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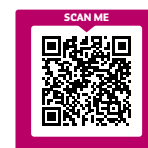
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# abroad

# SPECIAL EDITION

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# Bringing networks and knowledge into practice

For effective land administration systems that provide security of land and property rights, we need three key elements: networks, knowledge and practice. Since Kadaster International began its work, these elements have defined our approach and helped us to generate an impact in a responsible and efficient way.

In this special Abroad edition, we reflect on these three key elements. We look back at what we have achieved, and explore how we can contribute to the challenges that lay ahead. We also recognise the significant contribution and impact on our profession by Chrit Lemmen and Kees de Zeeuw. After many years of dedicated service, both are leaving Kadaster on September 1<sup>st</sup> 2022.

## More relevant than ever

A large proportion of humanity does not enjoy secure land and property rights. This is our global challenge in the domain of land administration. We need to speed-up and improve our efforts to document, record and recognise people to land relationships in all their forms. As decision makers, experts and beneficiaries, we need to collaborate to achieve this common goal.

For several decades, Kadaster has worked together with governmental institutions by providing expertise in setting up, operating and improving land administration and geo-information. This is more relevant than ever before.

“It is key to discuss, learn and grow together for effective and inclusive programmes and actions to achieve the Sustainable Development Goals”

Frank Tierolff at the Geospatial World Forum last May

### One last time: Chrit and Kees

Together, we must make sure we understand the needs and requirements, involve our network, and enable the next generation to continue. Both Chrit Lemmen and Kees de Zeeuw have brought people and networks together and stimulated creativity and innovation. Both invested in the development of approaches, models, frameworks, and people to achieve our common goal. As both move into new endeavours, we took the opportunity to have Chrit and Kees inspire our community one last time. Together with colleagues and friends, we shared knowledge, experiences and memories.

| Paula Dijkstra

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# Knowledge matters

 **Mathilde Molendijk** | Kadaster

Over the past decade, many articles have been published on land administration in its broadest sense. Not only on models such as the Land Administration Domain Model (LADM) or concepts such as Fit-For-Purpose Land Administration, but also on technical solutions, economic assessments, social implications, legal issues, lessons learned in practical pilots worldwide, and so on. These are presented and debated in many workshops, seminars, and conferences. The wealth of knowledge is impressive, as it entails not only understanding but also applying knowledge into practice, making judgements,

considering ethical responsibilities, and communicating with specialist and non-specialist audiences.

What has this wealth of knowledge brought us and what is next? We have asked representatives from academia to reflect on this. Is there room for improvement in the knowledge triangle of academia, public and private sector? How can we apply academic research in practice? Vice versa, how can practical problems or innovations ignite academic research?

## Lifecycle thinking

 **Eftychia Kalogianni** | TU Delft

TU Delft has a long and proud history of knowledge development in the domains of geodesy and land administration. The digital era has radically changed the way we manage landscapes and the information that relates to it. One of these new knowledge developments is Spatial Development Lifecycle (SDL) thinking, particularly in relation to 3D (cadastral) objects. This is the focus of my current work. The SDL provides input for land registration and cadastres in terms of data acquisition and design processes. In this regard, Building Information Model (BIM) is a promising and rich source that can be reused (under specific requirements and following rules for its structure) for land administration. The information management, exchange and reuse during the lifecycle of 3D (cadastral) objects requires interconnection between the disciplines involved and various scales, as well as the development of standardised approaches to address those challenges. I have been working on this, also from the perspective of the Land Administration Domain Model (LADM), where Kadaster plays a leading role, being part of the ISO TC211 editing committee of the second edition of LADM (FIG liaison).

## Digital trust

 **Martin Salzmann** | Kadaster

Over the past 10 years, land administration has sparked a lot of research and development related to digitalisation (from reconsidering access regimes, quality improvement, active involvement of partners in the value chain, privacy, security to 3D) in European countries. Whereas trust in the land administration domain traditionally largely stemmed from institutional arrangements, the focus is now on providing trust in a digital society. Increasingly, land administration operates in relation to and cooperation with digital government and the (private) parties in the (international) land market. This requires

a more holistic approach, not only focussing on rights, restrictions and responsibilities, but also on the stakeholders and providing added value to society at large. We experience that also mature systems have to develop in a 'fit for purpose' manner and consider interdependencies. Design principles and standards such as FELA and LADM are very useful in further developing our land administration eco-systems.

# Importance of networks

 **Christelle van den Berg** | Kadaster

To set up an effective land administration system, exchanging information and cooperating with all stakeholders in the domain is essential. We need each other. Land administration has so many aspects: from legislation to data collection in the field, and from research to the development of digital systems. No company, university, governmental organisation or NGO can cover all these aspects on

their own. Fortunately, it's getting easier to find each other. A first introduction online can be scheduled in no time. Even so, face-to-face contact seems to be the most effective way to sustain relationships.


## Leadership and networking

 **Eva-Maria Unger** | Kadaster

I would describe networking as 'developing meaningful relationships with other professionals' and Kees did this as the UN-GGIM co-chair of the expert group on Land Administration and Management to its excellence. In his term as co-chair, networks were built in strategic and new ways on professional but also on an organisational level. With the development and final adoption of the UN-GGIM Framework for Effective Land Administration (FELA), we achieved a milestone for the land


administration domain. This milestone was hard work by the expert group members but also possible because of the leadership and networking skills of Kees. He made it possible that also non-governmental organisations such as the World Bank, UN-Habitat, Global Land Tool Network and the Food and Agriculture Organisation contributed towards its development through substantial reviews. Similarly, Chrit created networks for the development and uptake of the FFPLA approach and LADM. These strategic networks and longtime relationships were imperative for the milestones achieved for the land administration domain.

## Networking the FIG way

 **Rudolf Staiger** | International Federation of Surveyors

The International Federation of Surveyors (FIG) provides an international platform for exchange and networking via our yearly working weeks and the 4-yearly congress. Both Chrit and Kees have taken part over the last 20 years on a regular base. They are active in sharing and advocating to the vast variety of people from all over the world. Over the last 10 years, Chrit became for our community Mr. "Fit-For-Purpose". He really pushed his approach into the land administration mainstream, with all his knowledge, power, and passion. Besides this, he was the main driver in implementing the ISO-standard on LADM.

## Leaving a legacy


 **Clarissa Augustinus** | Global Land Tool Network (formerly)

Chrit and Kees, through the Dutch Kadaster and ITC, have laid a global foundation as partners of the Global Land Tool Network with Fit-For-Purpose Land Administration (FFPLA) and the Social Tenure Domain Model (STDM). It started with a meeting of Chris Paresi of ITC, Stig Enemark of FIG and myself, and involved Chrit's PhD. It took years of work and many meetings. Their thinking has shaped policy and practice globally and in many countries and communities. The way they went about thinking about these tools has been key to their success. It is not just a technical design. Instead, they have involved diverse audiences, developed relationships and built capacity, had contested and uncontested conversations, piloted and experimented, honoured errors and tried again, and used STDM as an intellectual device-the soft systems methodology. Let's not stop here but continue to build on what we have learnt!

In 2014, the Netherlands became an active partner of the Global Land Tool Network (GLTN). The so-called Land Dialogue was established in which Dutch companies, knowledge institutions, government institutions and NGOs discuss how to put the VGGTs principles into practice. Next to this, the Dutch Ministry supported various NGOs in strengthening women's land rights and Fit-For-Purpose Land Administration in partnership with Kadaster International.

Ultimately, in 2019, the so-called Land-at-Scale programme started, in which low- and middle-income countries are supported through the Netherlands Development and Enterprise (RVO) agency to improve demand-driven aspects of land governance. As the Netherlands is convinced that land rights and sustainable land use are foundational to many of the SDGs, this programme is funded by various departments of the Ministry of Foreign Affairs.

# Sustainable practices

 **Rohan Bennett** | Kadaster

It is through 'practice' that we realise the benefits of effective networks and knowledge generation. In the applied domain of land administration, via practice we truly show and measure our value and contribution to society. At Kadaster, we are driven to continually improve our registration and mapping practices through the use of emerging technologies or more sustainable practices, delivering better outcomes for citizens from around the Netherlands. At Kadaster International we work with other national land administration

agencies, sharing those good practices, and in some cases helping to responsibly co-create them, such with Fit-For-Purpose Land Administration (FFPLA), Land Administration Domain Model (ISO 19152 LADM) country profiles, and the country-level implementation of the UNGGIM Framework for Effective Land Administration (FELA). We also work with private sector partners and the not-for-profit sector including Esri, Trimble, and Cadasta, and emerging start-ups like SmartLandMaps, to develop whole-of-sector national practices.

## Partnering for practice

 **Frank Pichel** | Cadasta

The land administration sector is insular, dominated by highly trained lawyers, surveyors and notaries - and as a result, often seen as too complex and costly to address within the broader global development agenda.

Chrit Lemmen and Kees de Zeeuw, and their colleagues, have worked to bring land governance to the masses - putting concepts like fit-for-purpose approaches and data standards on "the map" so to speak. Their embrace of technology and new approaches is helping to democratise land governance, ensuring the global data gap in the land sector can be filled...and processes improved upon.

Indeed, when Cadasta was launched in 2015, with a goal of helping to simplify, modernise and expedite the collection of property rights, it was upon these principles that we were founded. Changing norms in land governance in conjunction with technology availability have created the operating environment for Cadasta, and how our work has evolved.

## Support for start-ups

 **Claudia Stocker** | University of Münster

Putting knowledge into practice is the credo of SmartLandMaps, a young start-up initiative of the University of Münster in Germany. Based on several years of research and development work, our goal is to accelerate the digitisation of analogue participatory mapping results. SmartLandMaps' tools are based on innovative technologies such as artificial intelligence, cloud computing and modern photogrammetry. These approaches can help to relieve local, regional and international organisations from the time- and resource-intensive manual digitisation of paper maps. They help to fast-track the digital documentation of land rights without relying

## Practicing Fit-For-Purpose

 **Hanka Berdys and Joop van Staaldin** | Kadaster

Our most recent experience working with Chrit Lemmen is the project in Benin. Chrit took part in the design of the 'LADM country profile for Benin'. We designed the country profile in close cooperation with local experts of land administration agency (ANDF) and consultants of Kadaster International. Chrit's contribution here was - as usual - invaluable. Being a long time land administration professor at ITC, lecturing is in his blood. When working with him in Benin, during the daytime, his 'students' were land administration experts at ANDF, and during the evenings, he continued lecturing us. The project in Benin is based on field data collection according to the Fit-For-Purpose Land Administration (FFPLA) principles. However, once data is collected, it also must be maintained. This requires a reliable land administration IT solution. In Benin, we have introduced the Fit-For-Purpose Information Technology (FFPIT) approach, inspired by FFPLA.

## Translate into technology

 **Khoulood Saad** | Esri

Esri has had the great pleasure of working closely and collaboratively with Kadaster International for many years. The successful Fit-For-Purpose approach has been our achievement together. We could build upon Chrit's foundation and Kees' partnerships to operationalise FFP methodologies and the LADM. GIS technology, based on web services, has enabled a fast configuration of LADM, which has proven to be key as a repeatable framework that we share freely. We like to think of it as Esri translating it all into technology, after the hard work by Kadaster International. Together, we have put FFP/LADM into practice around the world, in places such as Colombia, Rwanda, and Kenya. In each case, the unique skill-sets of our staff teams, combined with our technology, have resulted in successful land administration projects.