AN INTEGRATED LAND REGISTRY / CADASTRE
INTEGRATING RELIABLE DATA (LEGAL / FISCAL / GIS):
A STRATEGIC ADVANTAGE
OPEN DATA & THE DLS PORTAL

NEOCLIS NEOCLEOUS – LIS MANAGER

PCC AUSTRIA 2018

VIENNA - AUSTRIA – 21/11/18
Reliability - Important Facts and Questions / Thoughts:

i. What do we actually mean by “Reliable”?

ii. Can we ever achieve 100% reliability? **Difficult!!**

iii. Real World Situation = The Cadastre World? **Never!!**

iv. Reliable = Quality / Speed / Efficiency / Completeness / Correctness / Effectiveness / Accuracy / Trust / Adaptiveness to Change / Cost of a Mistake / High Quality of Service / **Perception of Users vs Our Perception** / Legally Reliable / State Guaranteed / New IT Web Solutions / **IT & Coded Data Only (no text!!)**
Reliability - Important Facts and Questions / Thoughts:

v. **Reliable Data vs Reliable Business Processes**

vi. The more layers of data (dif. scales) = The less reliable!!

vii. Our Web Portals put pressure on us to be reliable!!

viii. Does it really matter if we are 100% or not?

ix. All Stakeholders need to speak the same language!

x. IT tools can help you increase reliability!
**Historical Background:**

i. Ministry of Interior - 1858

ii. Initial Task: Registration of Title

iii. Title System

iv. Parcel Based / Centric - Unique ID

v. Highly Respectable and Reputable System of Tenure, Registration, Valuation, Cartography, Survey.

vi. Efficient, Reliable, and Multipurpose Integrated Cadastre

vii. Multitask Umbrella Organization - All Aspects of Land Related Matters Under a Single Roof
Registration:

i. **Legal Issues - Legal Day to Day Transactions**

ii. **Preparation of Legislation (before legal vetting and approval by Parliament)**

iii. **Registration of Property**

iv. **Registration of Contracts of Sales**

v. **Property Searches**

vi. **Boundary Disputes / Re-adjustments**

vii. **Title Issuing**

viii. **Encumbrances**

ix. **Transfers / Mortgages / Sales**
State Lands Management:

i. Grants

ii. Leases

iii. Rights of Way

iv. Exchange or Alienate Property Vested in the Republic of Cyprus

v. Monitoring - State Land Management and Efficient Allocation

vi. Legal Issues
Land Tenure:

i. Tenure Issues
ii. Freehold vs Leasehold
iii. Divisions of Land and Property
iv. Amalgamations
v. Ex-Officio Issuing of Titles
vi. New Registration After Resurvey of Cyprus
Department of Lands and Surveys - Sectors

Valuation:

i. Acquisitions
ii. Requisitions
iii. Advisory Valuations
iv. Transfer Fees Valuation
v. Consulting - CY Embassies Abroad
vi. Valuations - European Court of Justice
vii. Property Analysis
Large Scale Projects
Land Acquisitions by the Government:
Department of Lands and Surveys - Sectors

Valuation (General Valuation & Taxation):

i. General Valuation
ii. Taxation Legal Issues
iii. Property Data Analysis
iv. Objections
v. Data Capture - Field Surveys
vi. Automated Mass Valuation
vii. Valuation Models
Cartography:

i. Traditional and Digital Cartography
ii. Large Scale Mapping
iii. Data Capture and Maintenance of Databases
iv. Digitization of Cadastral Plans
v. CY Official Cartographic Organisation
vi. Various EU Related Databases
DLS: AN INTEGRATED LR / CADASTRE
DATA: CORE ASSET / STRATEGIC ADVANTAGE

Survey:
i. Field Survey (Traditional – GPS)
ii. Update of Cadastral Plans
iii. Digital Cadastral Database
iv. Survey Database
v. Data Capture and GIS
vi. Day to Day Survey Related Transactions
vii. Private Surveyors
viii. Re-Survey of Cyprus – Systematic vs Sporadic

Department of Lands and Surveys - Sectors
Geodesy:

i. Geodetic Aspects
ii. DTM
iii. Ortho-photos / Satellite Imagery
iv. Aerial Photography
v. LIDAR Data
vi. Hydrography
vii. Nautical Mapping
viii. Aero Nautical Mapping
Deliverables (2015):

- Aerial Photography
- Orthophotos
- DTM – DSM
- Extents – Volume – Number of Floors
- Oblique Imagery
- LIDAR Data for the Cities
- Building Footprints
- 3D City Model – LOD2
- Integrated Legal, Fiscal, Spatial Data

New Aerial Photography Project:
CILIS Support and Administration:

i. Business Processes in alignment with the technical processes

ii. Day to day maintenance of CILIS

iii. E-Government Procedures - DLS Portal

iv. Scenarios of different strategic options

v. Outsourcing and new investment opportunities

vi. Preparation of Tender Documents - IT PROJECTS

vii. Handling of Large IT Scale Projects - MOU Troika

viii. Upgrading of the Cyprus Integrated Land Information System
DLS New IT Strategy – KPMG:

i. 10 Strategic Pillars
ii. 13 Strategic Dimensions
iii. 37 Detailed Strategic Actions (Description, Benefits, Effort Type, Key Work Steps, Key Stakeholders, Dependencies) i.e.
   • IT Governance Model
   • Policies, Procedures, Standards
   • Transition Plan
   • Business Continuity & Business Intelligence
   • 398 AS-IS vs TO-BE Re-Engineered Processes
   • DLS Unique Work: Reliable Data as the Prime Core Asset of DLS
   • Integrated Data: A Strategic Advantage
   • Reliable Data Built Into Reliable Business Processes
   • Reliable Business Processes Aligned with IT Processes
DLS: AN INTEGRATED LR / CADASTRE
DATA: CORE ASSET / STRATEGIC ADVANTAGE

Legal

Fiscal

GIS
Legal
- Registration
- Legal Issues
- Tenure
- Encumbrances
- Mortgages
- Sales
- Contract of Sales

Fiscal
- Mass Valuations
- Acquisitions
- Requisitions
- Advisory
- Fiscal Characteristics

GIS
- Survey
- Cartography
- Geodesy
- Hydrography
- DLSDB
- DCDB
- SDB
### DLS: AN INTEGRATED LR / CADASTRE

**DATA: CORE ASSET / STRATEGIC ADVANTAGE**

<table>
<thead>
<tr>
<th>BASE YEAR</th>
<th>MARKET VALUE</th>
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<tbody>
<tr>
<td>1920</td>
<td>100 €</td>
</tr>
<tr>
<td>1980</td>
<td>10,000 €</td>
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</table>

**GENERAL VALUATION VALUE:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>2013</td>
<td>200,000 €</td>
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<table>
<thead>
<tr>
<th>PLZ_CODE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Ka4</td>
<td>RESIDENTIAL</td>
</tr>
</tbody>
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**C.I.L.I.S PARCEL UNIQUE I.D.**
Intra – Data Capture Projects and Completion Framework:

CILIS:

i. Legal (Registration, Transfers, Tenure, Encumbrances) - 100% of CILIS

ii. Fiscal (Acquisitions, Day to Day Valuations, Taxation) - 100% of CILIS - Data Capture for Taxation: 100% (2014)

iii. GIS (Digital Cadastral, Resurvey) - 100% Digital Cadastral & 10.5% Resurvey (285 - 1:1000 & 824 - 1:2000 New Plans) & 17.2% Sporadic Resurvey (through transactions only)
CILIS General Statistics:

Legal Statistics:

i. Total Parcels: 1,125,067 & 467,164 (Occ)
ii. Total Registrations: 1,378,730
iii. Registrations (Flats - Hor. Div.): 161,175
iv. Contracts Registered: 59,049
v. Current Mortgages: 252,213
vi. Mortgaged Amount: €43,521,370,915
vii. Total Sales 2017: 14212
viii. Total Contract of Sales 2017: 8734
MOU Projects - Troika:

MOU - TROIKA:

i. **Revaluation of all properties in Cyprus**
   (1.1.1980 prices) – Compliant: 30/06/14 (1,2 Million Parcels & 500,000 Buildings)

ii. **Registration and Valuation of all State Land** –
    Compliant: 31/12/13 (90,000 Parcels) – Asset Swap with Central Bank of Cyprus Against Government Debt

**Why did we succeed?**

**Reliable Data – Reliable Integrated Processes!!**

**IT Efficiency !!**
Identification of Unregistered Buildings (350,000 identified):
General Guidelines:

i. Completion Up to February 2019

ii. Mass Valuation for every parcel

iii. Use of "GIS"

iv. Take into account new kind of data

v. "Data Capture" – Municipalities?

vi. Private Valuers – Open Tender for Analysis

New General Valuation as at 1.1.2018:
Automatic Calculation of Frontage Extent:
New EU Governmental Accounting Standards / Governmental Assets:
New Projects - CYPRUS:
New Projects - CYPRUS:
New Projects - CYPRUS:
The “DLS PORTAL”:

DLS e-Platform:

i. Citizen Portal - Static Info

ii. Electronic Applications (e-Transactions, Provision of Data Dynamically)

iii. Interactive GIS Maps at the Parcel Level (Cadastral, Topographic, Hydrographic)

iv. INSPIRE GeoPortal

v. 2018 Award Winning e-Platform – “Innovation Award” – 26th November 2018

The Cadastre on your Screen!!

http://portal.dls.moi.gov.cy
New e-Government Platform “DLS PORTAL”

Department of Lands and Surveys

The Department of Lands and Surveys “DLS” is probably the most important pillar of socio-economic development in our country, as it deals with the land, which is one of the leading factors for progress, prosperity and development in the Cypriot economy. With its present operational structure and responsibilities, through a wide range of Laws and Regulations, the Department is one of the most essential services of the Public Sector, making it a most important contribution to all sectors of activity of the Cypriot society. The DLS provides the basis for the design of all development programs relating to immovable property, offering services to many public sector entities, such as local authorities, bodies governed by public law, banking and other organizations and more generally all citizens. Continue ...

Latest News

Launch of the new DLS Internet e-Services Platform – The DLS PORTAL
23/5/2016

CADASTRAL FIELD SURVEYS CARRIED OUT BY PRIVATE SURVEYORS
05/11/2015

PROTECTED BUYERS - APPLICATION FOR THE TRANSFER OF PROPERTY
08/09/2015

NEW CITIZEN’S CHARTER PUBLISHED
25/01/2012

MIN. OF FOREIGN AFFAIRS - PROPERTY PURCHASES IN THE AREA OF THE REPUBLIC UNDER TURKISH MILITARY OCCUPATION
14/11/2007
New e-Government Platform “DLS PORTAL”

Parcel's Buildings
Building 1: BLOCK A

<table>
<thead>
<tr>
<th>Unit</th>
<th>Year Built</th>
<th>Unit Class</th>
<th>CATEGORY “A”</th>
<th>Unit Condition</th>
<th>Unit Enclosed Extent</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2011</td>
<td>Unit View</td>
<td>ΚΑΤΗΓΟΡΙΑ “A”</td>
<td>Unit Enclosed Extent</td>
<td>Unit Enclosed Extent</td>
</tr>
<tr>
<td>1</td>
<td>Covered Extent</td>
<td>16</td>
<td>Unit Covered Extent</td>
<td>Unit Parking Place Number</td>
<td></td>
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<tr>
<td>1</td>
<td>Parking Place Type</td>
<td>Flat No</td>
<td>A16</td>
<td>Unit Floor Number</td>
<td>Unit Refurbish Year</td>
</tr>
<tr>
<td>1</td>
<td>Unit Floor Total Number</td>
<td>1</td>
<td>Unit Refurbish Type</td>
<td>KAMIA</td>
<td></td>
</tr>
</tbody>
</table>

* The factors that apply are set by the provisions of Development Plans.
New e-Government Platform “DLS PORTAL”
New e-Government Platform “DLS PORTAL”
DLS PORTAL Free Web Services Examples
The Implementation of the DLS PORTAL:

e-Applications through the DLS PORTAL:

i. **Property Search**

ii. **Title Certificate Copy**

iii. **Official Cadastral Plan**

iv. **Correction of Pseudo-Id’s**

v. **Sales and COS for Valuers**

vi. **Selection of Auctioneers**
The Implementation of the DLS PORTAL:

e-Applications through the DLS PORTAL:

i. Mortgage Cancellation
ii. Sales and Contract of Sales in GIS
iii. Maintenance of Fiscal Data by Local Authorities
iv. Correction of Errors of General Valuation
v. Objection of Errors of General Valuation
vi. Demarcation of Property in GIS
vii. Objections of New Cadastral Plans
viii. Application Tracking System
ix. Provision of GIS Data
x. GIS Data to Private Surveyors
xi. CYPOS Registration
xii. Taxation Exports - Sewerage - Local Authorities
xiii. Categorization of New Roads in GIS by Local Authorities
xiv. Upload of Data to DLS
The Implementation of the DLS PORTAL:

New e-Applications through the DLS PORTAL (2019):

i. Registration of Encumbrances
ii. Release from Encumbrances
iii. Registration of e-Mortgage by Banks
iv. DLS API
v. DLS MOBILE - Android and iOS
New Government Platform

**DLS PORTAL**

### Web Applications:

**Demarcation of Boundaries:**

i. Application from the public

ii. Select your property from a list

iii. Select the points of demarcation from a map

iv. Upload contract with Private Surveyor
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New e-Government Platform “DLS Portal”

To: ΑΘΩΣ ΚΑΛΛΙΔΩΝΗΣ,

A digital file in PDF format is attached regarding your request, through an online application for Search Certificate to the Department of Lands and Surveys.

This is an informative message. Please do not reply on this email address.

Yours sincerely,

Department of Lands and Surveys
DLS Portal Website: http://portal.dls.moi.gov.cy
DLO Nicosia ☏ 22406000 | nidlo@dls.moi.gov.cy
DLO Limassol ☏ 25904800 | lidlo@dls.moi.gov.cy
DLO Larnaka ☏ 24803300 | lidlo@dls.moi.gov.cy
DLO Pafos ☏ 26904160 | pidlo@dls.moi.gov.cy
DLO Famagusta ☏ 24803109 | fidlo@dls.moi.gov.cy
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New e-Government Platform
"DLS PORTAL"

Web Applications:
Provision of Data (Vector):

i. Application from the public
ii. Select an area of interest from a map
iii. Pay and download

Your application has been completed successfully. The data you requested will be prepared shortly and you will be informed by sms or email, on how to collect them.

<table>
<thead>
<tr>
<th>Receipt No</th>
<th>Transaction No</th>
<th>Payment Date</th>
<th>Total</th>
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<tr>
<td>1</td>
<td>T007943-a4b4c2b6634585b7651e9e632727bb</td>
<td>22/03/2016</td>
<td>14.03 €</td>
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**DLS: AN INTEGRATED LR / CADASTRE DATA: CORE ASSET / STRATEGIC ADVANTAGE**

**New e-Government Platform**

**DLS PORTAL**

**Web Applications:**

i. Application from Private Surveyors

ii. Select files assigned

iii. Automatic Selection of Property

iv. Buffer

v. Free Download

vi. DBF Files, PSM, PSM Cards with Info
New e-Government Platform “DLS PORTAL”

SUBMISSION OF GENERAL VALUATION DATA DLS68318

Application Status Changed To Submitted

Email
21/05/2018 09:30:47
Key Facts:

- **Largest Governmental IT Project in Cyprus**
- **EU funded**
- **Started as a huge Turnkey Project**
- **Split into 2 Projects (GIS VS LEGAL / FISCAL)**
- **2 TENDER DOCUMENTS**
  - **GIS – MAY 2018 – 3 MILLION EURO – 20 Months**
  - **LEGAL / FISCAL – OPEN TENDER – DECEMBER 2019 – 12 MILLION EURO (ESTIMATED) – 4 Years**
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ArcGIS Enterprise Portal

1. Legacy Legal/Fiscal
   DLS Oracle Forms and ATS

2. ArcGIS Desktop
   Parcel Fabric Data Reviewer Workflow Manager ArcGIS Pro

3. Publication Geodatabase
   Regular Geodatabase Publication

4. Desktop Web Device
   DLS Data Available Internally Via ArcGIS Apps (Insights, Collector)

5. Integration with Business Systems
   - DLS Portal
   - HIPPODAMUS
Integrated Registry & Cadastre Procedures
Automated Quality Controls = Reliability
DLS: AN INTEGRATED LR / CADASTRE DATA: CORE ASSET / STRATEGIC ADVANTAGE

3 Cyprus Cadastre Parcel Fabric in ArcGIS Pro
Integrated Land Registry & Cadastre Procedures

Reliability: Online Business Intelligence!!
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