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Asbestos roof: 350m2
Height: 45.30m
Key metrics: landsurface 815m2 / floorarea 190m2
Value drivers: Unobstructed view over waterway / 17m from noisy road / detached
Roof year of construction: 2010
Solar panels: SE / 2.0 kWP / year 2012

What am I going to talk about?

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Asbestos roof detection in RGB aerial imagery
What does that have to do with 3D Geo Information?

Parts of the presentation:

- Intro
- Why asbestos roof detection?
- Method
- Results

What we do

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Data mining on aerial imagery

Point Clouds

Solar panels

Asbestos roofs

Why asbestos roof detection

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Nationwide ban on asbestos roofs from 2024 in the Netherlands

Assess the status

Monitor progress

Enforcement

How can we recognize asbestos?

Asbestos fiber reinforced cement: ~5% asbestos + ~95% cement

Corrugated sheets

shingles (“slate”)

Hyperspectral vs RGB

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Which has more information?

	Hyperspectral	RGB
resolution	1m – 10m	0.02 – 0.2 m
classification method	Spectral	Color + pattern
update frequency	New acquisition	Yearly available
cost	Acquisition + processing	Processing

Method

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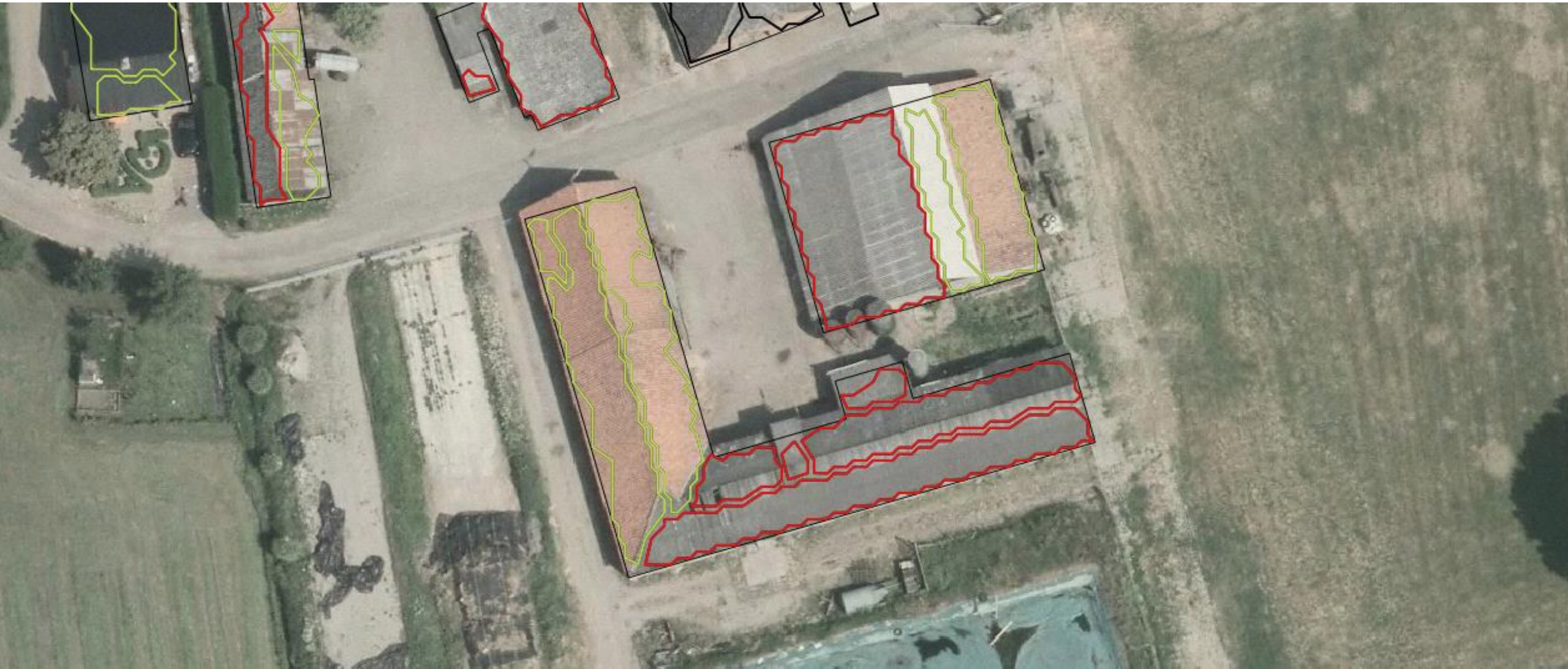
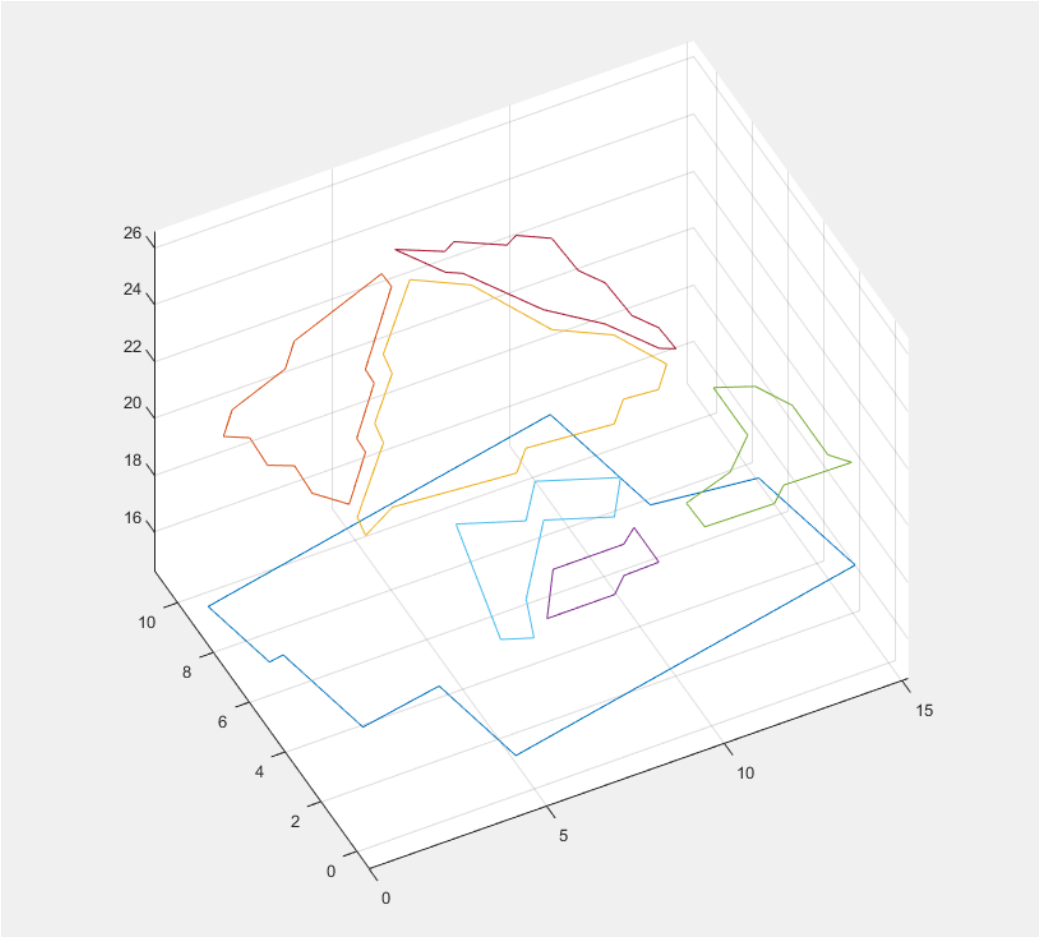


Method: 3D geo-information!



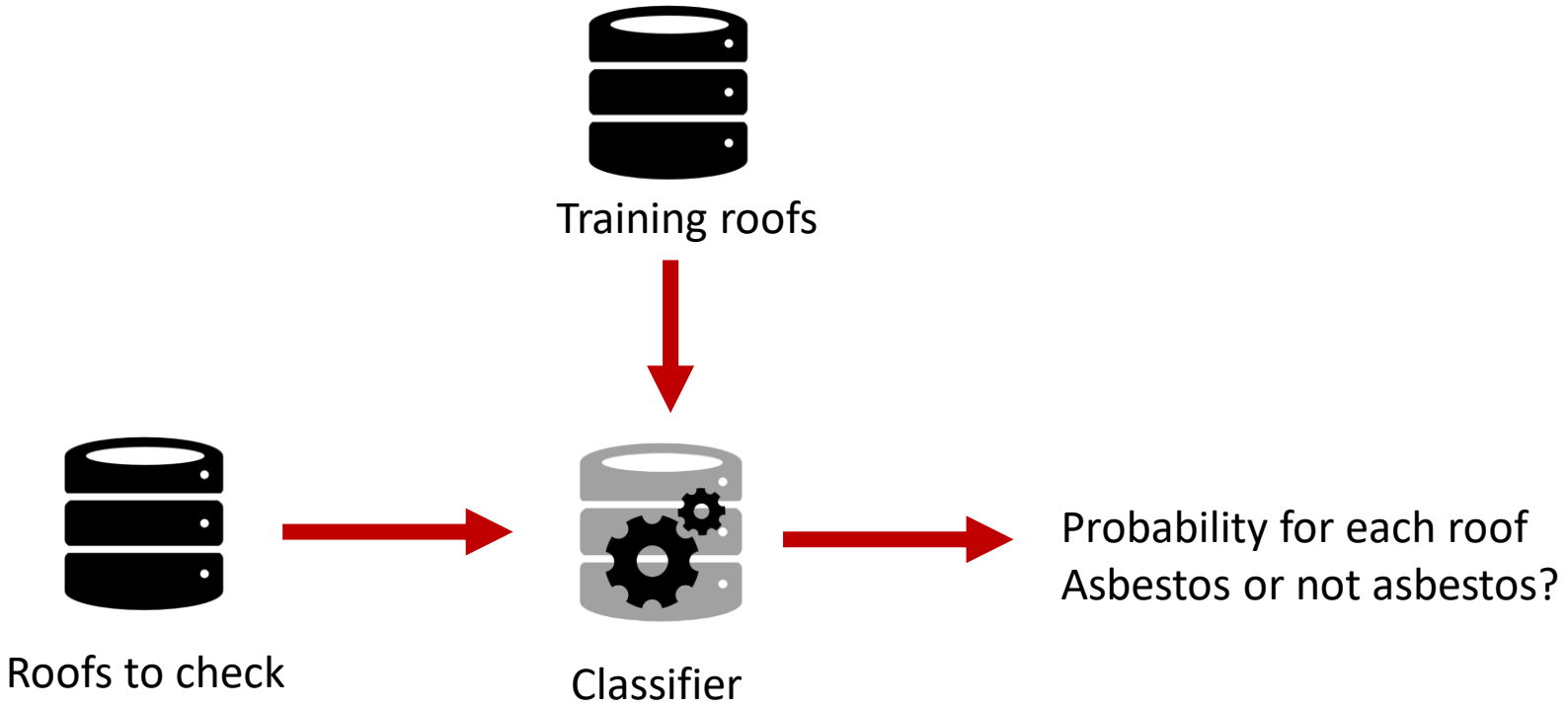
Method

3D roof segments + Stereo Imagery -> roof features

	Features (>100)								
Roof	R	G	B	pattern	variance	..	..	..	..
1									
2									
3									
4									

Machine learning classification

Roof features + Training data -> suspicious roofs



Machine learning classification

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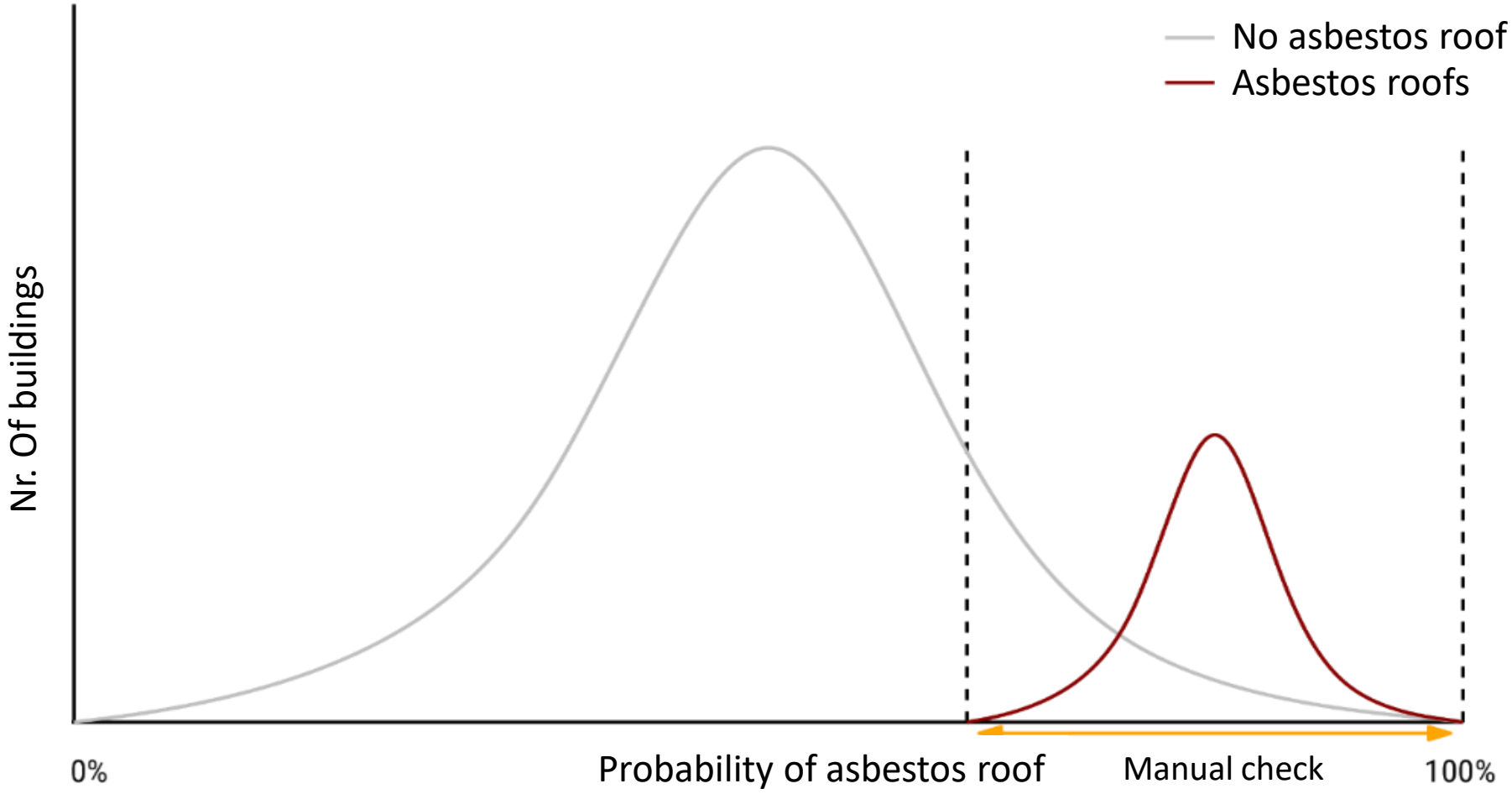
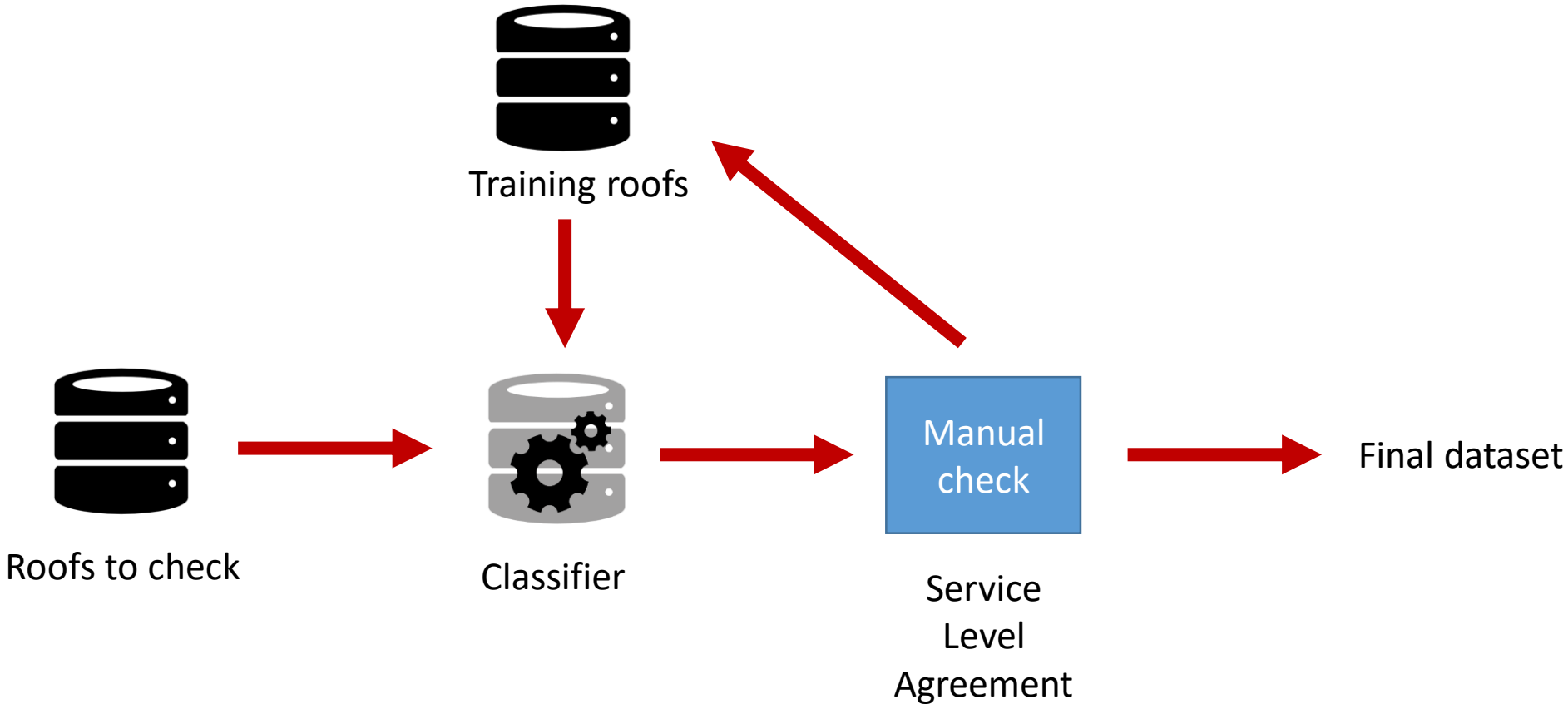


Method

Roof features + Training data -> suspicious roofs



Results

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We currently performed asbestos roof detection for over 130 municipalities

We get most new clients due to referral of previous clients!

We provide a clear service level agreement on detection accuracy

Asbestos roof detection

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