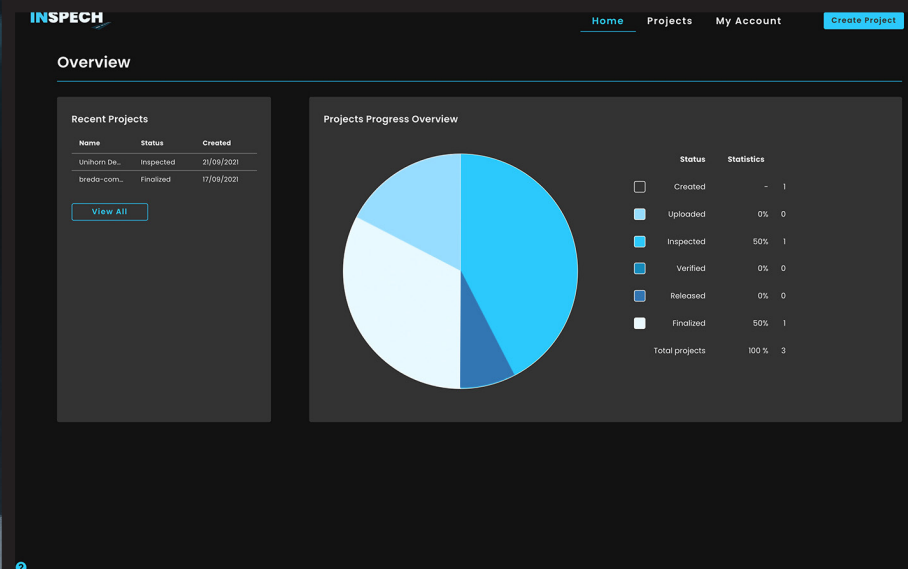
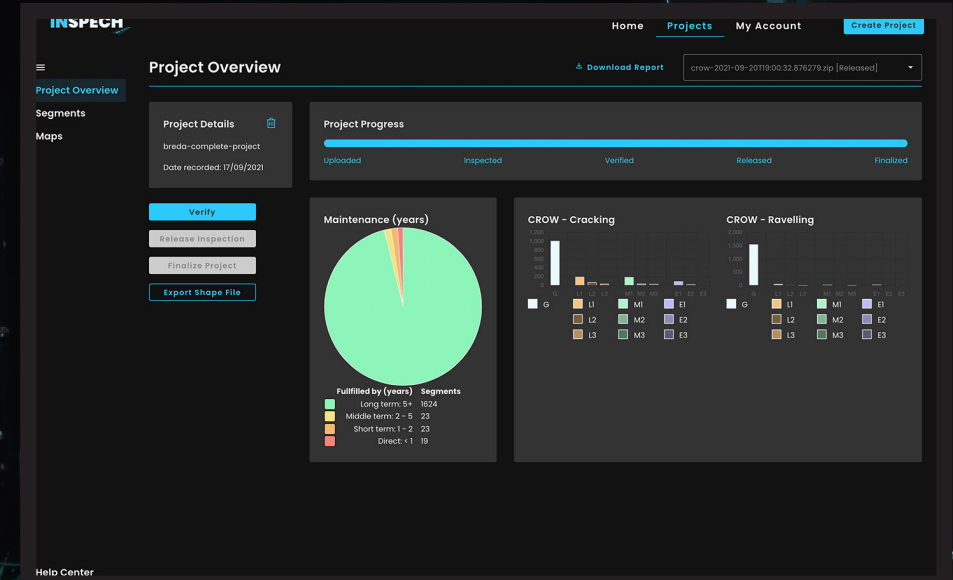
INSPECH accurately and consistently analyzes the images rapidly and classifies the detected damages according to the standards applicable in your country.



Online geospatial analysis provides **immediate insights** into the state of the inspected area. After the last mile check interactive reports can now be shared.

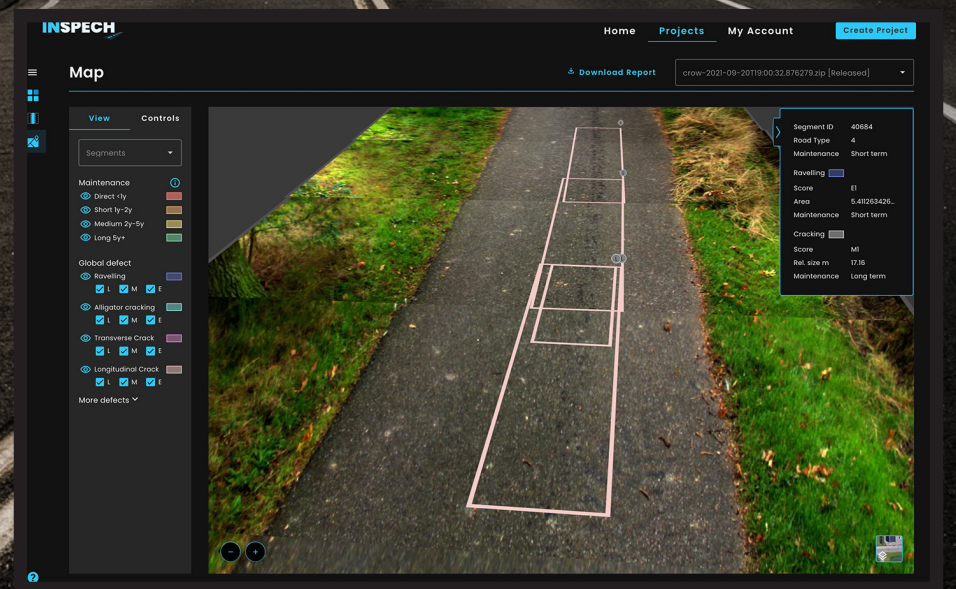
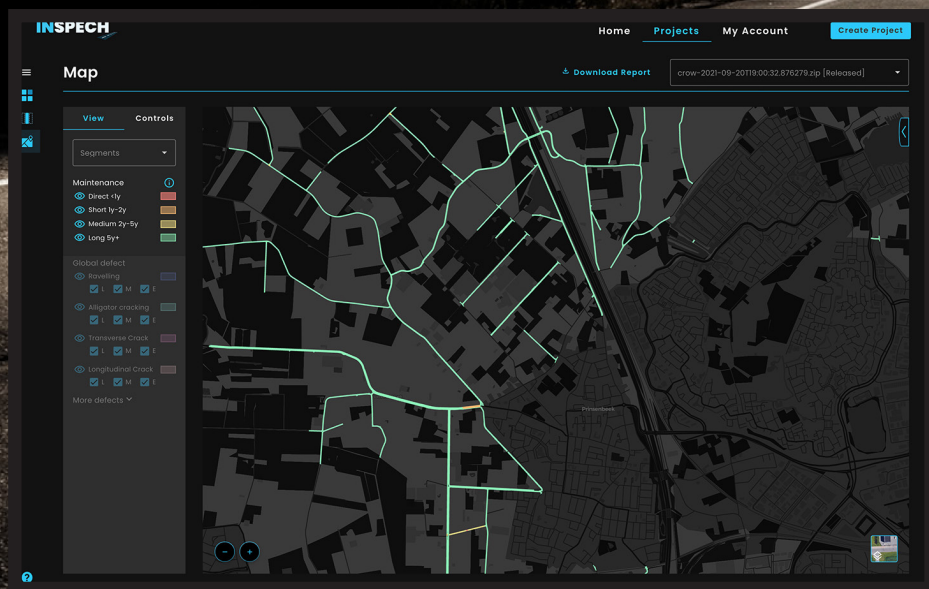
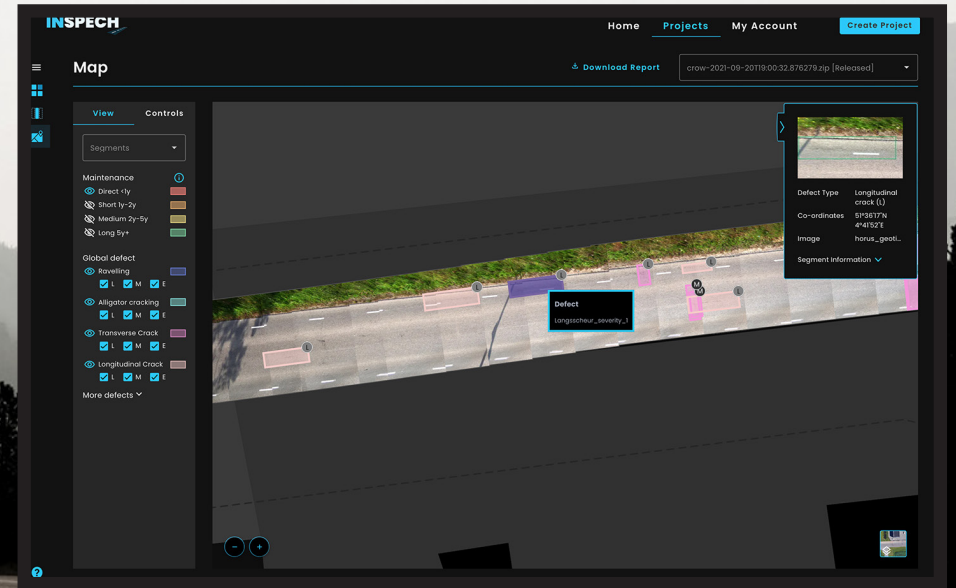
The dashboard

The dashboard offers a complete overview of all your current and finalized projects. With just a few clicks you have access to actionable insights into the different states of individual road segments or the area as a whole. **INSPECH** provides detailed information about the types of damages, the damages coordinates, the magnitude of the damages as well as the severity classes.



The digital map

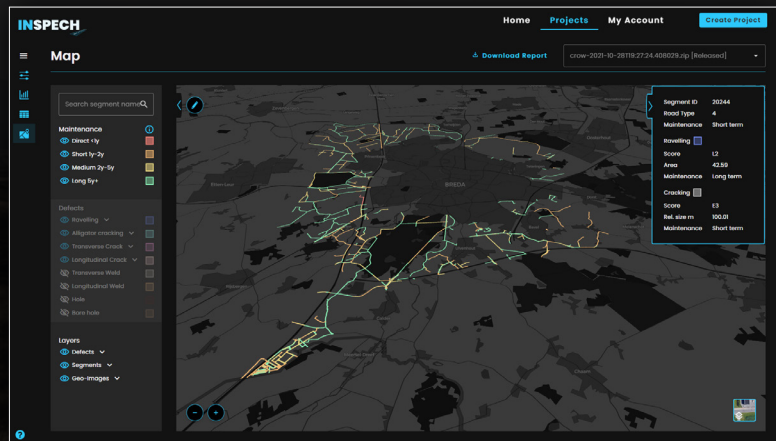
The state of the inspected area is visible at a glance on the highly interactive, digital map. **INSPECH** colors road sections according to maintenance deadlines in compliance with applicable regulations and plots individual damage on the map. In addition, **INSPECH** also plots orthographic images on the map so that you can view actual photos of specific road sections from behind your desk.



Software for Road Inspection

INSPECH

Automated Road Damage Detection



A highly accurate and consistent Digital Inspector, that takes over the human inspection tasks by rapidly analyzing captured video images of road surfaces and classifying defects.

Ideal for:

Infrastructure Inspection Organizations

Operated by:

Maintenance engineers
Asset managers

Software for planning and budgeting

INSPECH

Interactive Viewer



*The **INSPECH Viewer** is an easy-to-use solution to import road damage data and obtain applicable insights. This viewer is the perfect tool for sharing interactive reports with end-users.*

Ideal for:

National and local governments

Operated by:

Maintenance engineers
Asset managers
Directors

Product specifications



	ENTRY <i>no commitment</i>	ESSENTIAL <i>advanced reports</i>	PROFESSIONAL <i>localized & optimized</i>
Payment	One time charge	Yearly subscri.	Yearly subscri.
Price	On request	On request	On request
Number of km / lane <i>Per year</i>	500	> 2000	> 8000
Automatic defect detection <i>4 standard defect types</i>	✓	✓	✓
Inspection editing on the map	✓	✓	✓
Automated pavement condition reporting	✓	✓	✓
Interactive report viewer for customers	✓	✓	✓
Annotation of custom defects on map		✓	✓
Cloud data storage		250 GB *	500 GB *
Continuous optimization for local conditions			✓
Automatic detection of additional custom defects <i>Up to 5 extra defect types</i>			✓
Volume based pricing			✓

* All images remain property of their respective owners

Using deep technology, **INSPECH** disrupts the infrastructure management market by using Artificial Intelligence to take over time consuming, repetitive tasks from human inspectors. As an end-to-end solution, **INSPECH** identifies defects in the road surface in real-time, optimizes the deployment of road maintenance and enables organizations to sustain the infrastructure at a lower cost.

Automatic defect detection

INSPECH automatically detects defects of the following four defect types:

- Alligator cracking
- Longitudinal cracks
- Transverse cracks
- Potholes

Inspection editing on the map

In order to review and complete an inspection with **INSPECH**, the results can be edited on the map. The shape, label, and severity class of a detection can be edited and new detections can be added.

Automated pavement condition reporting

INSPECH automatically generates reports of the defects and pavement condition of the inspected area, based on **INSPECH**'s standard condition assessment. The pavement condition score per segment can be viewed in table view and is depicted in map view through the coloring of road segments by score. These reports can be downloaded as .XLSX or .SHP files.

Interactive report viewer for customers

Once the inspection process of the area is finished, an interactive report link can be shared with customers, allowing them to view the inspection results on the map in the **INSPECH Viewer**.

Annotation of custom defects on map

In addition to the defect types automatically inspected by **INSPECH**, other defects of your required taxonomy can be added to the viewer so they can be reviewed manually on the map during the inspection process.

Continuous optimization for local conditions

A feedback loop is enabled to gather data during your inspection process that is used to optimize the performance of **INSPECH** for the conditions of roads in your local domain.

Automatic detection of additional custom defects

Up to 5 extra defect types

In order to automate your inspection process even further, **INSPECH**'s automatic detection capabilities can be expanded by gathering examples of additional defect types, for the purpose of further training **INSPECH**.

INSPECH in practice

It is possible to optimally train **INSPECH** for different purposes, making it very versatile while guaranteeing reliability, consistency, accuracy and safety.

Reliable, consistent, secure and safe

With **INSPECH**, which can be deployed 24/7, you benefit from a significantly shorter lead time, reducing your costs along the way. The system also detects side objects and you always have access to full reports.

With an annual subscription, it is possible to assess deterioration over time by means of a trend analysis, leading to reliable predictions about surface lifespan and maintenance measures in the long term.

This is how **INSPECH** differentiates

A major and important difference between **INSPECH** and other digital road inspection providers is that with **INSPECH** it is the human expert who performs a final check on the inspected area before a report is approved and shared with the end customer. This last mile check is of great importance to guarantee maximum quality of the final inspection results.

This distinctive character lies in our unique business model. While our competitors are mostly software companies with no background in civil engineering, **INSPECH** is a collaboration between a highly specialized machine learning company and an established domain partner specializing in traditional road surface inspection, repair and maintenance. By merging the best of both worlds, we are maximising the value of both man and machine. **INSPECH** is literally unrivalled as a provider of digital road inspections.

INSPECH automates

- The inspection of asphalt and concrete pavements;
- MicroPaver™ airport pavement inspections;
- Minor maintenance inspection;
- Winter damage inspection;
- Measure and specification inspection;
- Inspection for location-oriented maintenance.

**THERE IS A DIGITAL
CLONE BEHIND EVERY
HUMAN EXPERT.
INSPECH USES
ARTIFICIAL
INTELLIGENCE TO
SCALE YOUR BUSINESS.**



PERCEIVE

INSPECH views thousands of kilometers of road footage. Every inch on every lane is carefully examined at high speed.



DECIDE

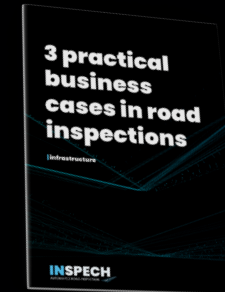
INSPECH recognizes a wide variety of defects, deterioration and anomalies, while keeping track of their exact location.



RESPOND

INSPECH processes the detections to generate an interactive report, facilitating decision-making for the long-term management of roads.

Create a better understanding



Free eBooks for you to download

On our website, free eBooks are made available for you to download by **BRAINCREATORS**, the software company that is one of the driving forces behind **INSPECH**. Go to inspech.com and click on **INSIGHTS**.

The benefits

- Get faster, more consistent & reliable results;
- Fully compliant with road assessment standards;
- Share reports with ease in a cloud-based SaaS environment;
- Inspect more roads in less time;
- Interact with inspection results in an online viewer;
- Export results in standard formats (ESRI Shapefile, XLS) online;
- Reduce road maintenance costs and maintain road safety.

We are looking to expand our ecosystem

Join us and scale your business

DOMAIN PARTNERS

We work with infrastructure companies performing road inspections to resell automated road inspection as a service in local markets.

Does your client portfolio include road authorities, road construction companies, councils and any form of government? Become our partner and rapidly scale your business at lower costs.

Then contact us and become a domain partner!

INSPECH.com / +31 (0) 203 697 260

"Thanks to Inspech's digital road inspector, we can now deliver full reports within days, which previously could take up to five weeks for a single road."

– Jeroen Bleeker, Manager at Unihorn

"Inspech performs the same as a trained and certified human inspector. It's like having a giant team of inspectors running a marathon."

– Mark Zwart, Owner at AMVision

**INSPECH can
reduce the
workload of your
experts by 90%**

INSPECH
AUTOMATED ROAD INSPECTION

powered by
**BRAIN
CREATORS**

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