



LandSense

A Citizen Observatory and Innovation Marketplace
for Land Use and Land Cover Monitoring

Call for Proposals

LandSense Innovation Challenge

Data-driven solutions for environmental monitoring

About LandSense

[LandSense](#) is building an innovative citizen observatory to uncover the collective potential of citizen-powered science and satellite imagery to improve the way we see, map and understand the world.

The LandSense Citizen Observatory, funded by the Horizon 2020 program, will offer modern community-based environmental monitoring tools and information systems to help transform decision making. Through **Earth Observation (EO)-driven** mobile applications, LandSense promotes citizens to not only play a key role in environmental monitoring, but also to be directly involved in the co-creation of such applications. Currently within the EU's EO monitoring framework, especially in the domain of Land Use Land Cover (LULC) dynamics, there is a need for low-cost methods for acquiring high quality in-situ data to create timely, accurate and well-validated environmental monitoring products. LandSense aims to disrupt the EO data economy by creating marketable solutions that can provide a step-change in LULC monitoring activities both within and beyond Europe.

About the LandSense Innovation Challenge

The LandSense Challenge targets individuals, web-entrepreneurs, start-ups and SMEs coming from all participating Horizon 2020 countries, **to present innovative IT solutions** addressing one of the three LandSense domains: **Urban Landscape Dynamics, Agricultural Land Use, and Forest & Habitat Monitoring**. The challenge focuses on using **data streams coming from the LandSense Citizen Observatory, the Sentinel Hub Service or other relevant EO data sources** to design novel LULC solutions for a range of applications within the selected domains.

Four LandSense Challenge finalists will have the opportunity to pitch their ideas at a side event on May 27, 2020 following the [Third International ECSA Conference 2020](#) in Trieste, Italy. Please note that registration for the ECSA Conference is not required for participation in this public challenge. However, all finalists are encouraged to attend the conference and share with this growing community of citizen science practitioners.

Each of the finalists will receive:

- A travel voucher in the amount of 250 EUR per team for attending the event in Trieste
- Business coaching and mentorship services at the challenge
- Matchmaking and networking opportunities with leading experts in EO and citizen science
- Promotional services by LandSense

The team with the best pitch in Trieste will receive:

- A grand prize of 1,500 EUR (in the form of a check presented at the event)
- A 1-year subscription to Sentinel Hub Enterprise, worth 5,000 EUR, provided by SINERGISE
- Online business coaching and mentorship services provided by the LandSense team

Challenge Concept

The LandSense Innovation Challenge supports knowledge sharing through a one-day event where participants can **present and share their technical capabilities, research and creativity**.

The objectives of the **LandSense Innovation Challenge** are to:

- Promote the best 4 pitch presentations** that could have a **clear business impact**
- Create awareness about the LandSense project objectives and outcomes**
- Foster the community spirit within the LandSense Citizen Observatory**



About the Third International ECSA Conference 2020

The Challenge will take place on May 27, 2020 in conjunction with the Third International ECSA Conference 2020 in Trieste (May 24-26, 2020). This conference is aimed at scientists, practitioners, activists, funders, policy makers in the field of citizen science, non-governmental organizations, artists, and interested citizens. Themes within the conference include a) the current state and future direction of citizen science, b) inclusiveness, equity and empowerment in citizen science, and c) technology-mediated citizen science among many other related topics.

About Sentinel Hub

Sentinel Hub's trial accounts will be opened for all participants during the first stage of the challenge and will be extended for the finalists during the final Challenge. To apply for the trial account, click [here](#).

Sentinel Hub is a Copernicus Masters award winning service for cloud-based storage, processing and distribution of satellite imagery. It targets application developers and remote sensing experts to side-step work-intensive and costly basic data processing so they can focus on creating added value services for end-users.

Sentinel Hub provides seamless and immediate access to the full worldwide archive of Copernicus Sentinel satellites (Sentinel 1, 2 and 3) as well as other sources such as Landsat 5, 7, 8, Envisat Meris and others. Services provide access to more than 2 PB of data and at this moment process more than one million requests each day, coming from users around the world, either using one of Sentinel Hub's free applications ([Sentinel Playground](#), [EO Browser](#)) or, more importantly, one of the 3rd party applications, which are powered by Sentinel Hub services. More information can be found at [Sentinel Hub](#).

How to Apply for the LandSense Challenge?

The LandSense Challenge is dedicated to facilitating the development of innovative IT applications that are addressing the field of Land Use/Land Cover within one of three LandSense domains:

1. **Urban Landscape Dynamics** - This theme focuses on engaging citizens in monitoring land change in urban and peri-urban areas. Solutions should be oriented towards local decision makers to support urban monitoring and planning.
2. **Agricultural Land Use** - This theme focuses on leveraging the power of EO systems and advanced crowdsourcing techniques to deliver value-added services to European farmers and public authorities involved in the agricultural sector.
3. **Forest & Habitat Monitoring** – Solutions within these domains should support in situ data collection to help monitor protected areas such as wildlife reserves, conservation areas, and other biodiversity hotspots.

The process is divided into **two stages**:

The first stage calls for ideas and invites participants to **submit proposals for IT-based LULC solutions within one of three LandSense domains**. Proposals (up to 3 pages long) should be submitted to the LandSense team by *Friday 10 April 2020 (5pm CET)*, using the following email address: challenge@landsense.eu. Please see the **LandSense Challenge Application Form** for further details. Although not mandatory, participants are highly encouraged to exploit the various open LandSense datasets, provided as part of the challenge, in their proposals. **Datasets will be available via <https://landsense.eu/Challenge> on Feb 17, 2020.**

The second stage includes **4 proposals** to be selected by the LandSense expert jury, where the finalists will be announced on *Monday, 20 April 2020 (5pm CET)*. *These 4 finalists will be* invited to the public challenge event in Trieste. Please note that registration for the ECSA Conference is not required for participation in this public challenge. The applicants will then have over a month to finalize and further develop their solutions, demos/mock-ups, and pitch presentations to present to the jury at the LandSense Challenge.

**If the applicants subscribe to the Sentinel Hub trial account, they are requested to inform the LandSense Team, by emailing challenge@landsense.eu the email address that have they used in the registration process, so the trial account can be extended throughout the first stage of the Challenge period. For finalists only, the Sentinel Hub trial account will be extended after the first stage and will be open until the end of the Challenge.*



Selection Criteria

The LandSense expert jury will assess the submitted proposals based on the following selection criteria. Criteria and thresholds apply to both the first and second stage of the proposal.

Selection Criteria	Points	Threshold
Feasibility of the concept	1-5	4
Market potential	1-5	4
Relevance for the domain	1-5	4
Total: max. 15		

Detailed description of the selection criteria

Applicants should pay attention to the following criteria when devising their idea and preparing the application.

Feasibility of the concept:

- i) Is the concept relevant to the field of Land Use and Land Cover monitoring?
- ii) Are objectives well described (Specific, Measurable, Achievable, Relevant and Time-bound)?
- iii) Is the proposed technical approach sound and appropriate for the scope of the proposal?

Market potential:

- i) Have you clearly identified the target market (size, segments, etc.)?
- ii) Do you clearly describe positioning and unique selling points?
- iii) Do you have a sound market penetration strategy?
- iv) Do you have an appropriate business and growth model in place?

Relevance for the domain:

- i) How might future environmental management and public participation be impacted by using your solution?
- ii) How can the new Citizens' Observatories as well as the next generations of observatories re-use and tailor your solution?
- iii) How applicable is your solution for solving problems of other stakeholders relevant for the domain?

Contact and Important Dates

For more detailed information: <https://landsense.eu/challenge>

More questions? Please contact: challenge@landsense.eu.

About Sentinel hub: <https://www.sentinel-hub.com/>

Deadline for submission of proposals: *Friday 10 April 2020, 17:00 CET*

Invitation of selected finalists: *Monday 20 April 2020, 17:00 CET*

Challenge date in Trieste: *Wednesday 27 May 2020*

