



Mineral Resources Authority

Papua New Guinea

Minerals for Life



Papua New Guinea - FlexiCadastre Implementation

**Gretel Orake, James Vuvu, & Louie Kawale,
Mineral Resources Authority**

FEBRUARY 2014

Outline



- 1. Papua New Guinea's Mineral Tenement System:** - , Gretel Orake, Manager, Technical Assessment, Regulatory Operations Division
- 2. Introduction of Flexicadastre in PNG:** James Vuvu, Cartographer, Regulatory Operations Division
- 3. Beating the challenges of adopting Flexicadastre:** Louie Kawale, Database Administrator, Regulatory Operations Division
- 4. Next steps Flexicadastre:** Gretel Orake, Manager, Technical Assessment, Regulatory Operations Division



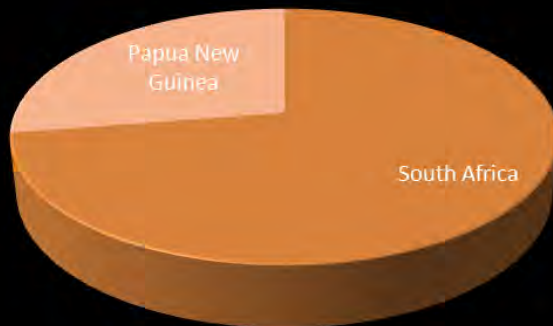
A bit about us



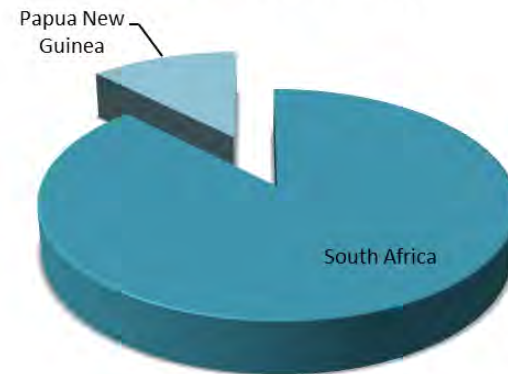
Background

| | | Land Area (km ²) | Population (million) (World Bank, 2012) |
|---|------------------|------------------------------|--|
|  | South Africa | 1,219,912 | 51.19 |
|  | Papua New Guinea | 462,840 | 7.167 |

Land Area (km²)



Population (millions)



| Types of Tenement | Purpose | Term (years) | Conditions |
|-----------------------------|---|--|---|
| 1. Exploration License | To conduct mineral exploration on land and offshore | 2 | Max. 750 sub-blocks (One Sub block = 3.41 km ²) |
| 2. Alluvial Mining Lease | To mine within river beds or 20m on either side of river bed. | 5 | Natural citizen/land group only Not on existing tenements except for EL & ME |
| 3. Mining Lease | For small to medium scale mines | 20 on grant Up to 10 on renewal | Max.area <60km ² |
| 4. Special Mining Lease | For large scale mines. | 40 on grant Up to 20 on renewal | Development Forum called by Minister Mine Development Contract with State |
| 5. Lease for Mining Purpose | For infrastructure supporting a mining operation | Linked to term of related mining lease | Max.area <60km ² |
| 6. Mining Easement | For ancillary purposes – road, pipelines, power lines, etc | Identical to mining lease term | Area to fit purpose |



PNG's Mineral Tenements System

- Mineral Resources Authority of Papua New Guinea
 - Established by the Mineral Resources Act 2005
 - Inherited processes from former Department of Mining
 - Regulatory Operations Division is one of four divisions of MRA and responsible for tenement management
- Tenement system is mainly a Manual process

INDEPENDENT STATE OF PAPUA NEW GUINEA
Mining Act 1990
Mining Regulation 1990

24, 35, 42
52, 70 and 85
7

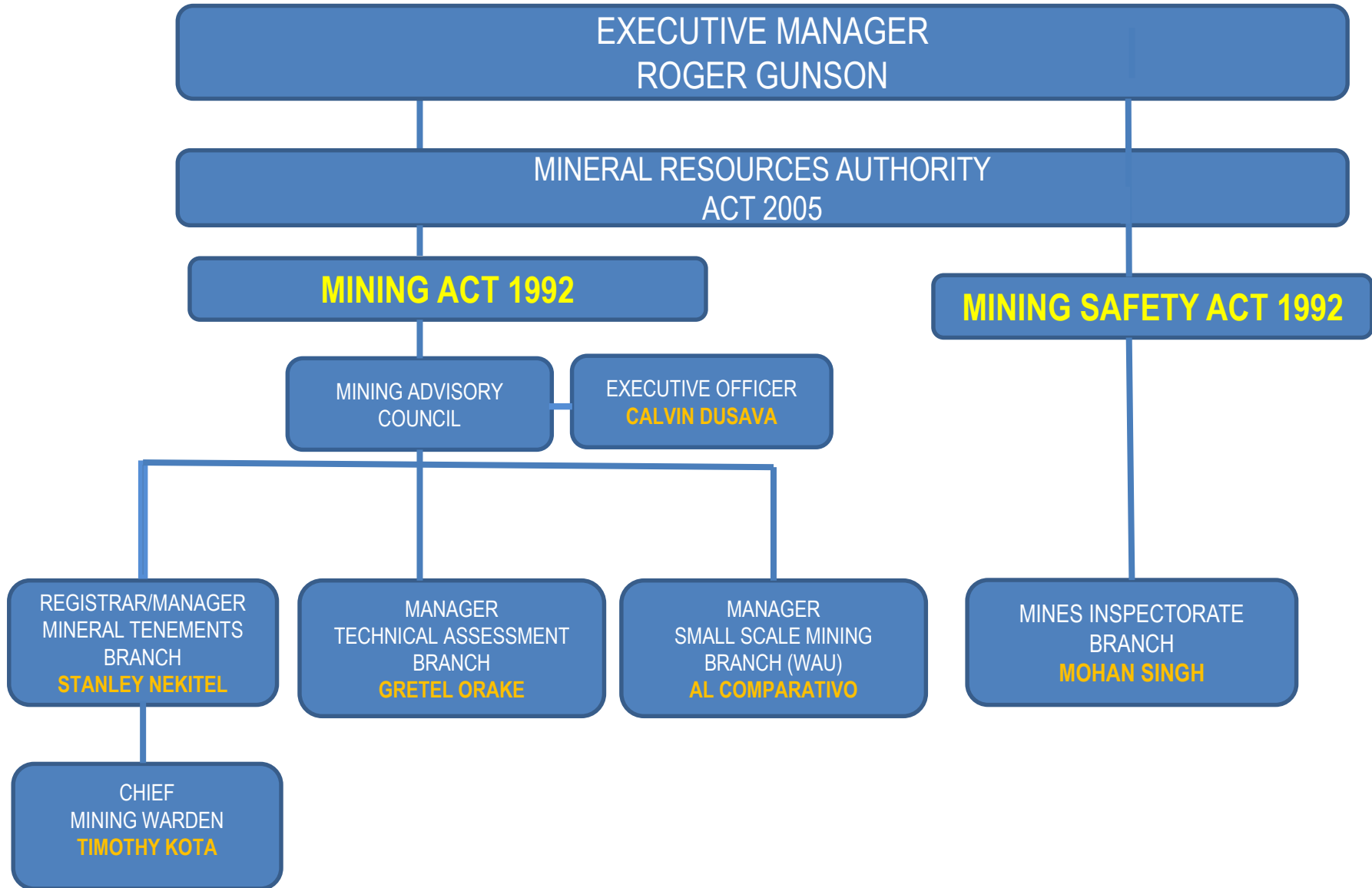
APPLICATION FOR A TENEMENT

Completed by the applicant -
Applicant: Kwambiko Amewu, Amato Asmi, Jankiad Kimmweto Jataisa
For notices: P.O. Box 55 Bulolo, M.P.
Type applied for: ML
Right: 5 (months/years)
Own or landmark (from published map) Bulolo, M.P.
Locations of Gardens Hearing: PROVINCIAL ADMINISTRATIVE OFFICE, Bulolo
(applicant's or agent's signature see Note 1)
26th August 94 (date)

Agents should produce evidence of authorisation.

Fee: K50 up to 5 ha; K250 5-10 ha; K2,500 10-50 ha; K5,000 over 50 ha.
RT: K3 per ha. up to 10 ha, K5 per ha. 10-50 ha. K8 per ha over 50 ha.
DEPOSIT: K2,000 up to 5 ha; K5,000 5 to 10 ha. K20,000 10-50 ha; K40,000 over 50 ha.
Map showing Boundaries: FORM 17; or: survey

REGULATORY OPERATIONS DIVISION – ORGANISATIONAL CHART



The Project



The World Bank

Project Supported by World Bank Technical Assistance Program 2 to PNG

July 2013

| 1 | 2 | 3 | 4 | 5 | 6 | |
|----|----|----|----|----|----|----|
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

Commenced on 29th July 2013



Our Team comprises:



SD- Eva Stredder and Charles Young



MRA- Regulatory Operations Division

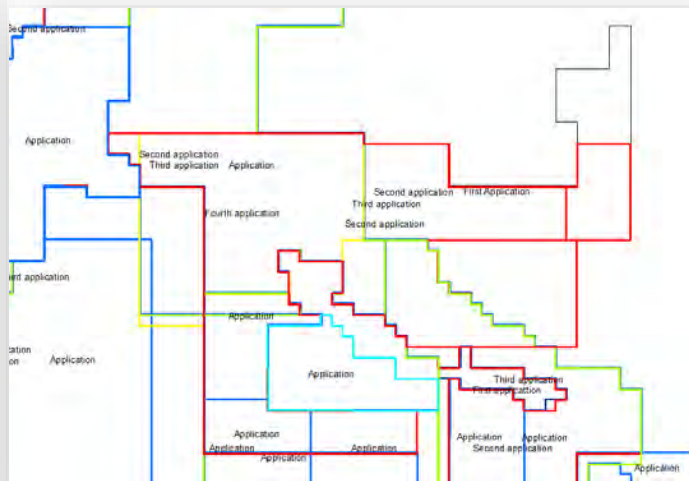


Achievements in 6 months

Spatial Data verification and capture

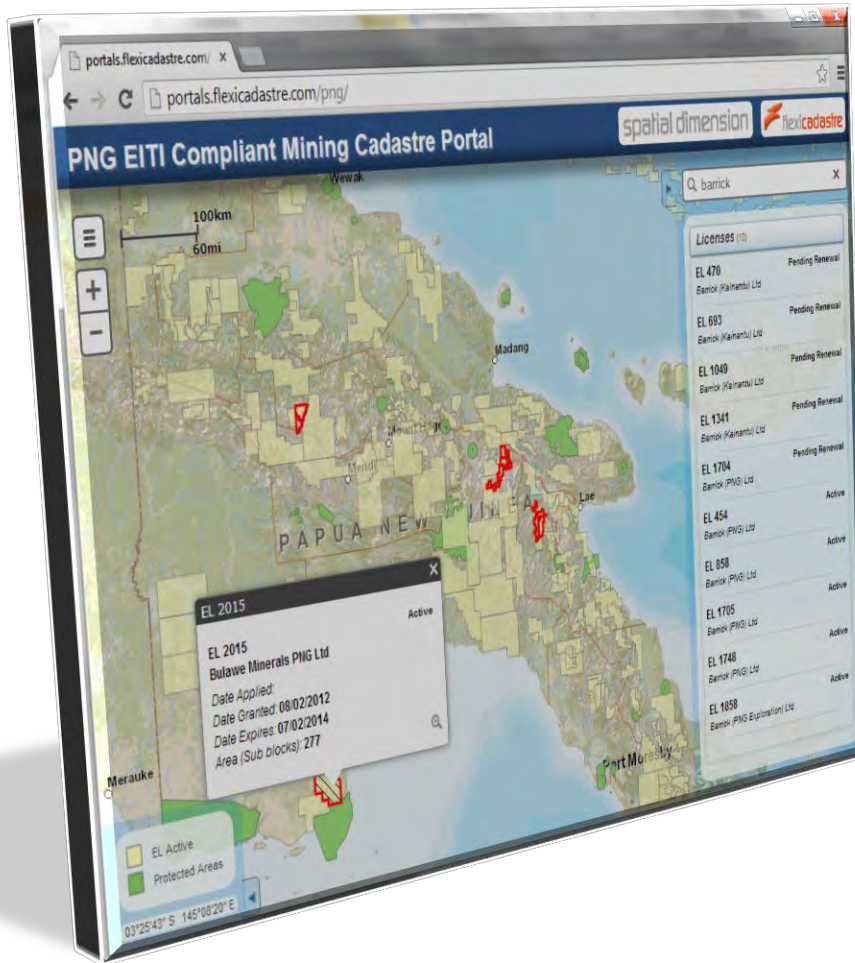
- Spatial shape registration of different Tenement types
- Correction of existing shape files
- Attribute data editing
- All tenement types
- Approx. 50% complete

| Status | |
|----------------------|----------------------|
| Application | Application |
| Application (provisi | Application |
| Application | Application |
| EL application | EL application |
| First Application | First Application |
| First application | First application |
| First application mo | First application mo |
| First application. | First application. |
| First applicattion | First applicattion |
| Fourth application | Fourth application |
| New application | New application |
| Second Application | Second Application |
| Second applicant | Second applicant |
| Second application | Second application |
| Section applicattion | Section applicattion |
| Third application | Third application |
| application | application |
| new ELA | new ELA |
| second application | second application |



| | | |
|---------|-----------------------------|----------------------------|
| AML 602 | Morris Siragin | |
| ML 114 | Aaron Apinko | Bulolo Sub District Office |
| ML 108 | Aaron Apinko & Matai Waiako | |
| ML 109 | Aaron Apinko & Matai Waiako | |
| ML 418 | Aaron Nanga | P O Box 2, Bulolo |
| AML 529 | Abraham Gein | P O Box 181, Bulolo |
| EL 1774 | Ademsa Pty Ltd | |
| EL 1775 | Ademsa Pty Ltd | |
| EL 1776 | Ademsa Pty Ltd | |
| EL 1777 | Ademsa Pty Ltd | |
| EL 1778 | Ademsa Pty Ltd | |
| AML 536 | Agili Pura | |
| AML 542 | Agoma Peke (Yolo Clan) | |
| EL 2120 | AGR Exploration (PNG) Ltd | P O Box 3953, Boroko |
| EL 2121 | AGR Exploration (PNG) Ltd | |
| AML 096 | Aiyati Group | P O Box 45, Wau |

EITI Map Portal



- All Exploration Licences
- All Special Mining Leases
- Up-dated Weekly
- Other lease Types to be added once verified.



Primary Non-Spatial Data verification and capture

Data Capture Wizard

Main Menu

| Code | Tenement Type | Tenement Status | Approval Status | Appl_date | Grant_date | Exp_date | Ren_d |
|---------|---------------------|-----------------|-----------------|------------|------------|------------|-------|
| EL 1091 | Exploration License | Active | | 1993/09/30 | 1994/04/26 | 2014/04/25 | |
| EL 1093 | Exploration License | Active | | 1993/10/07 | 1994/08/29 | 2014/08/28 | 201 |
| EL 1105 | Exploration License | Active | | 1994/01/07 | 1995/01/26 | 2015/01/25 | 201 |
| EL 1115 | Exploration License | Active | | 1994/02/01 | 1994/09/26 | 2014/09/25 | |
| EL 1165 | Exploration License | Active | | 1995/10/31 | 1996/03/01 | 2014/02/28 | 201 |
| EL 1178 | Exploration License | Active | | 1996/04/25 | 1997/02/28 | 2013/02/27 | 201 |
| EL 1178 | Exploration License | Active | | 1996/10/31 | 1997/02/27 | 2015/02/26 | 201 |
| EL 1193 | Exploration License | Active | | 2001/01/24 | 2002/09/20 | 2014/09/19 | 201 |
| EL 1312 | Exploration License | Active | | 2001/06/29 | 2002/09/20 | 2014/09/19 | 201 |
| EL 1316 | Exploration License | Active | | 2004/01/07 | 2004/08/13 | 2014/08/12 | 201 |
| EL 1316 | Exploration License | Active | | 2004/05/07 | 2006/06/05 | 2014/06/04 | |
| EL 1351 | Exploration License | Active | | 2004/05/25 | 2004/11/23 | 2014/11/22 | 201 |
| EL 1365 | Exploration License | Active | | 2004/07/30 | 2005/05/03 | 2015/05/02 | 201 |
| EL 1369 | Exploration License | Active | | 2004/07/30 | 2005/05/03 | 2015/05/02 | 201 |
| EL 1369 | Exploration License | Active | | 2004/07/30 | 2005/05/03 | 2015/05/02 | 201 |
| EL 1369 | Exploration License | Active | | 2004/12/15 | 2005/06/10 | 2015/06/09 | 201 |
| EL 1380 | Exploration License | Active | | 2005/02/02 | 2005/06/10 | 2015/06/09 | 201 |
| EL 1380 | Exploration License | Active | | 2005/02/02 | 2005/06/10 | 2015/06/09 | 201 |
| EL 1380 | Exploration License | Active | | 2005/02/02 | 2005/06/10 | 2015/06/09 | 201 |
| EL 1390 | Exploration License | Active | | 2005/07/29 | 2006/04/28 | 2014/04/27 | 201 |
| EL 1392 | Exploration License | Active | | 2005/12/20 | 2006/06/05 | 2014/06/04 | 201 |
| EL 1392 | Exploration License | Active | | 2005/12/20 | 2006/06/05 | 2014/06/04 | 201 |
| EL 1403 | Exploration License | Active | | 2006/09/28 | 2008/12/22 | 2014/12/21 | 201 |
| EL 1403 | Exploration License | Active | | 2006/09/28 | 2008/12/22 | 2014/12/21 | 201 |
| EL 1403 | Exploration License | Active | | 2006/09/28 | 2008/12/22 | 2014/12/21 | 201 |
| EL 1416 | Exploration License | Active | | 2006/10/17 | 2007/10/30 | 2013/10/29 | 201 |
| EL 1416 | Exploration License | Active | | 2006/10/17 | 2007/10/30 | 2013/10/29 | 201 |
| EL 1416 | Exploration License | Active | | 2006/10/17 | 2007/10/30 | 2013/10/29 | 201 |
| EL 1416 | Exploration License | Active | | 2007/05/11 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1465 | Exploration License | Active | | 2007/05/11 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1465 | Exploration License | Active | | 2007/05/11 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1465 | Exploration License | Active | | 2007/08/01 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1468 | Exploration License | Active | | 2007/08/01 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1468 | Exploration License | Active | | 2007/08/01 | 2008/11/03 | 2014/11/02 | 201 |
| EL 1468 | Exploration License | Active | | 2007/08/06 | 2011/03/21 | 2015/03/20 | 201 |
| EL 1576 | Exploration License | Active | | 2007/08/06 | 2011/03/21 | 2015/03/20 | 201 |
| EL 1576 | Exploration License | Active | | 2007/08/06 | 2011/03/21 | 2015/03/20 | 201 |
| EL 1576 | Exploration License | Active | | 2007/08/09 | 2012/03/12 | 2014/03/11 | 201 |
| EL 1590 | Exploration License | Active | | 2007/08/09 | 2008/07/07 | 2014/07/06 | 201 |
| EL 1590 | Exploration License | Active | | 2007/08/09 | 2008/07/07 | 2014/07/06 | 201 |
| EL 1590 | Exploration License | Active | | 2007/08/09 | 2008/07/07 | 2014/07/06 | 201 |
| EL 1592 | Exploration License | Active | | 2007/08/09 | 2008/07/07 | 2014/07/06 | 201 |
| EL 1592 | Exploration License | Active | | 2007/08/09 | 2008/07/07 | 2014/07/06 | 201 |
| EL 1592 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |
| EL 1594 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |
| EL 1594 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |
| EL 1595 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |
| EL 1595 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |
| EL 1597 | Exploration License | Active | | 2007/08/10 | 2009/02/13 | 2015/02/12 | 201 |

Record: 1 of 194

Filtered Search

Add New
Edit
Delete

Tenements Verified
Licence list

COMPARE GIS/TOOL

Compare Status
Compare Application date
Compare Grant date
Compare Expiry date
Compare last Renewal date
Compare Locality
Compare Company Addresses

- Data Capture Tool
- Approx. 60% data validation complete.



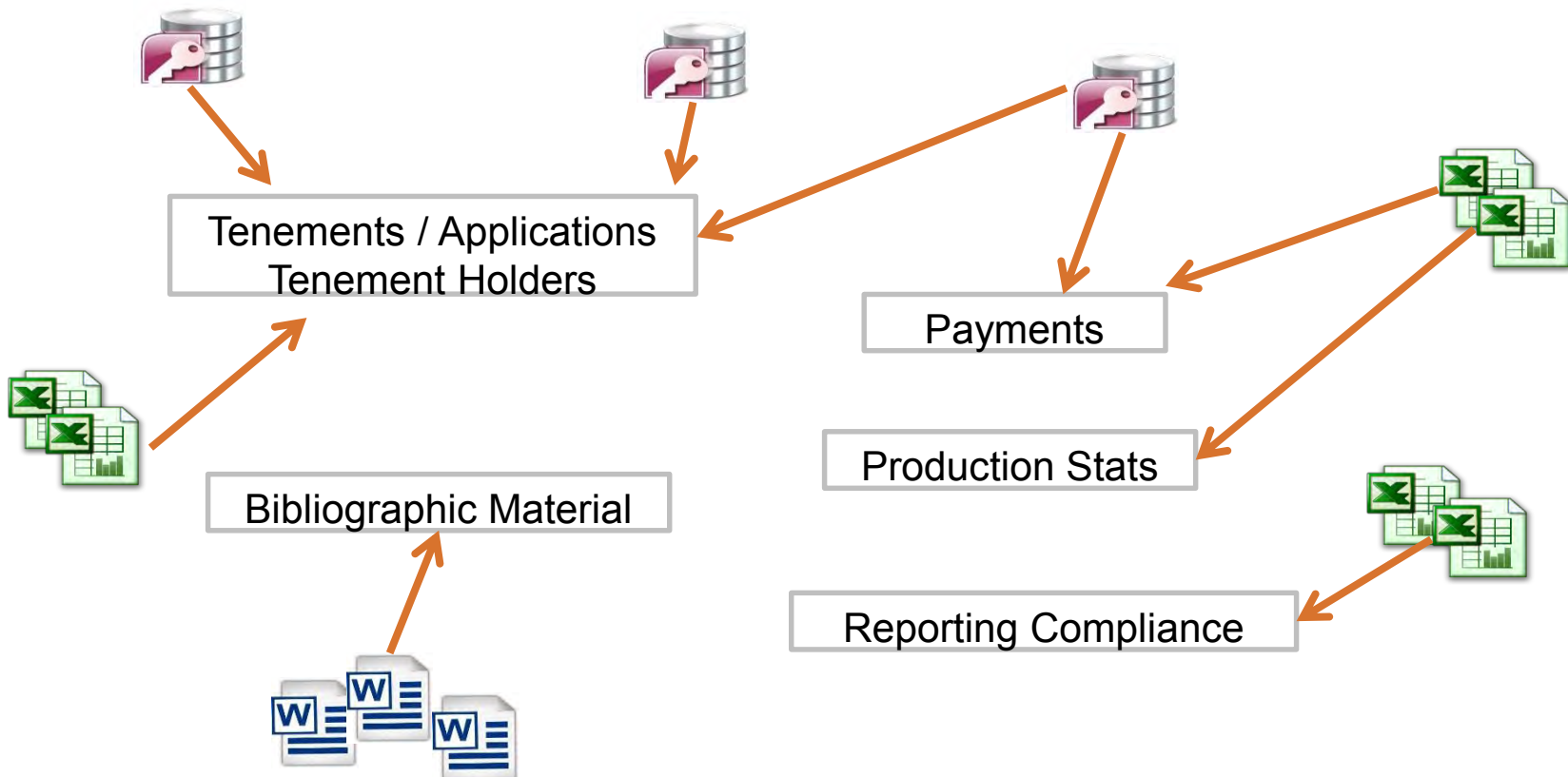
Challenges during the development of Flexicadastre

- **Additional Work Load to normal duties**
 - Reorganising staff as back up to support development of flexicadastre.
- **Resistance to change e.g. common work practice verse flexicadastre**
 - Continuous training (incentives , quiz with prize)



Challenges during the development of Flexicadastre

- Different Data Capture Sources/Methods



Challenges during the development of Flexicadastre

- Centralised Data Capture Tool-This Transition Database has greatly aided in Data validation & capture
- Preview of Data Entry in Flexicadastre

The screenshot displays the 'License Capture Tool' interface. At the top, there is a ribbon menu with tabs for 'File', 'Home', 'Create', 'External Data', 'Database Tools', and 'Datashheet'. Below the ribbon is a toolbar with various icons for file operations, data manipulation, and text formatting. The main area is titled 'Data Capture Wizard' and contains a 'Main Menu' section with a table of data. The table has columns for Code, Tenement Type, Tenement Status, Approval Status, Appl_date, and Grant_date. The table is currently displaying 35 records, with the 15th record (LMP 46) highlighted. To the right of the table, there are several buttons for data management: 'Add New', 'Edit', 'Delete', 'Tenements Verified', and 'Licence list'. Below these buttons is a section titled 'COMPARE GIS/TOOL' with several buttons for comparison: 'Compare Status', 'Compare Application date', 'Compare Grant date', 'Compare Expiry date', 'Compare last Renewal date', 'Compare Locality', and 'Compare Company Addresses'. At the bottom of the window, there is a status bar showing 'Records: 8 of 2695' and a search bar.

| Code | Tenement Type | Tenement Status | Approval Status | Appl_date | Grant_date |
|--------|---------------------------|-----------------------|-----------------|------------|------------|
| ME 83 | Mining Easement | Active | | 13/12/2006 | 18/02/2008 |
| LMP 49 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| SML 8 | Special Mining Lease | Active | | 4/06/1999 | 26/07/2000 |
| LMP 42 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 43 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 44 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 45 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 46 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 48 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| ME 75 | Mining Easement | Active | | 4/06/1999 | 26/07/2000 |
| ME 77 | Mining Easement | Active | | 4/06/1999 | 26/07/2000 |
| ME 78 | Mining Easement | Active | | 4/06/1999 | 26/07/2000 |
| ME 79 | Mining Easement | Active | | 4/06/1999 | 26/07/2000 |
| ME 76 | Mining Easement | Active | | 4/06/1999 | 26/07/2000 |
| LMP 47 | Lease for Mining Purposes | Active | | 4/06/1999 | 26/07/2000 |
| LMP 87 | Lease for Mining Purposes | Active | | 16/08/2012 | 10/10/2013 |
| LMP 88 | Lease for Mining Purposes | Active | | 16/08/2012 | 10/10/2013 |
| LMP 86 | Lease for Mining Purposes | Application Withdrawn | | 23/04/2012 | 20/05/2013 |
| LMP 38 | Lease for Mining Purposes | Active | | 14/07/1997 | 18/10/1997 |
| LMP 39 | Lease for Mining Purposes | Active | | 14/07/1997 | 18/10/1997 |
| LMP 40 | Lease for Mining Purposes | Active | | 14/07/1997 | 18/10/1997 |
| ME 73 | Mining Easement | Active | | 19/06/1995 | 21/07/1995 |
| ME 72 | Mining Easement | Active | | 19/06/1995 | 21/07/1995 |
| ME 71 | Mining Easement | Active | | 19/06/1995 | 21/07/1995 |
| LMP 35 | Lease for Mining Purposes | Active | | 23/12/1994 | 21/07/1995 |

Next steps with Flexicadastre

- Roles training from development through to implementation
- Incentives
- Online portal application option
- Legislative review to accommodate



Overall

- Better management and administration of mineral tenements ; and
- Improved distribution of information via a web portal hence, better transparency and attraction of investment



Em tasol na tenku

