The background of the slide is a photograph of an oil spill on water, showing the characteristic rainbow-colored patterns of crude oil. Overlaid on this image is the title text.

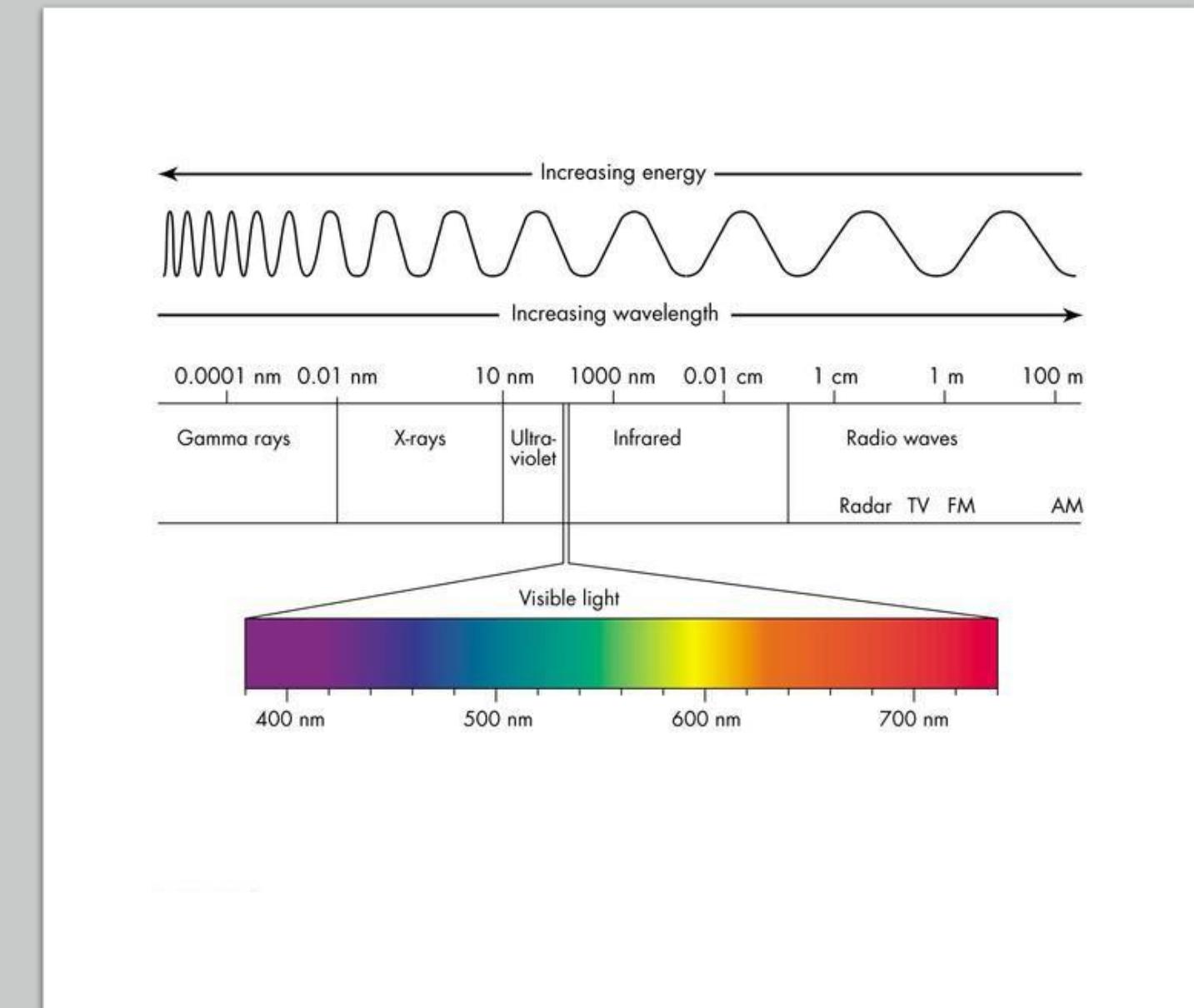
Oil Spills Detection

Problem description

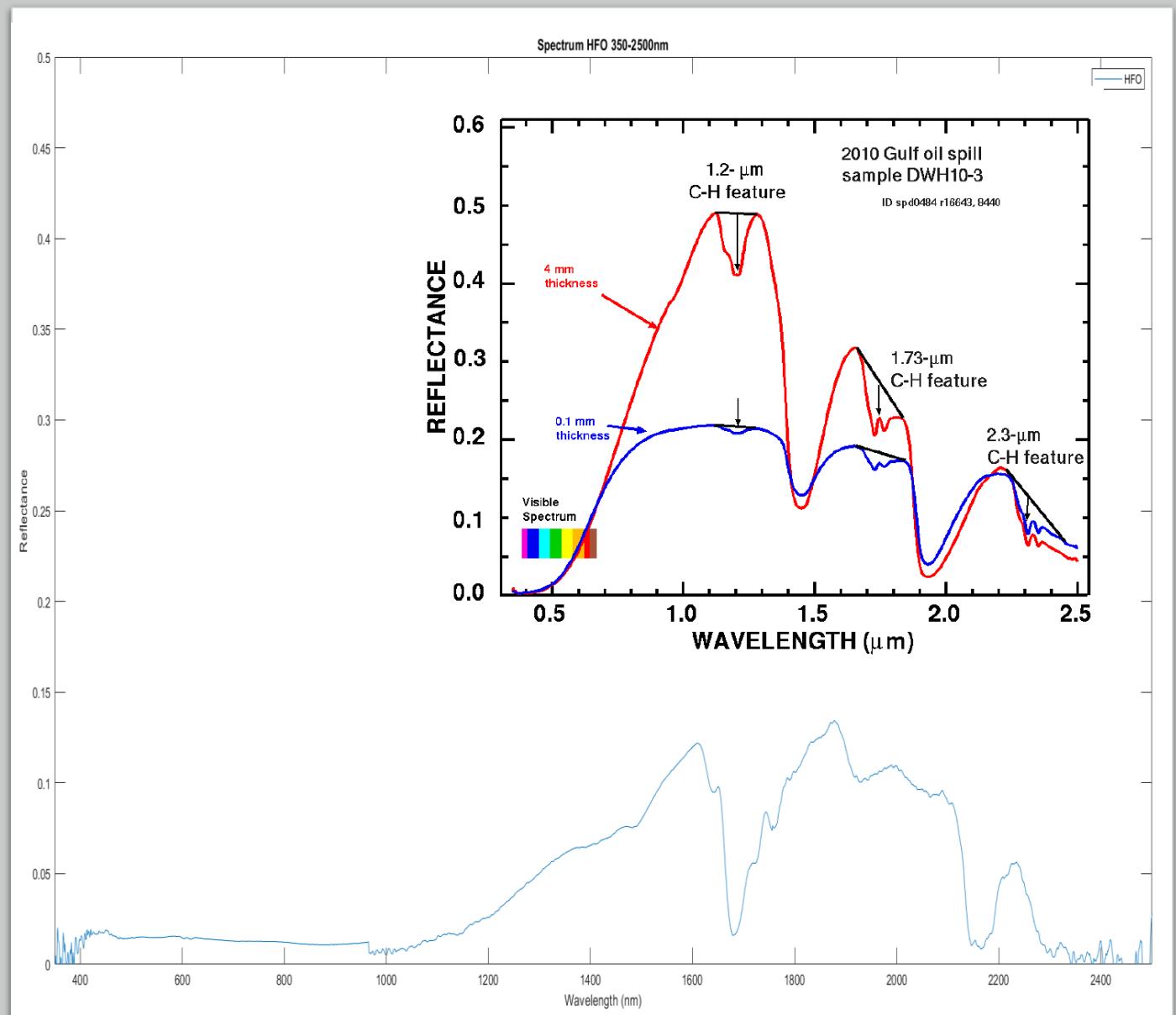
- Expensive to clean
- Pollutor identification
- Discouraging effect → Clean port
- Automated Drone based solution

Research / Technologies

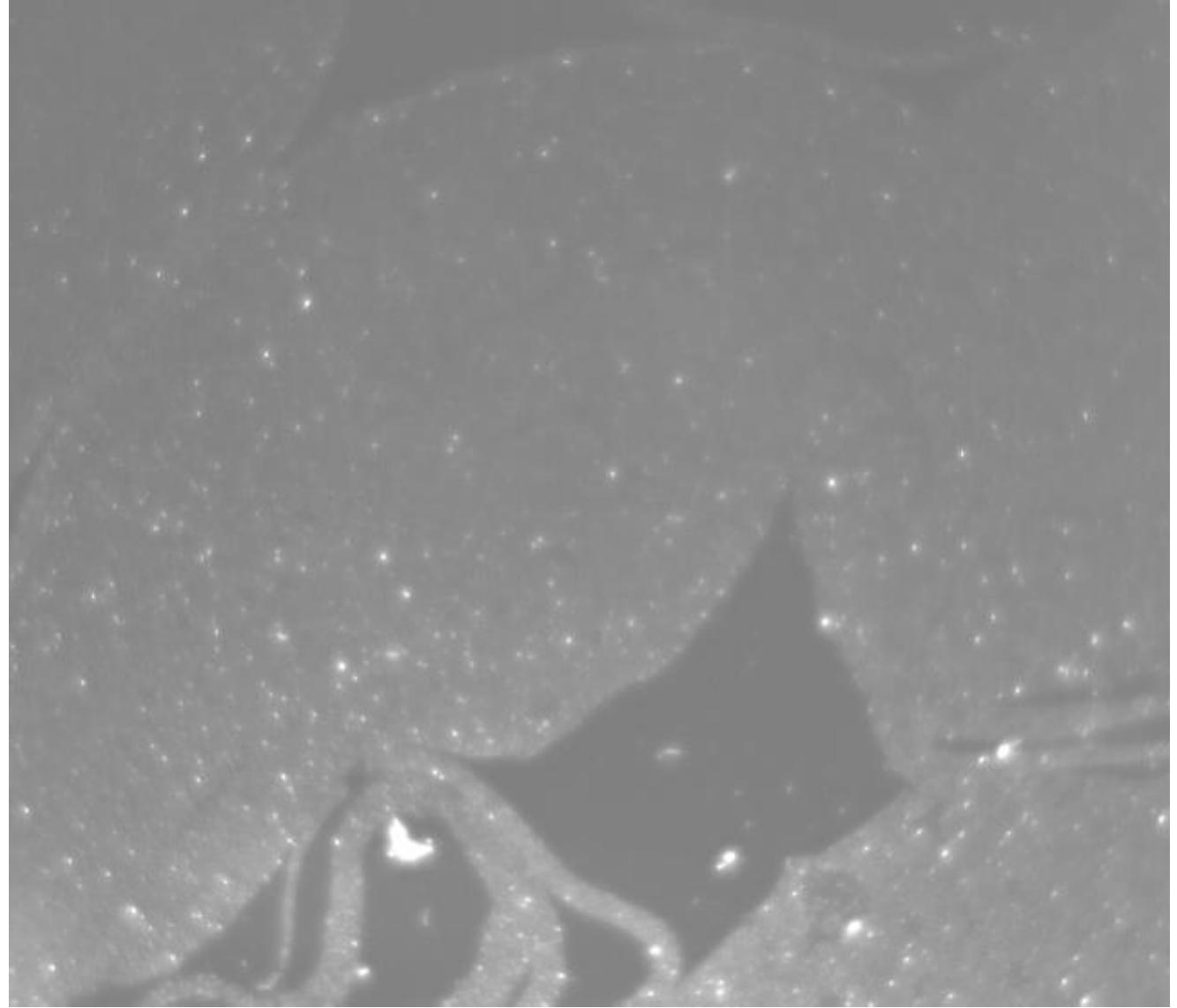
- UV
- RGB
- Laserfluorosensor
- NIR - SWIR
- IR
- Radar



Lab – Spectrometer



Lab - SWIR



Lab - IR

- Water
- ULSFO
- DMA
- HFO



Test controlled enviroment



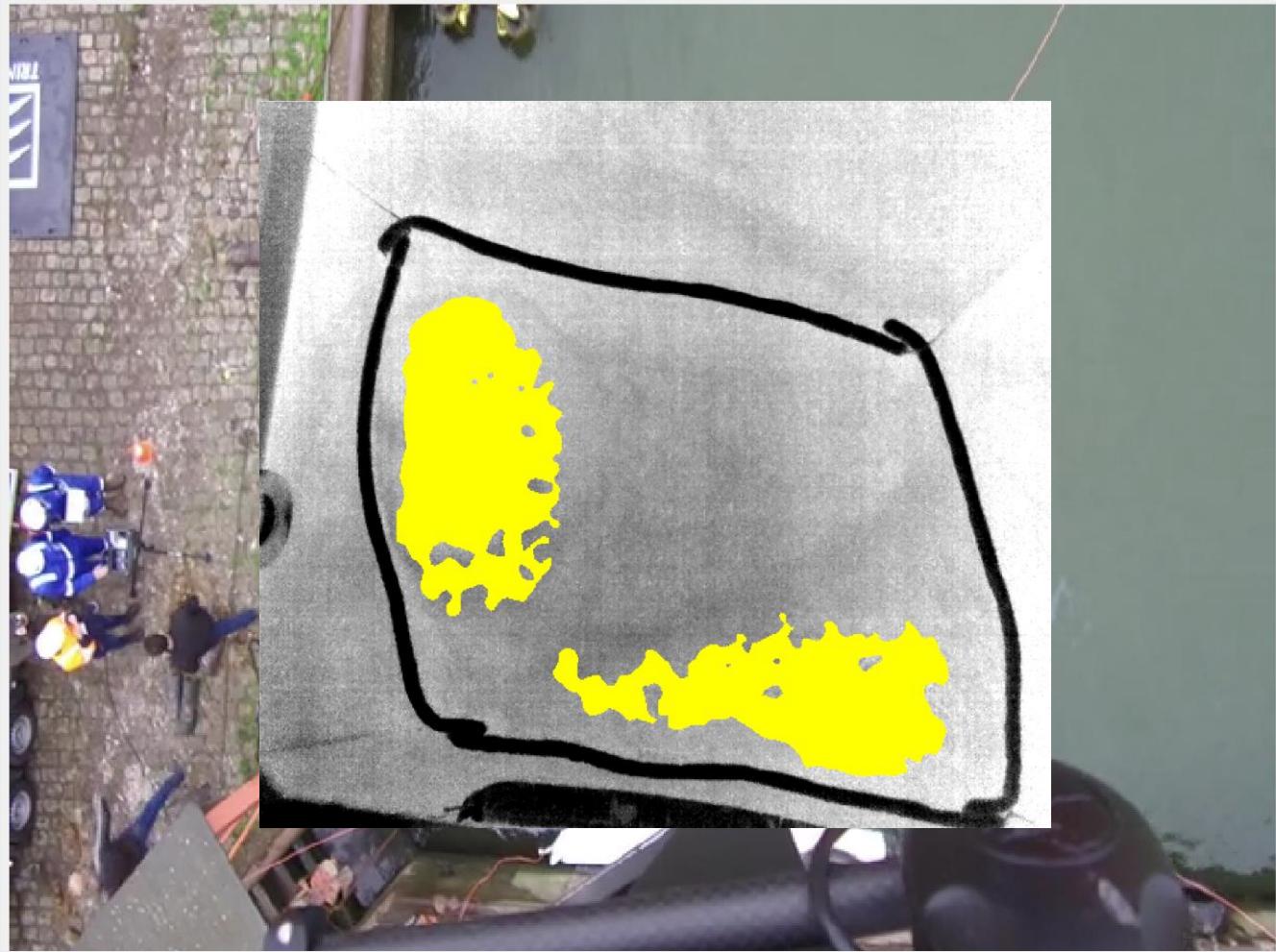
Test controlled environment



TRINOVA
engineering in the sky



Results



Future steps

- Machine learning RGB & IR camera
- Hyperspectral research
- Detect more materials (plastics, litter,...)

Adopted from (Merv Fingas, 2000)

Oil Appearance	Approximate Film Thickness
Dark brown-Black	50.00 μm
Oil colors dark	10.00 μm
Brown color	2.00 μm
Red-Brown sheen	0.50 μm
Rainbow sheen	0.15 μm
Silvery Sheen	0.05 μm

