GEOSPATIAL WORLD FORUM

TRANSFORMING ECONOMIES IN 5G ERA
The Geospatial Way!

7-9 April 2020 /// Amsterdam

www.geospatialworldforum.org

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Why IOT/AI in Land Administration ...

01 Global population to reach almost 10 billion by 2050, creating unprecedented urbanisation challenges

02 70% of developing countries do not have an effective LAS

03 Digital transformation and adoption has been slow

04 Digital mapping out of date

05 Jurisdictional approach has ensured fragmented approach
The Modern LAS

digital cadastre

digital land title registry

faster response times

reduced operational costs

increased efficiency

new service revenue

higher levels of customer service
LAS provide the infrastructure for implementation of land policies and land management strategies in support of sustainable development.
Disruptive Technology

01 Artificial Intelligence

02 Cloud/Big Data

03 Internet of Things

04 Block Chain

Efficient and Intelligent Operation

Global Visibility Real Time Data Access

Connected World

Security Authenticity

Technology Change
IOT/AI - Land Administration

Mobile Devices/Drones
Fit for Purpose Survey
Satellite (Imagery/GNSS)

Big data
Cloud
Block chain

Remote Sensing/AI
Data Sharing/Collaboration
Standards and Interoperability

Efficient Land Management
Smart Cities
Customer Value

LAND SURVEY
LAND DATA & DATA QUALITY ASSURANCE
APPLICATION

LAND ADMINISTRATION

01 Connectivity
02 Data Management
03 Data Analytics
04 Human Value

Efficient Land Management
Smart Cities
Customer Value
1. Transformed Revenue Models

- Outcome based
- Pay per use
- XaaS

- Reduced Operational Costs
- New Sources of Revenue
2. Transformation of business processes

- Innovation
- Automation
- On Demand
- Mobility

- faster response times
- reduced operational costs
- increased efficiency
- higher levels of customer service
### 3. Smarter and Leaner

<table>
<thead>
<tr>
<th>Reality modelling</th>
<th>Change Detection</th>
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<td>Smart Sustainable Cities</td>
<td>Smart Buildings/Homes</td>
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<td>Autonomous Processes</td>
<td>Reskilling of Workforce</td>
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- **digital cadastre and land title registry**
- **faster response times**
- **increased efficiency**
- **higher levels of customer service**
4. New Value

- Increase customer base
- Address previously unattainable markets
- Higher Revenue-Lower Cost

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Blockchain in LIS

- Archived Land Transactions
- Land Title Certificate Information
- Integrated Land Management Information System
- Land Transactions
- BLOCKCHAIN
- USERS
- Land Title Verify
- User Credential
- Send
- Request
- Biometrics & Land Title Transaction
Land Administration Components

Governance
- Legislative framework
- Policies, processes and institutions by which land is managed

Survey
- Registration of parcels
- Cadastre

Titling
- Conveyance
- Registry

Administration
- Land Use and Permitting
- Addressing
- Valuation
- Taxation
- Development Control
- Grievances and Disputes
- Urban and Regional Planning

BPM  ECM  GIS  CRM  BI  AI  IOT  BC
Impact

01. Public and Private Confidence in Conveyancing
02. Security of Tenure
03. Credit Security
04. Housing Delivery
05. Public Safety
06. Service Delivery
07. Reduced Land Disputes
08. Environmental Stewardship
09. Spatial Land-Use Planning
10. Land Resource Management
11. Government Revenue
12. Efficient Property Market
Thank you

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Land Administration Components

- Process
- Distribution
- Processing
- Rights
- Assessment
- Inventory
- Land
- Purposes
- Data Acquisition