

# TENURE SECURITY AS A SERVICE

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**Key words:** Tenure security, Sustainable Development Goals, trends and developments, service provider.

## SUMMARY

The world around us is changing. Some changes go fast, others even faster. In this changing world the need for security and stability is a constant factor. When it comes to access to land, land use and living, land administration plays an important role in taking care of the security and stability.

The need for a good land administration can be clearly derived from the Sustainable Development Goals (SDG's) Analysing the 17 goals it is found that land administration systems have impact on the feasibility of many of these goals.

In this paper various trends and developments are identified. Livelihood insecurity will be a global issue as well as the shift in land use from rural to urban. Our society will be networked and economies will have more focus on sharing and individual entrepreneurship. In that world trust in (governmental) information will be essential. This can be only achieved with the help of moderne technology and digitization of data. Making use of modern technology, services can be developed accordingly. Another fast developing aspect in our profession, is the societal demand.

The trends and developments we describe, can be translated into issues that effect our daily practice of land administration in the near future. An overview of issues is given.

It is our challenge to provide society with stability and security in this changing world. To do this, it is necessary to explore new ways to do our work and become service oriented.

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## **1. STABILITY AND SECURITY IN A CHANGING ENVIRONMENT**

The world around us is changing. Some changes go fast, others even faster. In this changing digital world the need for security and stability is a constant factor. When it comes to land use and living, land administration plays an important role in taking care of the security and stability. People and nature should be able to rely on a government that safeguards these and protects land tenure security.

A land registry and mapping agency should provide trusted information on where objects are located or move and what people should take account for in the management and planning of activities in space and time.

In the world we know the records kept and managed in land registries and cadastres are a reliable basis for the information that underlie many government tasks by providing insight, overview and trust. Increasingly parties more and more rely directly on the information and services to promote sustainable economic development. Therefore the trust vested in the information and these digital services becomes even more important.

It is a challenge to provide society with fit for purpose information to guarantee stability and security in a changing world. Data on land tenure security is an important part of that information. To do so, it is necessary to explore new ways to do our work. We see a movement from lamp to light, from car to mobility. Our challenge is to create and provide secure services that are used daily by governments, citizens, businesses and devices.

## **2. LAND ADMINISTRATION GUIDED BY THE SUSTAINABLE DEVELOPMENT GOALS**

Everything happens somewhere. Location therefore is a crucial element in our information needs, whether it is static (like property of land) or dynamic (like navigation or moving objects). Everything also happens sometime. So the multitemporal aspect of our information is as crucial as location.

The actual usability of our information for land management and land tenure security is defined by the match between data quality and user demands in both space and time. But also the affordability and needed capacity and time to collect, manage and distribute this information define our land administration systems. This is referred to as Fit for Purpose Land Administration (FFP LA) and has been described in several publications (e.g. FIG/WB, 2014; GLTN/UN-HABITAT/Kadaster, 2016).

The need for a good land administration can be clearly derived from the Sustainable Development Goals (SDG's) as defined by the General Assembly of the United Nations (<https://sustainabledevelopment.un.org/>). This agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. Analysing the 17 goals it is found that land administration systems have impact on the feasibility of many of these goals. For example, registered land rights are essential to end poverty (goal 1), to have gender equality (goal 5) and to work on climate change (goal 13). Tenure security should be seen as a prerequisite for sustainable development and therefore of great importance to the achievement of the SDG's in the year 2030. In figure 1 an indication is given of the goals and articles that are supported by good land administration.



**Figure 1.** Eleven of the seventeen Sustainable development goals are identified to be positively supported by good functioning land administration. Reference to the most relevant articles of the sustainable development goals is given.

It should be stressed that the Sustainable Development Goals impact activities in both developed and developing countries. For example the goals ‘No hunger’ needs the attention from all countries in the world and is not a sole responsibility for developing countries. Also in well developed countries sustainable (smart) cities (goal 11) are at the focus of policy making. All goals also have a global impact and a national impact. In the Netherlands the Central Bureau of Statistics analysed the national progress on the SDG's. The state of play end 2016 was evaluated positive for the goals 3, 6, 8 and 17, while improvement has to be made on the goals 4, 5, 7 and 13 (see figure 1 for goal numbers). This shows that also developed countries can steer and point their policies, using the SDG's as a reference

framework. What is new for all countries is that more and more we work and live in a digital society. This changes the context in which we have to achieve these goals. At the same time this digitization also provides us with new means and methodologies to achieve these goals.

### **3. TRENDS AND DEVELOPMENTS**

The present technology and data availability is enormous. Satellite imagery, GPS and a connected world through the internet give opportunities that weren't thinkable just a few decades ago. Standards like the Land Administration Domain Model (LADM) allow for a jump start of new initiatives and the connection between top-down and bottom-up initiatives. Also the knowledge, tools and experience evolve at exponential rates. For example the Voluntary Guidelines (VGGT) and the recently published Guiding Principles on Fit For Purpose Land Administration allow for well-designed systems with respect to the legal, spatial and institutional frameworks.

Making use of modern technology, services can be developed accordingly. At the same time we live in a rapidly developing world. In society we see the following trends and developments:

#### **Livelihood insecurity**

The demographic pressure on land and the fast growing need for food, energy and natural resources causes overexploitation and inequality in many places. This results in an increase in insecurity for people and nature. We are faced with crumbling security at global, national and personal level. These include topics such as:

- Climate Change
- Migration and integration
- Threat of terrorism and safety
- Banking crisis and financial instability
- Flexible labor market
- Pressure on (old-age) pension
- Rising healthcare costs
- Robotics and digitization of work
- Wealth and income inequality

These insecurities may vary by region, but we note them everywhere. Looking, for example, at the Netherlands we see people searching for solutions coping with these issues and experimenting in the following ways:

- Living in so-called 'Tiny houses', small houses with a basic equipment and without or only a small mortgage.
- Sharing living quarters rather than owning them. Off grid living: self-sufficient living;
- Digital nomads, people who live and work without a permanent place of residence ('I live where my laptop is');
- Gentlemen farmers: a farm which provides a small local community with all food;

- Independent entrepreneurship: marketing your own products and services using platforms like über and airbnb.

These new walks of life, work and living often do not fit well within the existing rules of society and the public sector in particular.

### **Shifting land use**

We are used to divide the space into blocks with a particular function: living, working, shopping, roads, nature and agriculture. These functions will blend in the future. Continuous social and natural processes affect our livelihoods and environment. Urbanization is a world wide trend. In addition to urbanization and regional contraction spatial planning and the associated energy and water issues will be effected by climate change issues.

### **Sharing and networking**

Technological developments, such as the Internet and social media, make it easier for people to connect with each other and solve problems in new ways. Instead of a setting up a small hotel people start a website to rent rooms, rather than becoming a taxidriver people start a site to share transport and instead of making an audio library at home, people will stream infromation to listen to music. Solutions that are made possible by technology and a shift from 'owning to sharing'.

### **Trust**

An important condition for the use of new services is trust. Unreliable services are not used and disappear just as quickly as they emerge. This confidence is built by being trustful online. By likes, reviews, photos, stories and stars we can see what services are reliable, which products are useful, which locations are suitable and which people do their job well. This also effects government services. Land registries and cadastres are now generally accepted as authority. This is partly vested in law and ourimage of reliability, security, quality and independence.. If we want to fulfill the demands onon data quality, data management and innovation we also have to earn our trust in the digital society. But we should be aware that confidence is fragile. Errors can be greatly magnified by social media and communities, resulting is distrust and organsiational risks for goverment bodies.

### **Modern government in a networked society**

New solutions also come with new problems. Public sector bodies have to face the reality that we live in a partially centralized and partially decentralized digital world. Many activities are undertaken at the local or even personal level, whereas the instruments and services these people use are provided by global players [Salzmann and Burmanje, 2014] Initiatives like AirBnB and Uber are examples where local and global worlds meet. Governments (and parts of society) are not accustomed to that in many cases. Everyone can be a taxi driver, innkeeper, child care professional or cook or even a combination of these.. However, if things go wrong, many people still hold the government accountable. So how do govenrments ensure that things go as they should go and that the proper checks and balances are in place? What does a government look like in the networked society? How do governments ensure the security and confidence that is expected?

## **Technology & digitization**

After digitizing the paper world in the last decades a truly digital reality is emerging. It is based on the Internet, smartphones, online shops and platforms. These innovations ensure major changes in our world. In our (spatial) domain more and more decisions can be taken in a virtual world. Major technological developments such as block chain technology and Artificial Intelligence even might directly influence the working processes in our land administration domain.

## **4. ISSUES AFFECTING LAND ADMINISTRATION**

The trends and developments as described, can be translated into issues that effect our daily practice of land administration in the near future. This is not an attempt to be clairvoyant, but it should define the mindset we use to define our strategies, visions and investments to make.

**Internet or moving things.** Self driving cars, drones and the projection of virtual reality in real life situations, require fit for purpose geo-information and positioning systems. Liability, property and land use rights are essential in this developments. Furthermore these devices give us now possibilities to collect and update our information: in real-time, in difficult terrain and even indoors.

A '**sharing economy**' asks for custom made agreements between individuals and government. This also relates to the centralisation and decentralisation paradigm discussed earlier. Law and regulations need refinement for that. Further digitization and open data policies are needed. And the government should offer a platform to society where transactions and agreements can be made.

'**Datafication**'. The impact of data on our way of living increases. Think of the possibilities of open data, big data and linked data. But also the concept of authoritative data might be redefined (is trust embedded in the datacommunity and/or public institutions?). Personal data protection is already an issue under debate and policy related to privacy will evolve. Also the virtual reality will gain importance, compared to the real life situation. What if parcel and ownership information in a pointcloud environment on the internet define the amount of tax one has to pay, instead of the measurements made in the field by surveyors?

Considering the issue of sharing and datafication we will also enter the discussion on the sharing of land and personal data. This might lead to new arrangements where it is defined how persons and object share their data with other entities or networks.

**Consumers become contributors.** Traditional services have a customer and a supplier, but nowadays the customer-supplier relationships are less clear. Like customers took over the administrative tasks of a bank by internet banking, citizens may take over surveying activities from the cadastral organisation or the private land surveyor. The customer in his new role is also referred to as a prosumer.

Equally, people will act and take responsibility themselves, rather than through governments. This *self motivation and activity*, will influence major impact decisions such as buying a house or designing landscapes and private environments.

*Developers* will use more and more data from governments to develop services both for public and commercial applications. The end user (of even his application) will increasingly interact with an intelligent application based on embedded information and processes of real estate agents, cadastral surveyors, financial institutions, land registries and cadastres.

The need for *access to data* is key and will also become more international. Exchange of property will be a cross border activity and directives and legislation on data will be as well a international driven discussion.

*Digital government* will be the norm in the near future. This implies that citizens and businesses can access a variety of certified public services through a channel of their choice. A major task of the government will be related to access mechanism (authentication and authorization), standardization, warranting access to data and maintaining the integrity and the currency of the data, thereby offering trusted services ensuring efficiency of the public sector.

*Privacy*. Social media are here to stay in today's society. On the one hand, many citizens seem to use social media without worrying about their privacy. But then there are poignant examples of privacy violations like identity that occur. The European privacy regulation ([European Commission, 2014]) introduces new rights for citizens so that they are better able to protect their privacy interests. This means that the Land Registry and cadastre, in line with this new legislation, should provide safeguards to protect the privacy of individuals so that for example data leaks are minimized.

The importance of the *right to use* land or housing will become as important as the right to own. This will effect the dynamics of property registration drastically. The changing user demand as foreseen in the Fit for Purpose Land Administration approach, will not necessarily mean that more detail and more accuracy are the next steps in land administration development. Future purposes might have requirements of faster or cheaper registration of other variables, allowing/asking for information of a lower quality.

## 5. BECOMING A SERVICE PROVIDER

Thirty years ago, most people had only a few times in their life (if at all) contact with the Land Registry or the Cadastre. Even if this was the case intermediaries like real estate agents, solicitors, notaries or land surveyors took care of land issues for their customers. We are heading towards a situation where citizens, maybe unconsciously, make use several times a day of the information we provide as cadastre or land registries. To meet this challenge, there is a need for a lot of information and services that support users in their decision making. This

requires understanding and knowledge of the importance and quality of data and direct access to data. This places demands on the accuracy, completeness and timeliness of our records and the way people and systems have access to that information. Data is like water: it is taken for granted that it is always and everywhere available. Without it, one realizes how much work it is to keep the water available, clean, clear and healthy.

It is our challenge to provide society with stability and security in this changing world. At the one hand all the developments in society sketched above make this look challenging. At the same time the issues we discuss (which are very often related to the digital society) make it possible to deliver this stability and security. To do this, it is necessary to explore new ways to do our work and become service oriented. At the same time, we have to stick to the core values of our profession. Tenure security is about providing trust; Trust in the government or trust in the community. Also the management of land, space and natural resources demands for an approach where inclusiveness of all stakeholders in society is key. The basis for proper use of data is in confidence: confidence that the data is of good quality, it is well maintained and that your privacy is guaranteed. Trust should be the core value of any land administration organisation.

The changing need for privacy, data accessibility and new services might be in pace with technological development, it is largely impossible to keep up the organisational development to these changing demands. We have to adapt as organisations. Sharing and networking become new competences in our business processes and cadastral organisations evolve from data providers to information providers, to service providers.

## **6. CONCLUSIONS**

In this changing world the need for security and stability is a constant factor. Land administration plays an important role in taking care of that security and stability.

The need for a good land administration can be clearly derived from the global objectives as defined by the Sustainable Development Goals (SDG's). In eleven out of the seventeen SDG's, land administration is believed to contribute to achieve the goals by 2030.

Livelihood insecurity will be a global issue as well as the shift in land use from rural to urban. Our society will be networked and economies will have more focus on sharing and individual entrepreneurship.



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## BIOGRAPHICAL NOTES



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