

IOT/AI Disruption in Land Administration

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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Digital mapping out of date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

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The Modern LAS

digital
cadastre

digital land
title registry

faster
response
times

reduced
operational
costs

increased
efficiency

new service
revenue

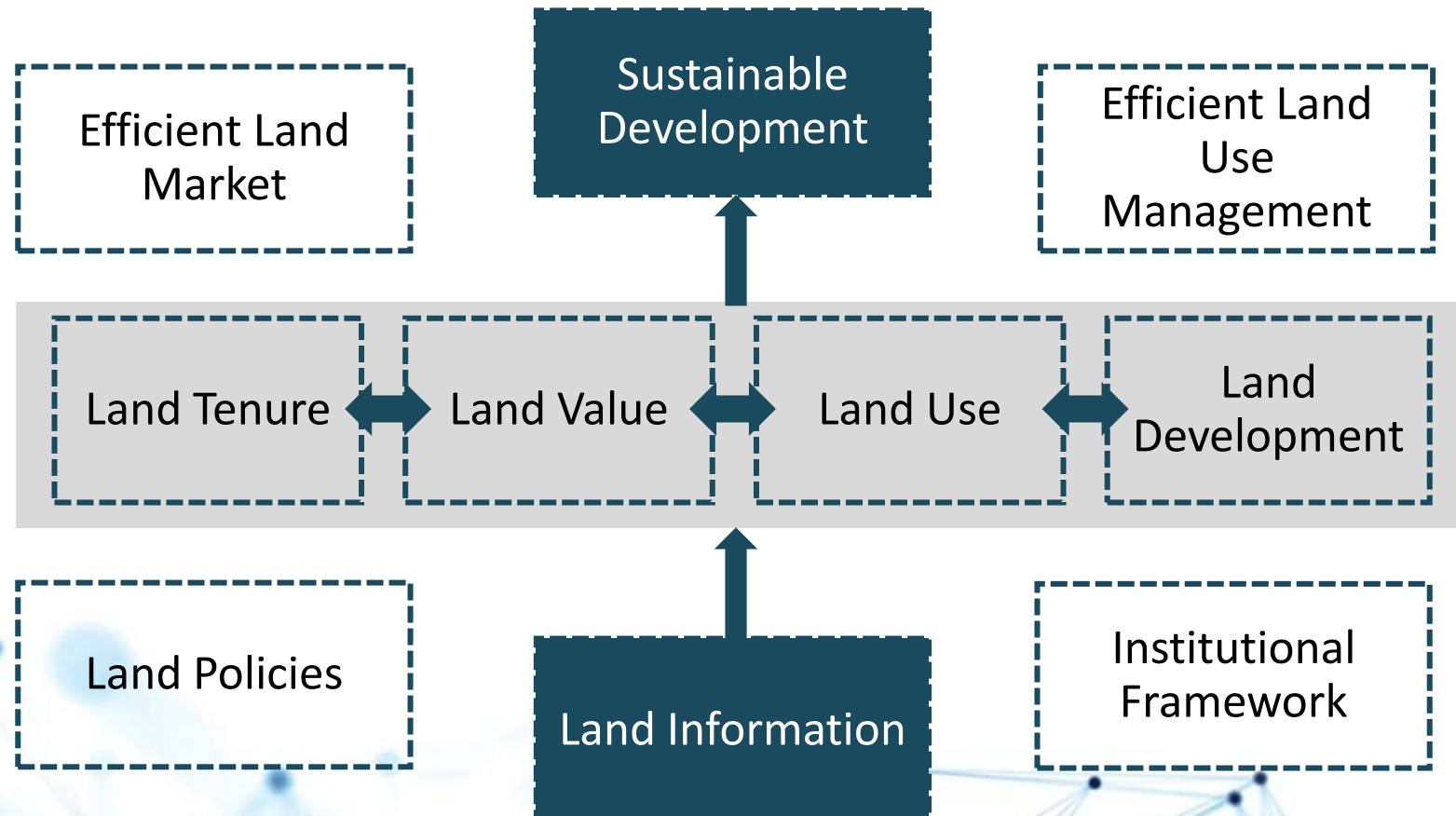
higher levels
of customer
service



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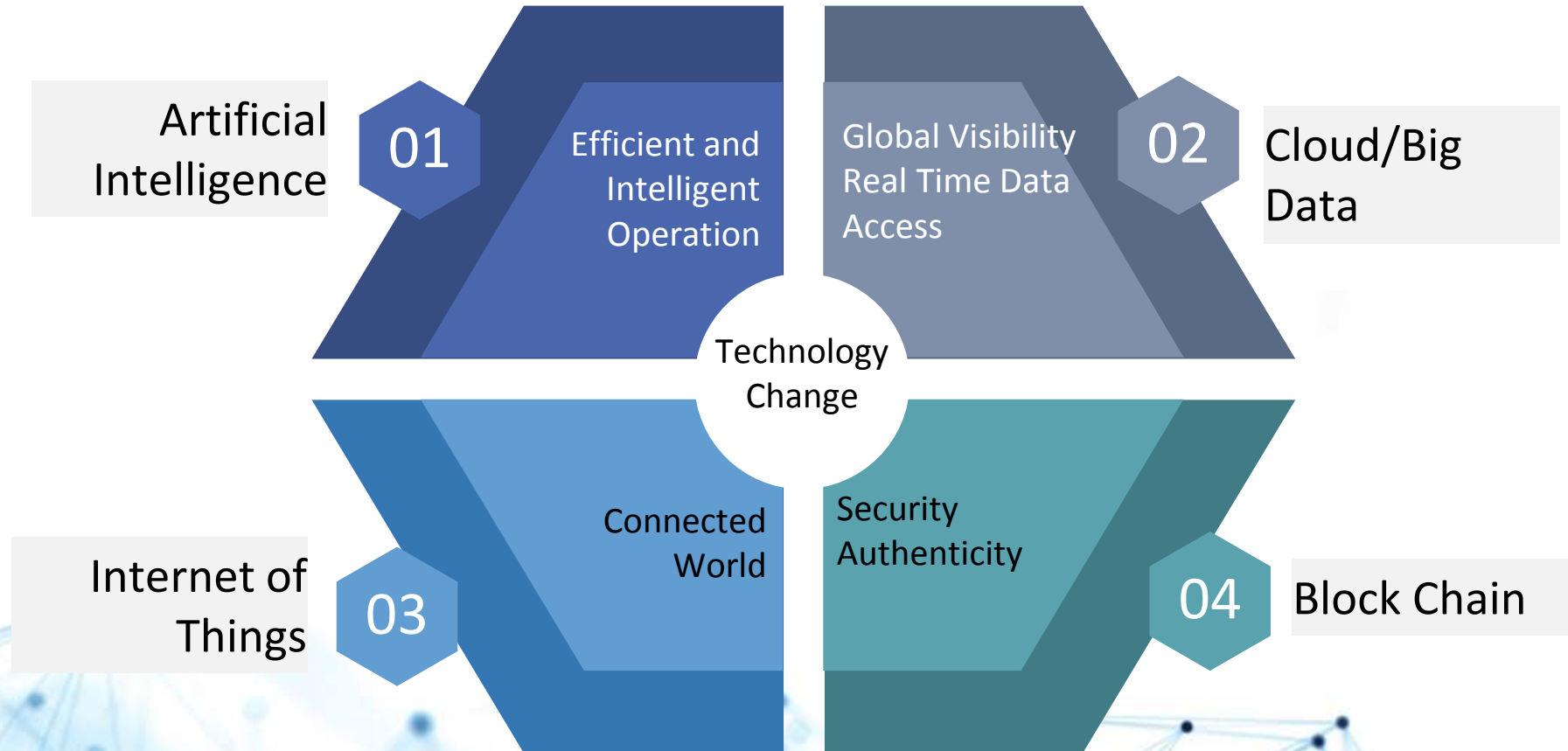
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LAS Framework

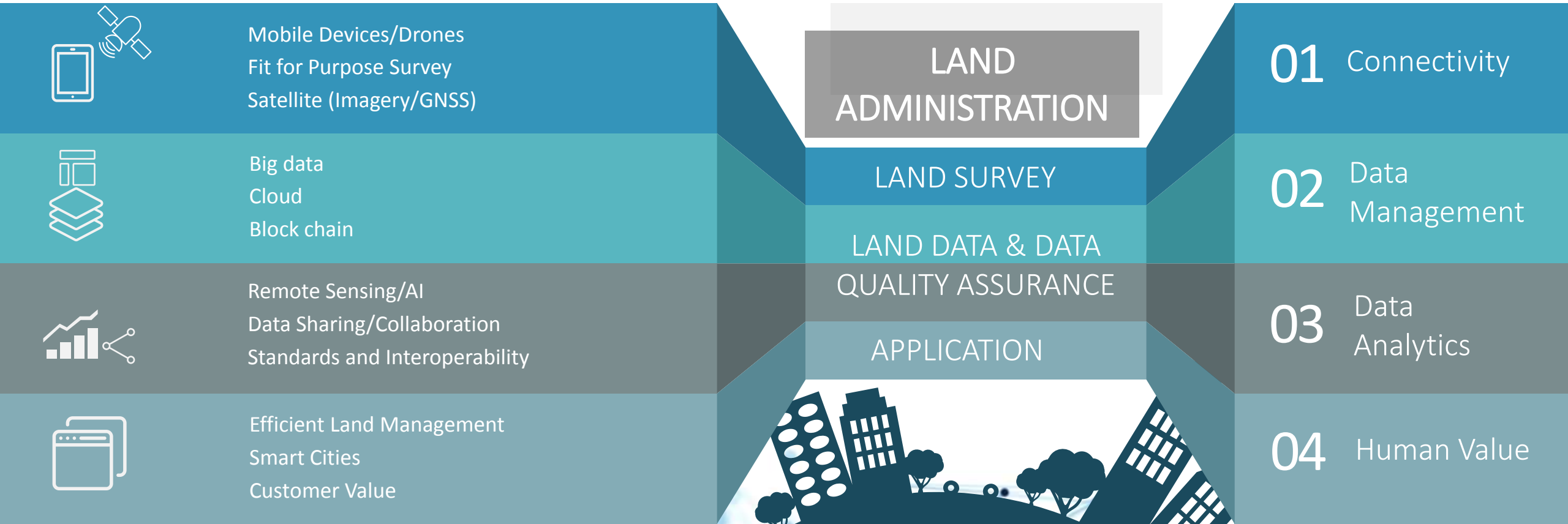


LAS provide the infrastructure for implementation of land policies and land management strategies in support of sustainable development.

Disruptive Technology



IOT/AI - Land Administration



1. Transformed Revenue Models

Outcome based

Pay per use

XaaS

Reduced Operational Costs

New Sources of Revenue



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2. Transformation of business processes

Innovation

Automation

On Demand

Mobility

faster
response
times

reduced
operational
costs

increased
efficiency

higher levels
of customer
service



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3. Smarter and Leaner

Reality modelling	Change Detection
Smart Sustainable Cities	Smart Buildings/Homes
Autonomous Processes	Reskilling of Workforce

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

reduced operational costs

increased efficiency

new service revenue

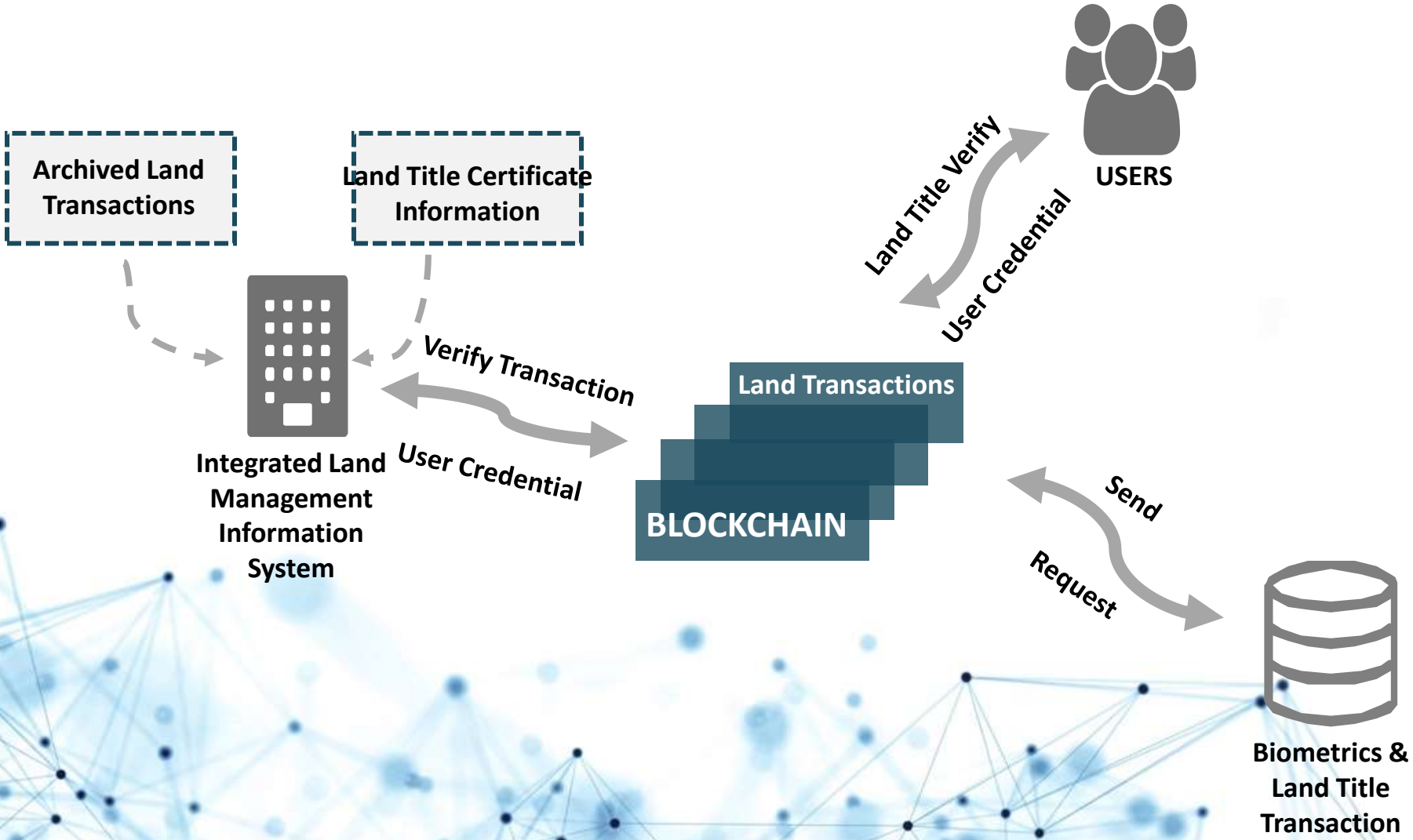
higher levels of customer service



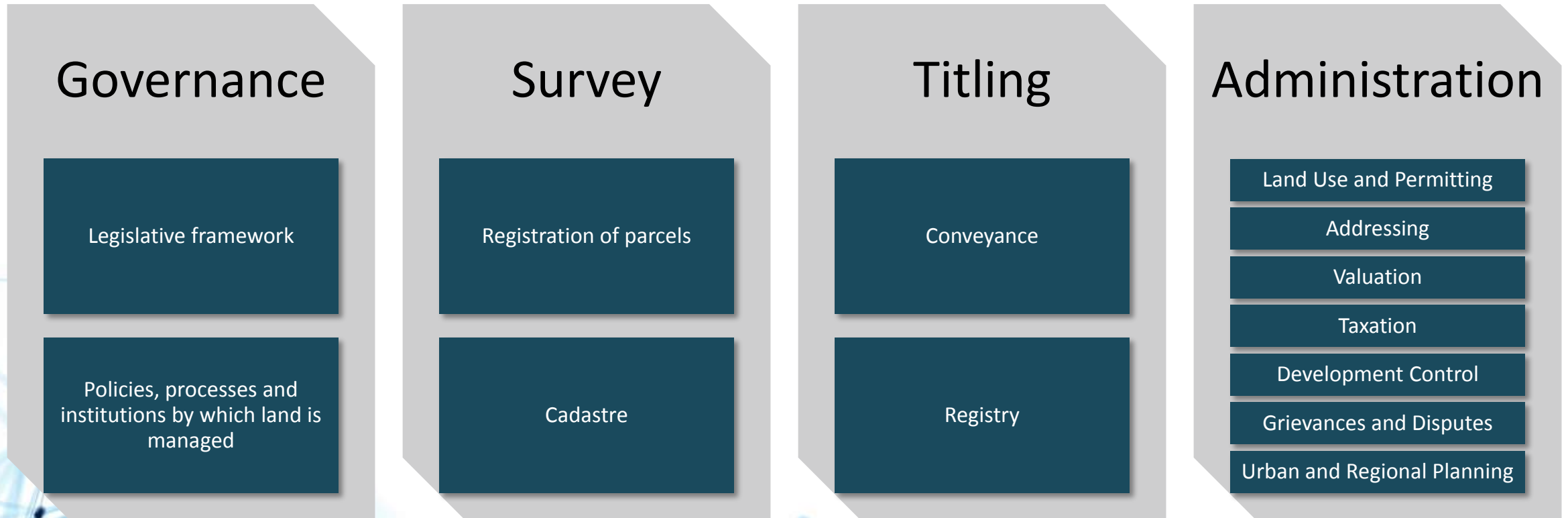
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Blockchain in LIS



Land Administration Components



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

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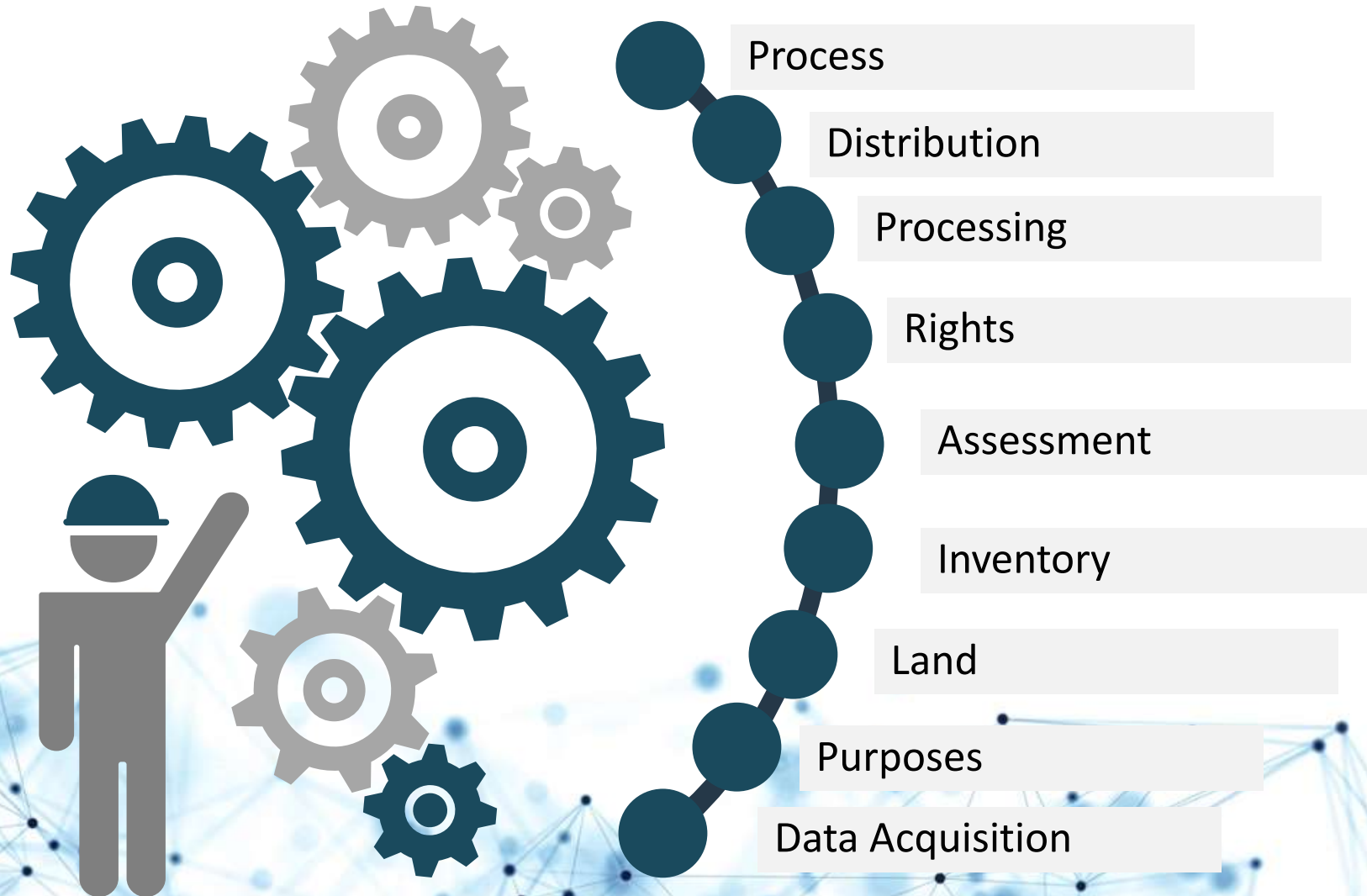
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Thank you

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Land Administration Components



Libelium Smart World

Air Pollution

Control of CO₂ emissions of factories, pollution emitted by cars and toxic gases generated in farms.

Forest Fire Detection

Monitoring of combustion gases and prescriptive fire conditions to define alert zones.

Wine Quality Enhancing

Monitoring soil moisture and trunk diameter in vineyards to control the amount of sugar in grapes and grapevine health.

Offspring Care

Control of growing conditions of the offspring in animal farms to ensure its survival and health.

Sportsmen Care

Vital signs monitoring in high performance centers and fields.

Structural Health

Monitoring of vibrations and material conditions in buildings, bridges and historical monuments.

Quality of Shipment Conditions

Monitoring of vibrations, strokes, container openings or cold chain maintenance for insurance purposes.

Smartphones Detection

Detect iPhone and Android devices and in general any device which works with WiFi or Bluetooth interfaces.

Perimeter Access Control

Access control to restricted areas and detection of people in non-authorized areas.

Radiation Levels

Distributed measurement of radiation levels in nuclear power stations surroundings to generate leakage alerts.

Electromagnetic Levels

Measurement of the energy radiated by cell stations and WiFi routers.

Traffic Congestion

Monitoring of vehicles and pedestrian affluence to optimize driving and walking routes.

Smart Roads

Warning messages and diversions according to climate conditions and unexpected events like accidents or traffic jams.

Smart Lighting

Intelligent and weather adaptive lighting in street lights.

Intelligent Shopping

Getting advices in the point of sale according to customer habits, preferences, presence of allergic components for them or expiring dates.

Noise Urban Maps

Sound monitoring in bar areas and centric zones in real time.

Water Leakages

Detection of liquid presence outside tanks and pressure variations along pipes.

Vehicle Auto-diagnosis

Information collection from CanBus to send real time alarms to emergencies or provide advice to drivers.

Item Location

Search of individual items in big surfaces like warehouses or harbours.

Waste Management

Detection of rubbish levels in containers to optimize the trash collection routes.

Smart Parking

Monitoring of parking spaces availability in the city.

Golf Courses

Selective irrigation in dry zones to reduce the water resources required in the green.

Water Quality

Study of water suitability in rivers and the sea for fauna and eligibility for drinkable use.

