



Deliverable 8.2

Launch Events for Product and Services

December 2019

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Abstract:

Business model and business plan of the its4land toolbox

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The its4land consortium consists of the following partners:

University of Twente (UT)

KU Leuven (KUL)

Westfaelische Wilhelms-Universitaet Muenster (WWU)

Hansa Luftbild AG (HL)

Institut d'Enseignement Supérieur de Ruhengeri (INES)

Bahir Dar University (BDU)

Technical University of Kenya (TUK)

Esri Rwanda (ESRI).

1 Executive Summary

This is the second and last deliverable (D8.2) under Work Package 8 (WP8) of the project ‘its4land’, the work package which aims at developing a sustainable business model for the dissemination and commercialization of the land tenure recording technology suite - the outcome of the project. Using the results from the project Work Packages 2 to 7 (WP2 - WP7) key exploitable results (KER) were produced and bundled in the land administration toolbox. This toolbox consists of the following software tools (S) and consultancy services (C):

- (C) Needs Assessment - consultancy services for needs assessment (WP2).
- (S) Smart SketchMaps (SmartSkeMa) - data collection tool to record aspects of people to land relationships where the spatial component is captured using hand drawn sketch maps and described in a qualitative way (not surveyed) and then automatically transformed for further usage in a GIS (WP3).
- (C) UAV-based Data Acquisition - consultancy services for UAV-based data acquisition for land tenure recording (WP4).
- (S) Semi-automatic Visible Boundary Delineator - a tool that facilitates image-based cadastral mapping by extracting visible boundaries automatically and by supporting the delineation procedure (WP5).
- (S) Publish and Share – a system platform with integrated tools to publish and share land information (WP6).
- (C) Governance and Capacity Building - consultancy services to apply the governance and capacity development models for the use of the its4land geospatial tools (WP7).

Different launch events were used during the last 8 months of the project to present, demonstrate, showcase and promote the its4land toolbox. These were the:

- 4th Land Conference of the Institute of Land Administration of the Bahir Dar University in Bahir Dar - Ethiopia on 24 and 25 May 2019
- ISPRS Geospatial Week 2019 at the University of Twente from 10 - 14 June 2019
- RCMRD International Conference and 4th AfriGEO Symposium in Nairobi from 13- 16 August 2019
- Intergeo 2019 in Stuttgart from 17 – 19 September 2019, and
- AfricaGIS 2019 in Kigali from 18 – 22 November 2019

Exhibition spaces / booths were used during the latter three events to advertise, showcase and demonstrate the its4land innovative tools. Demonstration sessions were held to demonstrate and train the software tools and promote the consultancy services.

The purpose of the launch events was to support the future commercialisation activities of the project partners.

In addition, a video animation was produced to present and explain the its4land land administration toolbox. This video runs for more than two minutes and was already shown to present the toolbox at the

- ISPRS Geospatial Week 2019
- RCMRD International Conference and 4th AfriGEO Symposium
- Intergeo 2019
- AfricaGIS 2019

The video is available on youtube (<https://www.youtube.com/watch?v=5ZaOeUp7BPg>) and on the its4land website. It is a useful explainer to promote the its4land toolbox to a large number of organisations. It reaches out to the land sector community providing information on how to benefit from the innovative land tenure recording tools.

Promotional material such as flyers and posters were produced and used in the launch events.

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its4land Toolbox Flyer

2 Introduction

its4land is a European Commission Horizon 2020 project funded under its Industrial Leadership program, specifically the ‘Leadership in enabling and industrial technologies – Information and Communication Technologies ICT (H2020-EU.2.1.1.)’, under the call H2020-ICT-2015 – and the specific topic – ‘International partnership building in low and middle income countries’ ICT-39-2015.

its4land aims to deliver an innovative suite of land tenure recording tools that respond to Sub-Saharan Africa’s immense challenge to rapidly and cheaply map millions of unrecognized land rights in the region. ICT innovation is intended to play a key role. Many existing ICT-based approaches to land tenure recording in the region have not been highly successful: disputes abound, investment is impeded, and the community’s poorest lose out. its4land seeks to reinforce strategic collaboration between the EU and East Africa via a scalable and transferrable ICT solution. Established local, national, and international partnerships seek to drive the project results beyond research and design (R&D) into the commercial realm. its4land combines an innovation process with emerging geospatial technologies, including smart sketch maps, UAVs, automated feature extraction, and geocloud services, to deliver land recording services that are end-user responsive, market driven, and fit-for-purpose. The transdisciplinary work also develops supportive models for governance, capacity development, and business capitalization. Gender sensitive analysis and design is also incorporated. Set in the East African development hotbeds of Rwanda, Kenya, and Ethiopia, its4land falls within TRL 5-7: 3 major phases host 8 work packages (excluding Work Package 9 on ethics) that enable contextualization, design, and eventual land sector transformation. In line with Living Labs thinking, localized pilots and demonstrations are embedded in the design process. The experienced consortium is multi-sectorial, multi-national, and multidisciplinary. It includes SMEs and researchers from 3 EU countries and 3 East African countries: the necessary complementary skills and expertise is delivered. Responses to the range of barriers are prepared: strong networks across East Africa are key in mitigation. The tailored project management plan ensures clear milestones and

deliverables and supports result dissemination and exploitation: specific work packages and roles focus on the latter.

Work Package 8 (WP8) of this project focuses on capitalizing on the its4land results as stated in the project proposal and draws on activities and outcomes from Work Packages 2 to 7. This document, D8.2, is the second and last deliverable of WP8 and covers the launch events which to present, demonstrate, showcase and promote the **its4land land administration toolbox** a suite of configurable services and software solutions to facilitate the land sector transformation. This toolbox consists of the following software tools (S) and consultancy services (C):

- (C) Needs Assessment - consultancy services for needs assessment (WP2).
- (S) Smart SketchMaps (SmartSkeMa) - data collection tool smart sketchmaps is a tool to record aspects of people to land relationships where the spatial component is captured using hand drawn sketch maps and described in a qualitative way (not surveyed) and then automatically transformed for further usage in a GIS (WP3).
- (C) UAV-based Data Acquisition - consultancy services for UAV-based data acquisition for land tenure recording (WP4).
- (S) Semi-automatic Visible Boundaries Delineator - a tool that facilitates image-based cadastral mapping by extracting visible boundaries automatically and by supporting the delineation procedure (WP5).
- (S) Publish and Share – a system platform with integrated tools to publish and share land information (WP6).
- (C) Governance and Capacity Building - consultancy services to apply the governance and capacity development models for the use of the its4land geospatial tools (WP7).

D8.2 describes the events used to launch the toolbox to the land administration community in the Netherlands, Germany, Ethiopia, Kenya and Rwanda.

This report will also be hosted in an abridged form on the its4land.com website under <https://its4land.com/capitalize-wp8/>.

3 its4land Land Administration Toolbox Launch Events

The launching of the its4land products and services – bundled in the its4land land administration toolbox – made use of international and regional GIS and land conferences and exhibitions to present, demonstrate, showcase and promote the toolbox. Five major events provided the platforms for launching the its4land products and services. Exhibition spaces / booths were used during three major events to advertise, showcase and demonstrate the its4land innovative tools. Demonstration sessions were also held to demonstrate the software tools and describe the consultancy services.

Annex 1 list the events and the number of people reached when presenting, promoting or demonstrating the its4land land administration toolbox.

The following paragraphs will describe in more detail each event.

3.1 4th Land Conference – Ethiopia

This conference (<http://www.bdu.edu.et/content/institute-land-administration-conference>) is organized by the Institute of Land Administration of the Bahir Dar University in Bahir Dar – Ethiopia, a partner in the its4land project. It is an annual conference which primarily addresses the Ethiopian land administration sector and is sponsored by international aid organisations such as UK Aid, GIZ or USAID.

This was the 4th conference and it took place on 24 and 25 May 2019 with around 100 to 150 participants, from academia, land administration professionals from Ethiopian ministries and current land related projects.

The its4land project partners submitted a conference paper with the title “Innovative Geospatial Tools for Fit-For-Purpose Land Rights Mapping“. The paper will be published in the conference proceedings. The presentation of the paper was scheduled on 25 May and it contained a description of the its4land’s key exploitable results. It also included two videos, one describing the Smart SketchMaps software tool and the other the Semi-automatic Visible Boundaries Delineator. The conference participants expressed their interests in these tools as well as in the UAV data acquisition.

Figure 1 shows the programme of the Bahir Dar Land Conference for the 25 May 2019 while Figure 2 shows a photo of the presentation.

25 May
2019

08:30 – 08:50	The Role of Customary Authorities in Land Administration: Examples from Tanzania and Ethiopia	Maija Hyle-REILA	Dr. Berehanu Kefale	Habtamu S. Alelegne W
08:50 – 09:10	National Integrated Land Use Policy	Bulcha Berecha (NILUP)		
09:10-09:30	Its4land - Innovative Geospatial Tools for Fit-For-Purpose Land Rights mapping	Tarek ZEIN (ITS4LAND)		
09:30-09:50	Towards Recognizing Customary Tenure in African Cadastral System, The Case of Ethiopia	Dr. Melkamu		
09:50 – 10:30	Plenary Discussion			
10:30-11:00	Health Break			
11:00 – 11:20	Federalization of Power Over Land in Ethiopia: Federal Legislative Practices in Contest	Habtamu S. (BDU-ILA)	Dr Tadesse	
11:20-11:40	Monitoring Agricultural Investments in Ethiopia: A Remote Sensing Based Approach	Mulugeta et al (GIZ-S2RAI)		
11:40 – 12:30	Plenary Discussion			
12:30-14:00	Lunch Break			
14:00 – 14:30	Building Harmonized Private and State Land Data and Information Systems in Ethiopia	Mulugeta Tadesse (GIZ-S2RAI), and Yohanes Reda.	Dr Achamyeleh	Habtamu S. Alelegne W
14:30 – 15:00	Economic and Social Impact of Poor Pastoral Land Governance in Ethiopia	Dr Solomon B & Ato Abebe M		
15:00 – 15:30	Health break			
15:30 – 17:00	Plenary Discussion and Overview		Ato. Menberu Dr. Tadesse	
17:00 – 17:30	Closing Remark	Dr. Belachew		

Figure 1: Bahir Dar Land Conference Programme on 25 May showing the title and time of the its4land presentation

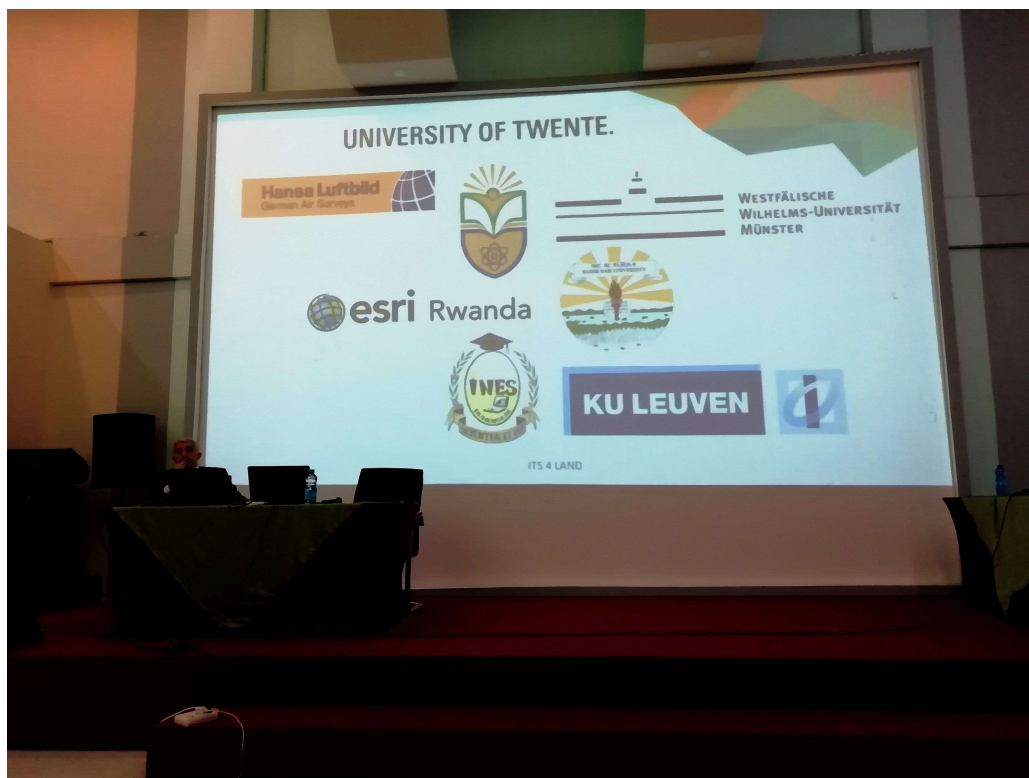


Figure 2: Photo of the its4land presentation session

3.2 ISPRS Geospatial Week 2019, Netherlands

The *ISPRS Geospatial Week* (GSW) 2019 (<https://www.gsw2019.org/>) is a combination of workshops organised by about 30 ISPRS Working Groups active in areas of interest of ISPRS. It was organised by the University of Twente – ITC and the ISPRS – the International Society of Photogrammetry and Remote Sensing. The fact that the University of Twente, an its4land project partner, is an organizer in this conference meant that the its4land project and the its4land land administration toolbox received a prominent position in the workshop sessions. The participants of the workshops are academics and professionals active in the fields of geospatial data capture, collection and processing.

The its4land workshop ran under the title “its4land – A land Administration Toolbox with Innovative Geospatial Tools for Fit-for-Purpose Land Rights Recording” and was organized in two sessions (see Figure 3 to Figure 5) on 12 June. Each of the work package leaders showcased their exploitable results to the workshop participants thus providing a firsthand live demonstration of the innovative results. The participants of the its4land workshop showed interest in the Smart SketchMaps software tool, the UAV data acquisition and the Semi-automatic Visible Boundaries Delineator.

Date: Wednesday, 12/Jun/2019					
9:00am - 10:30am	IND-04: Indoor Modelling Location: Waaier 4 Chair: Lucia Diaz Vilarinho Chair: Edward Verbree Indoor3D session	LS-01: Machine & Deep Learning Location: Waaier 2 Chair: Jan Boehm Chair: David Griffiths Laser Scanning session	UAVG-07a: Scene Understanding from UAV Data Location: Waaier 1 Chair: Claudio Porsello Chair: Ewelina Rupnik	UAVG-07b: UAVs in H2020 Projects Location: Waaier 3 Chair: Francesco Nex	
10:30am - 11:00am	Coffee break				
11:00am - 12:30pm	IND-05: Virtual and Augmented Reality Location: Waaier 4 Chair: Kourosh Khoshelham Chair: Avideh Zakhori Indoor3D session	ISSDQ-01: Spatial Data Quality: The Wider Context Location: Waaier 3 Chair: Alfred Stein Chair: Wenzhong Shi	LS-02: Change Detection Location: Waaier 2 Chair: Wei Yao Chair: Gottfried Mandlburger Laser Scanning session	UAVG-08a: Integration of UAV Data with Other Sources Location: Waaier 1 Chair: Norbert Haala Chair: Sander Oude Elberink	UAVG-08b: ITS4LAND I Location: Carré 2K Chair: Mila Koeva
12:30pm - 1:30pm	Lunch break				
1:15pm - 2:15pm	IS-03: Gold sponsor presentations: Riegl and Zoller & Fröhlich Location: Waaier 2 Chair: Sander Oude Elberink Industry session				
1:30pm - 2:30pm	PS-03: Poster session Location: Foyer Posters of the workshops Laser Scanning and ISSDQ				
2:30pm - 3:30pm	IND-06: Positioning and Navigation II Location: Waaier 4 Chair: Beril Sirmacek Chair: Kai-Wei Chiang Indoor3D session	ISSDQ-02: Spatial Data Quality on Images Location: Waaier 3 Chair: Alfred Stein Chair: Mahmoud Delevar	LS-03: Registration and Change Detection Location: Waaier 2 Chair: Bisheng Yang Chair: Roderik Lindenbergh Laser Scanning session	UAVG-09a: UAV for Mapping: Experiences and Best Practices Location: Waaier 1 Chair: Markus Gerke Chair: Caroline Gevaert	UAVG-09b: ITS4LAND II Location: Carré 2K Chair: Mila Koeva
3:30pm - 4:00pm	Coffee break				
4:00pm - 5:30pm	IND-07: Indoor Mapping II Location: Waaier 4 Chair: Ville Lehtola Chair: Sisi Zlatanova Indoor3D session	ISSDQ-03: The Latest in Methodology of Spatial Data Quality Location: Waaier 3 Chair: Wenzhong Shi Chair: Mahmoud Delevar	LS-04: Environmental Mapping Location: Waaier 2 Chair: Martin Rutzinger Chair: Michael James Olsen Laser Scanning session	UAVG-10: UAV Photogrammetry II Location: Waaier 1 Chair: Francesco Nex	
5:30pm	Exhibitor reception				

Figure 3: its4land workshop schedule on 12 June of ISPRS Geospatial Week

Part1

11 00 – 11 05 - Introduction its4land - video
11 05 – 11 15 - its4land toolbox
11 20 – 11 35 - KUL presenting consultancy services for needs assessment and governance and capacity modelling
11 40 – 12 00 - WWU demonstrating Smart SketchMa
12 05 – 12 25 - UT-ITC presenting UAVs for land administration

Part2

14 30 – 14 50 - ITC demonstrating Automatic Feature Extraction
14 55 – 15 15 - Hansa Luftbild demonstrating Publish and Share platform
15 20 – 15 30 - Final questions

Figure 4: Program for the two sessions aiming to demonstrate the key exploitable results of its4land



Figure 5: Introducing the its4land land administration toolbox to the conference participants

3.3 RCMRD International Conference and 4th AfriGEO Symposium, Kenya

The annual RCMRD Conference (<https://ric2019.rcmrd.org/>), organised by the Regional Centre for Mapping of Resources for Development in Nairobi, Kenya, provides a platform for science policy exchange, innovation hub and user engagement between Earth Observation users. The theme for this year's conference, which took place from 13 – 16 August 2019, was “Earth Observation for Evidence Based Decision Making” which aimed to inspire the presentation of innovative and creative ideas on the use of earth observation information in addressing societal problems. The participants of the conference were around 200. The attending academics and professionals, active in the fields geospatial data capture, collection and processing, came mainly from Kenya and its neighbouring countries such as Uganda, Ethiopia, Rwanda, Tanzania, etc. making the conference a suitable platform to present the its4land land administration toolbox containing the project exploitable results.

The its4land project was present with an exhibition booth and offered live demonstration of the Smart SketchMaps software tool and the Semi-automatic Visible Boundaries Delineator. The its4land project partners from WWU, University of Twente – ITC, Esri Rwanda and Hansa Luftbild were present during the entire conference to present the project's exploitable results. In addition, an oral presentation was given on 14 August (see the agenda in Figure 6). The audience of the presentation were professionals and academics of the land administration sector who then also came to the booth to see the live demonstration given by the work package leaders of WWU and ITC (see Figure 7 and Figure 8).

In addition to the its4land exhibition booth there were other exhibitors from USAID SERVIR Africa, Esri Eastern Africa, Digital Earth Africa, GMES Africa, Biopama, Oakar Services, and Locate IT. Contacts with Oakar Services and Locate IT, both are service providers in the field of surveying and land delineations, were exchanged.

The RCMRD academics were interested in the geospatial software tools which were presented and asked if workshops could be arranged to train their courses' participants. Such trainings are a service the project partners could offer to training institutes in East Africa specifically and in the developing countries generally.

Agenda

4 Subsessions

- **The Role of Cadastral Information in Peri-Urban Settlement Planning in Kigali City**
2:00pm - 2:20pm, Aug 14
📍 RS/GIS Lab2
- **its4land – A land Administration Toolbox with Innovative Geospatial Tools for Fit-for-Purpose Land Rights**
2:20pm - 2:40pm, Aug 14
📍 RS/GIS Lab2
- **Relationship between Urbanisation and Human-Wildlife conflicts around Queen Elizabeth National Park**
3:00pm - 3:20pm, Aug 14
📍 RS/GIS Lab2
- **Land Information Management System**
3:20pm - 3:40pm, Aug 14
📍 RS/GIS Lab2

Figure 6: Oral presentation of its4land innovative geospatial tools was scheduled during the Land Administration and Management session



Figure 7: Tarek Zein presenting the toolbox on the annual RCMRD Conference



Figure 8: its4land booth on annual RCMRD Conference.

3.4 Intergeo 2019, Germany

Intergeo is the largest platform of the geospatial community worldwide. This year the conference celebrated its 25th anniversary and took place in Stuttgart, Germany, from 17 – 19 September 2019. The conference hosted more than 680 exhibitors from all over the world which showed their innovations. Hansa Luftbild has been an Intergeo-exhibitor for many years and used this year's conference to promote the its4land land administration toolbox. The its4land project partners from WWU and UT-ITC also attended the conference to promote their exploitable results.

Intergeo gave the its4land project a large international exposure given that some 19'000 attended the conference. With this exposure the innovative geospatial software tools of its4land will have a good start commercializing the project results internationally. Three main international organizations were reached during the Intergeo conference. These were Germany's GIZ, NIRAS of Finland and EFTAS GmbH, which are active players in the application of innovative land administration. Figure 9 and Figure 10 show its4land presence at Intergeo 2019.



Figure 9: its4land promotion at Intergeo 2019 in Stuttgart



Figure 10: its4land project partners at Intergeo 2019

3.5 AfricaGIS 2019, Rwanda

AfricaGIS is the largest geospatial, science and technology conference on the African Continent. The conference is held every two years and is organised by EIS-Africa, a pan African non-profit organisation. The AfricaGIS conference and exhibition series have become a flagship geospatial information marketplace in Africa. For the past 20 years, the series have contributed immensely to the development of skills and institutional capacity in geoinformation across the continent. This year's conference was held in Kigali, Rwanda, from 18 to 22 November. With around 500 participants from the entire African continent, it provided an excellent platform to showcase and demonstrate the its4land land administration toolbox.

Therefore, the its4land project decided to rent an exhibition booth and offered live demonstrations of the Smart Sketch Maps – Smart SkeMa software tool, the Visible Boundary Delineator as well as the Publish and Share platform. There were also 20 other exhibitors present during this conference representing different commercial and academic as well and international organisations. Some of these were Supermap from China, Finnpartnership from Finland, Digital Earth Africa, Esri, the University of Rwanda etc.

The its4land project partners from WWU, University of Twente – ITC, ESRI Rwanda and Hansa Luftbild were present during the entire conference (INES was present on selected days too) to present the project's exploitable results and showcase the innovative its4land software tools. The professionals who showed interest in these tools were from the GIS or the land administration sector. Annex 2 shows the list of the professionals who attended the live demonstration of the software tools (the email addresses of the professionals visiting the booth are available and consent was obtained to use them for further information sharing. They are, however, not shown in the annex, to protect the privacy of the visitors). Please refer to work package 9 of the its4land project regarding ethics and private data protection.

The its4land partners of WWU, UT-ITC and Hansa Luftbild held a workshop on Monday 18 Nov under the FOSS4G (Free Open Source Software for Geospatial) sessions to present the software tools which were developed in the its4land project. This workshop introduced the participants to the Smart SketchMaps tool, the Visible Boundary Delineator and the Publish and Share platform, and gave them the opportunity, to gain

first-hand experience in using the software tools (the workshop took place in the computer room of the University with some 20 desktop computers). Around 20 participants attended this workshop. The following figures give snapshots of its4land at the AfricaGIS conference.

The live demonstration evoked interest in the audience, who fresh from using the software in the lab, were able to identify with it better. A few participants approached the its4land project partners after the workshop to gain a better understanding of the its4land software tools. Following the invitation to come see the platform and tools in action at its4land project exhibition booth, several attendees subsequently paid a visit with some even bringing their own data for consultation on how the platform and tools could be used by them.

On Thursday 21 Nov. ITC organized an Alumni-Reception inviting both Alumni and conference participants. The non-formal format of the event was attended by 35 guests and provided also a good framework to continue the discussion about its4land and its exploitable results.



Figure 11: its4land exhibition booth with professionals learning about the its4land software tools



Figure 12: Live demonstrations of the tools



Figure 13: Professor Angela Schwering of WWU demonstrating Smart SketchMaps

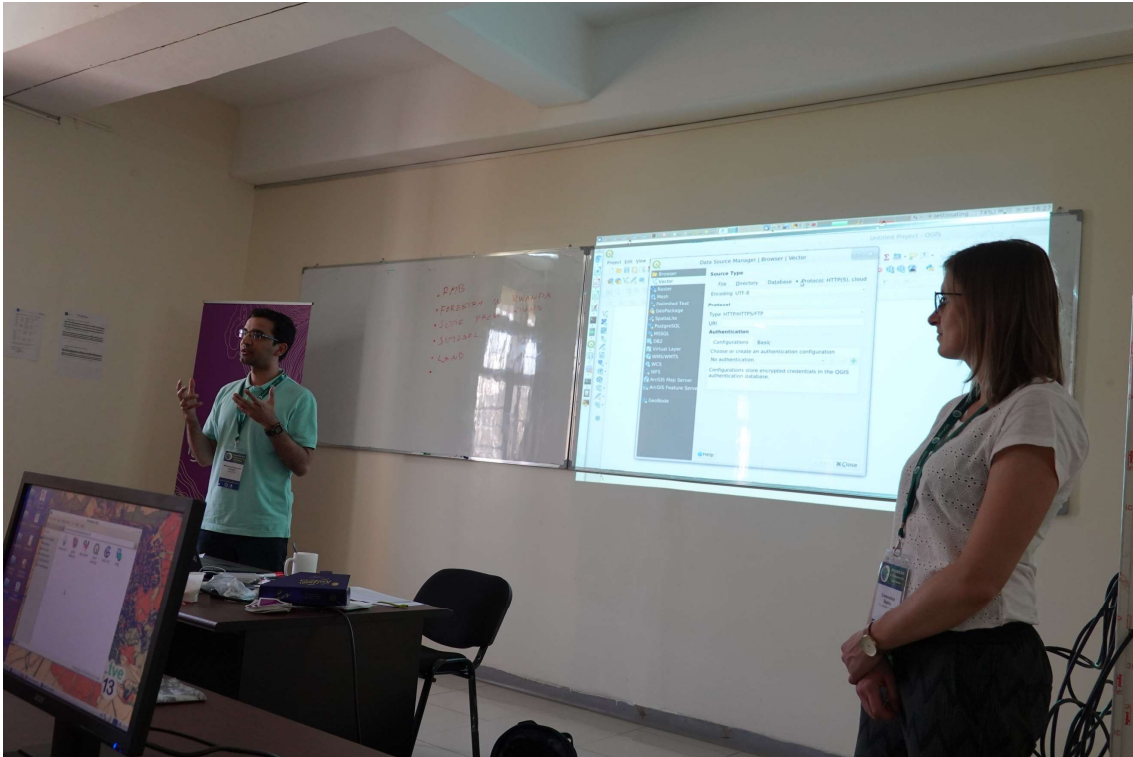


Figure 14: Dr. Sophie Crommerlinck of UT-ITC and Dr. Imad Humayum of Hansa Luftbild holding the FOSS4G workshop about the its4land toolbox



Figure 15: Workshop participants learning how to use the Publish and Share platform



Figure 16: Workshop participants learning how to use Visible Boundaries Delineator tool

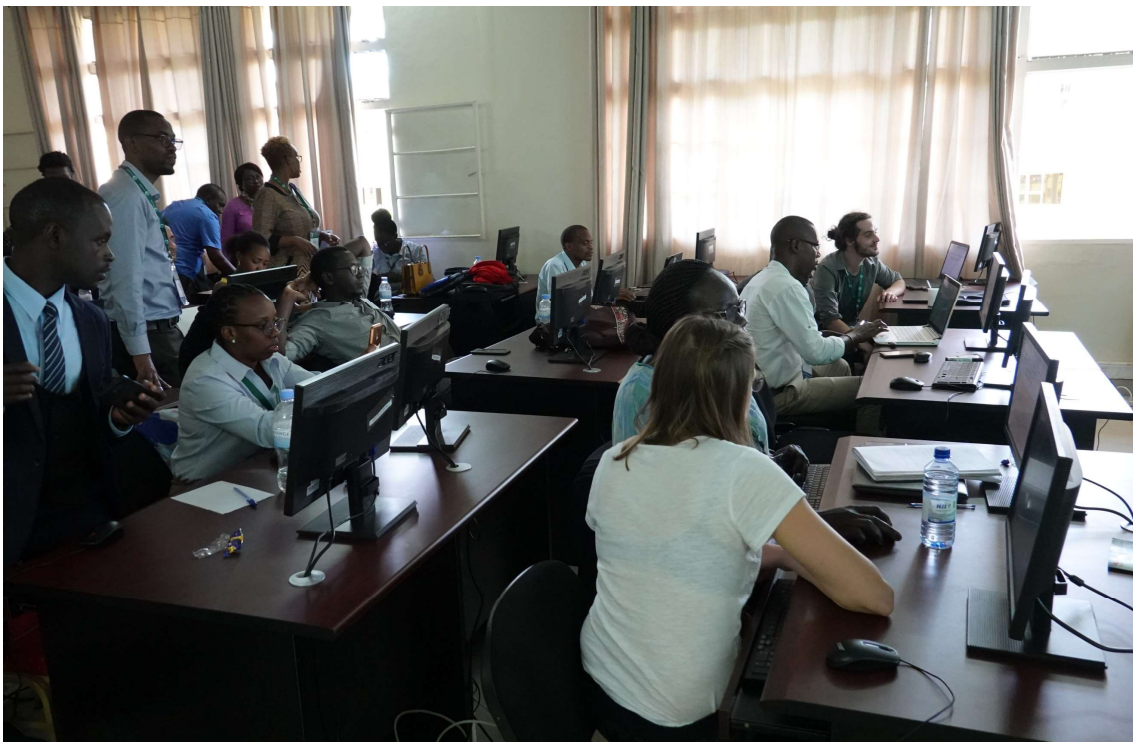


Figure 17: General view of the workshop participants being active in experiencing the its4land software tools



Figure 18: Group photo of the workshop participants



Figure 19: Group photo of the its4land project partners presenting the its4land toolbox at AfricaGIS in Rwanda

4 its4land Toolbox Video

In addition, a video animation was produced to present and explain the its4land land administration toolbox. This video runs for more than two minutes and was already used to present the toolbox at the

- ISPRS Geospatial Week 2019
- RCMRD International Conference and 4th AfriGEO Symposium
- Intergeo 2019
- AfricaGIS 2019

The video is available on youtube (<https://www.youtube.com/watch?v=5ZaOeUp7BPg>) and on the its4land website. It is a useful explainer to promote the its4land toolbox to a large number of organisations. It reaches out to the land sector community providing information on how to benefit from the innovative land tenure recording tools.

5 Promotional Material

In addition to the video, flyers and posters about the its4land land administration toolbox as well as the Smart SketchMaps were produced to be used during the different launch events of the its4land toolbox. Annex 3 shows the flyer of the its4land land administration toolbox which was produced for and distributed at the launch events. The posters produced are similar to this flyer.

6 Conclusion

The its4land project is a European Commission Horizon 2020 project funded under its Industrial Leadership program. The results of the research in this project are bundled in the its4land land administration toolbox. This toolbox was presented, demonstrated, showcased and promoted at different international and regional events in Europe and East Africa in order to launch the toolbox and support the future commercialisation activities of the project partners. A large number of people were reached during these events. In addition, a video animation was produced to present and explain the its4land land administration toolbox. Flyers and posters were also produced and used to present and promote the its4land project results.

Annex 1

Number People Reached in Events

Event	Date	No. of People Reached
Presentation at Ethiopian Land Conference	24 - 25 May 2019	200
Workshop at Geospatial Week 2019	12 June 2019	30 (workshop participants)
Exhibition at RCMRD RIC	13 - 16 August 2019	150
Oral Presentation at RCRMD RIC	14 August 2019	30
Intergeo 2019, Stuttgart	17 – 19 September 2019	undetermined
Live Demonstration at AfricaGIS 2019	19 – 22 November 2019	34
Workshop FOSS4G at AfricaGIS 2019	18 November 2019	31

Annex 2

List of Professionals Experiencing its4land Software Tools at AfricaGIS

Name	Organisation
Steven Hill	University of Würzburg - Germany
Samuel Ayodele	Institute for Trypanosomiasis and Research - Nigeria
Abednico Maphuru	Department of Surveys and Mapping - Botswana
Gunnar Hesch	GIS Expert, GIZ - Germany
Yona Jairosi	Allied Systems Zimbabwe
Breno Pimenta Gil	Product Manager, Simosol Oy - Finland
Rajesh Nooka	Dataworld - South Africa
Halido Nagabila	Director General of Institut Geographique de Burkina Faso
Jones Ofori-Boadu	Lands Commission Ghana
Daniel Haywood	Ramani Geosystems Ltd - Kenya
Nicolas Fagart	Ramani Geosystems Ltd - Kenya
Alain Roland Munyaneza	esri Rwanda
David Iradukunda	esri Rwanda
Jules M. Karasira	esri Rwanda
Oluwaseun Franklin Olabode	Geospatial Analyst
Luca Battistella	JRC European Commission
Alexis Gatoni Sebarenzi	University of Rwanda
Adejoh John Inuwa	Blessjonez Associates Ltd. - Nigeria
Grace Iraguha	Rwanda Information Society Authority
Delphine Mukaneza	GIS Manager, Locus Dynamics Ltd - Rwanda
Jean Pierre Hitimana	University of Rwanda
Venant Nzibaza	University of Rwanda
Dr. Manirakiza Richard	INES-Ruhengeri - Rwanda
Emmanuel Nyandwi	University of Rwanda
Olivier Niyonshuti	University of Rwanda
Andrew Stauffer	esri
DUKUNDANE Olivier	sakae IT OFFICER
Vivianne Meta	LocateIT Ltd - Kenya
Lukas Beuster	Project Manager, Max and Ingeborg Herz Stiftung - Germany
Christopher Mulenga	Director, Platinum Consulting - Zambia
Emmanuel Tembo	Projekt Manager, National Land Titling Project - Zambia
Adewale Akingbade	Executive Director, AFRIGIST - Nigeria
Stanislaus Y. Adiaba	Honorary Sectretary, Ghana Institution of Surveyors - Ghana
Samuel J. Ayodele	Projet Director, AYGeospatial Services, Nigeria

Annex 3

its4land Toolbox Flyer

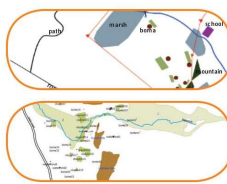
its4land Land Administration Toolbox

Innovative Geospatial Tools for Fit-for-Purpose Land Rights Recording

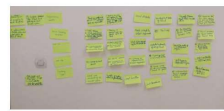


The **its4land land administration toolbox** delivers a suite of land tenure recording tools and consulting services which respond to the Sub-Saharan Africa needs to rapidly map millions of unrecognised land rights.

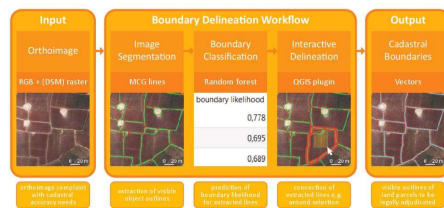
- **Smart Sketchmap** (Smart SkeMa) to record aspects of people to land relationships where the spatial component is captured using hand drawn sketch maps and described in a qualitative way (not surveyed) and then automatically transformed for further usage in a GIS



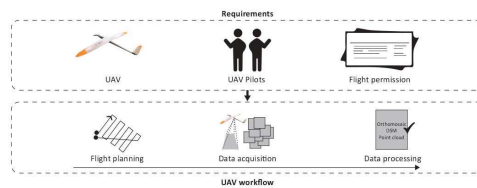
- **Needs assessment.** Interactive workshops to collect data of specific needs, market opportunities, and readiness of end-users in the domain of land tenure information recording



- **Semi-automatic visible boundaries delineator** which facilitates image-based cadastral mapping by extracting visible boundaries automatically and by supporting the delineation procedure



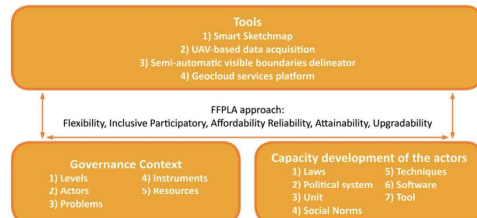
- **UAV-based data acquisition** guidelines and customizable workflows in the context of land administration



- **Governance and capacity development** models for the use of geospatial tools

- **A general and universal platform** for operating, integrating and disseminating land administration workflows by a set of high level geocloud services based on three main concepts:

- LADM
- Web based API
- Geocloud services platform



Project Facts

CALL: Collaborative Projects Call 2- ICT12 | **EXECUTION:** From February 2016 to February 2020

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