

Spottitt



William Ray – Spottitt Earth Observation Specialist

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Context

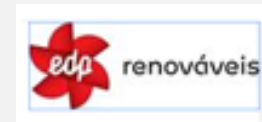


For every 100MWatt of installed onshore wind power somebody has spent over **500,000 Euro** and **6 months** of manual effort just searching for sites with suitable geography using out of data maps and information.

Could automation and satellite imagery be used to reduce cost and time to market of onshore wind developments?

Thus in 2014 the concept of **Automated** and **On Demand** remote sensing analysis was born and 3 Spottitt co-founders started their journey.

Thanks to European Space Agency co-funding July 2017 pre-commercial trials of the Spottitt service started with 8 customers.



Spottitt Service

Fully automated, cloud based, remote sensing analysis service, which allows customers to:

- select their desired **automated** analysis – ranging from Land Cover Analysis through to Turbine Positioning analysis
- define their area of interest any where in the **world**
- purchase the **most recent** satellite imagery and data from multiple sources
- input their analysis parameters of **choice** e.g. minimum distance from buildings, roads etc.

 Buy

and get results in a matter of minutes/hours.

“Quick, efficient, affordable. No earth observation knowledge or software required”.

Land cover analysis ▾

Existing project ▾

lucy.kennedy@qurus.com 20

Select High Res. Image 1 2 3

Max cloud %

Max snow %

Minimum AOI coverage %

Date from Date to

Order search results by area of interest, descending

X Reset

Q Search

Snow: n/a, Cloud: 0%, Res: 6m

AOI coverage: 100%, Price: 3 486

DS_SPOT6_201606241504521_FR1_FR1_SE1_SE1_W...

2016-06-24

Snow: n/a, Cloud: 0%, Res: 6m

AOI coverage: 100%, Price: 3 486

DS_SPOT6_201606241504521_LM1_FR1_SE1_SE1_...

2016-06-24

Snow: n/a, Cloud: 0%, Res: 6m

AOI coverage: 100%, Price: 3 486

DS_SPOT7_201706101501225_FR1_FR1_SV1_SV1_W...

2017-06-10

Snow: n/a, Cloud: 2%, Res: 6m

AOI coverage: 100%, Price: 3 486

DS_SPOT7_201706101501225_LM1_LM1_LM1_LM1_...

2017-06-10

Snow: n/a, Cloud: 2%, Res: 6m

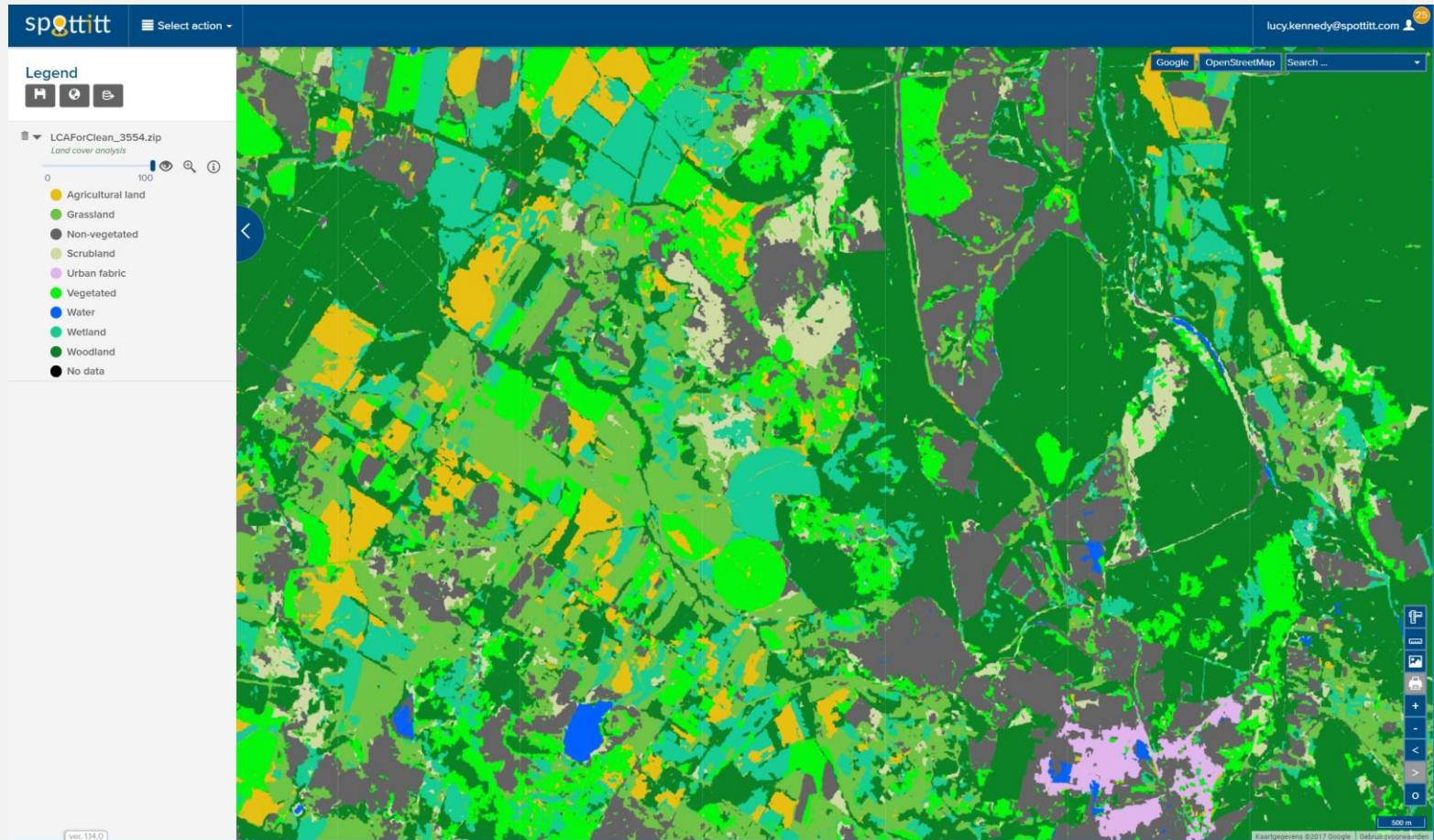
AOI coverage: 100%, Price: 3 486

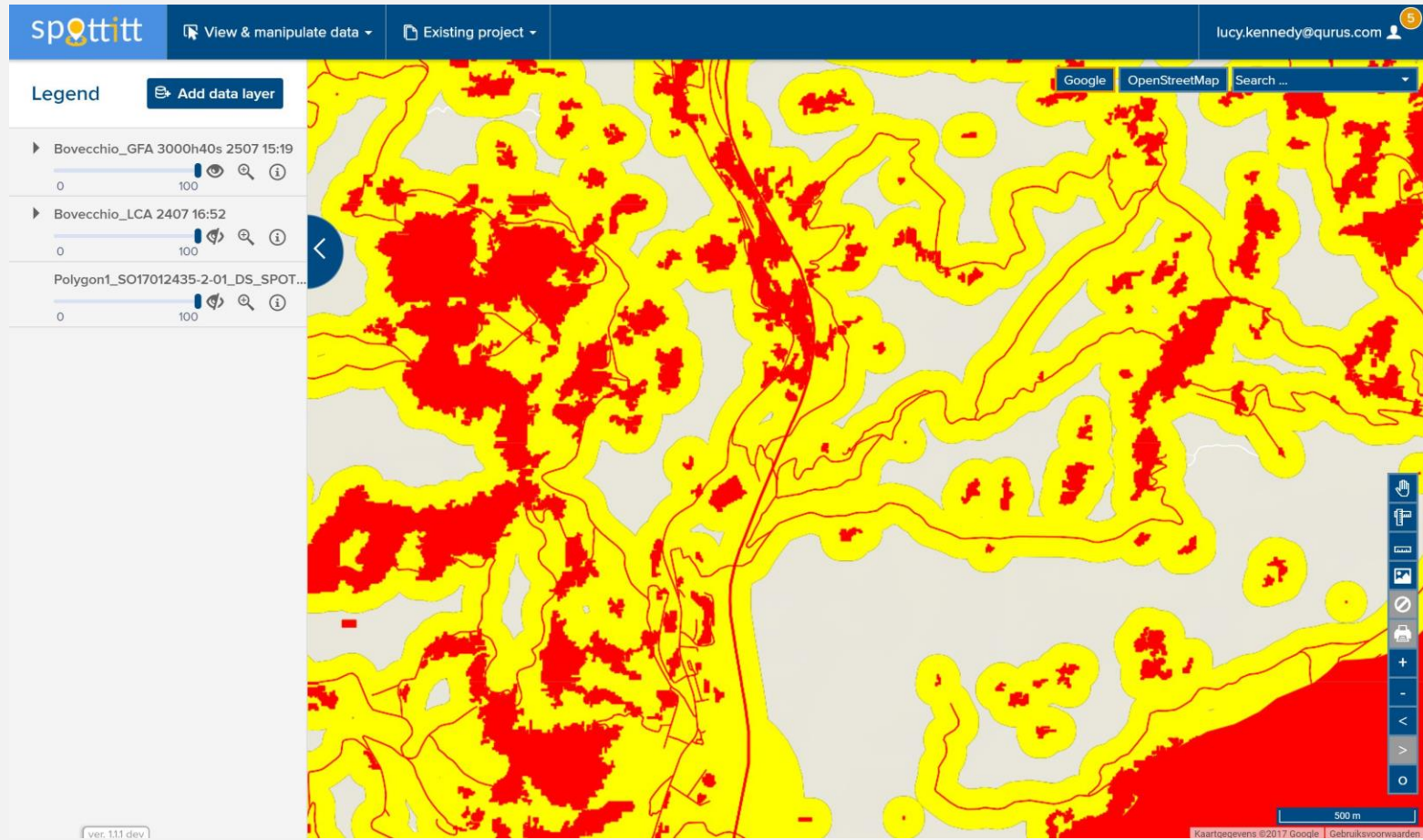
ver. 114.0 dev

Google OpenStreetMap Search ...

10 km

Kaartgegevens ©2017 Google Gebruiksvoorwaarden





Current & Future Data Sources

- We currently use the SPOT 6/7 constellation and Landsat 8 imagery to conduct our automated land cover analyses.
- In addition, we use very high resolution Pleiades, WV2 & WV3 imagery to create our Building Recognition product.
- We also use several freely available global GIS datasets (Open Streetmap, Protected Planet) for our greenfield analysis.
- In the future, we want to utilise Sentinel 1 & 2 imagery in our Land Cover Analysis.



Current Challenges & Future Opportunities

- Accessibility and cost of very high resolution satellite imagery makes it difficult to train AI algorithms due to a lack of training data. Buying the imagery is costly and processing the imagery is also time/cost expensive.
- The GBDX platform and challenges like SpaceNet are beginning to address this problem though.
- Automating the purchase and download of imagery from suppliers to our users has also proved challenging. Imperative that purchasing satellite imagery becomes easier in the future.
- Higher revisit frequencies for high resolution satellite imagery are needed to kickstart monitoring and management services.
- The lack of a reliable cloud masking algorithm for Sentinel 2 imagery makes it difficult to use in any automated product.
- However, the high resolution and revisit times of the Sentinel constellation means that there are many opportunities to utilise this data in the future.
- Now exploring other applications that could be automated e.g. environmental monitoring, Solar PV site screening and deforestation.



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Spottitt Ltd.

Electron Building

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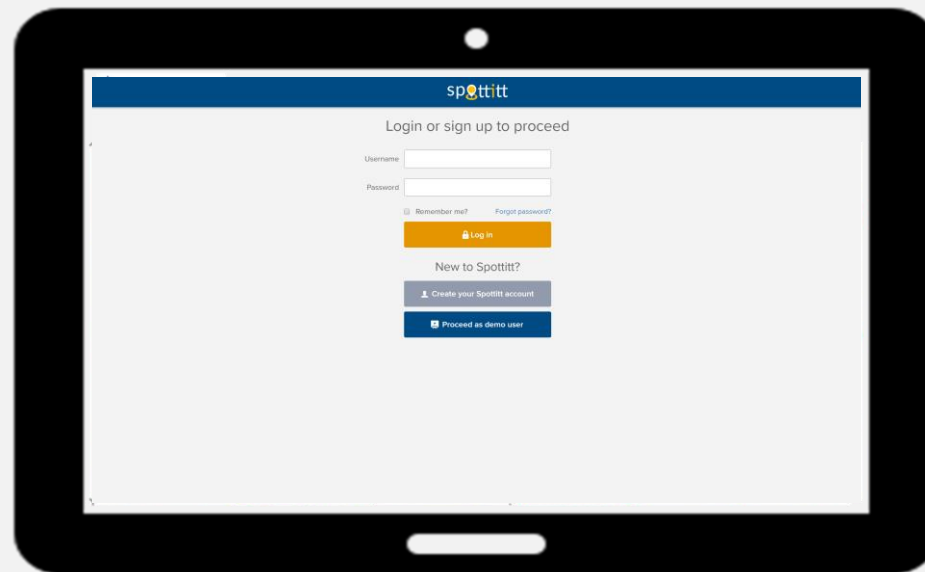
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Login to our geoportal as a demo user at <https://geoportal.spottitt.com>

View our European Space Agency project page - <https://artes-apps.esa.int/projects/sewiss>