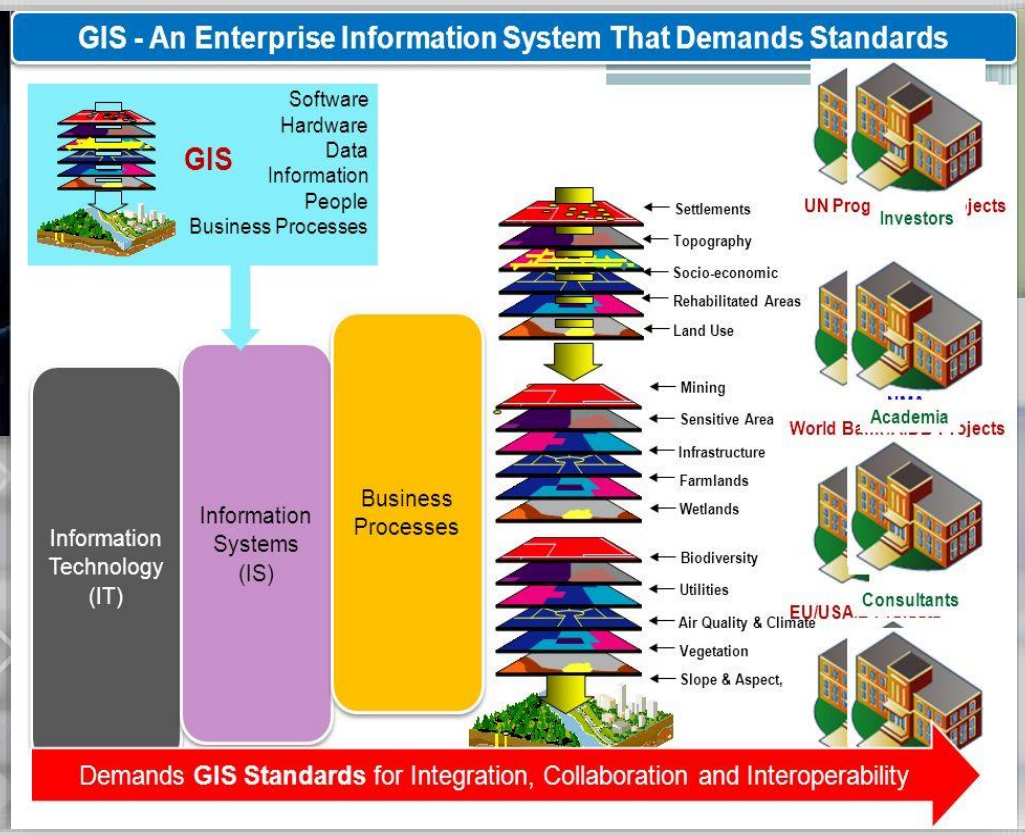
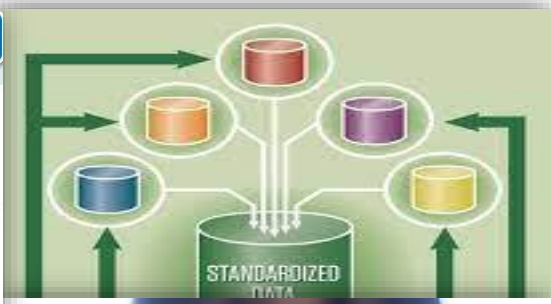
DATA STANDARDS UPDATE

FIJI GEOSPATIAL INFORMATION MANAGEMENT COUNCIL

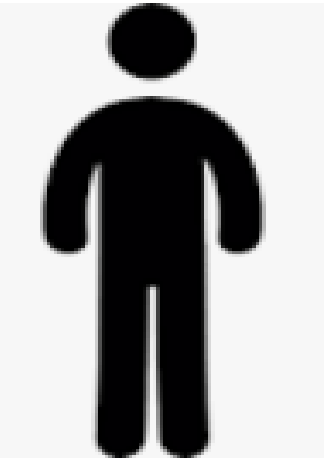




MANAGEMENT

EFFECTIVE
EFFICIENT
CORRECT and
TIMELY USE

RESOURCES



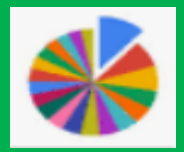
ADDED VALUE

- We don't own the material
- When we bring it back it should be better

CURRENT WORK PLAN

SPATIAL DATA INVENTORY FOR FIJI

IDENTIFICATION OF FUNDAMENTAL DATA THEMES



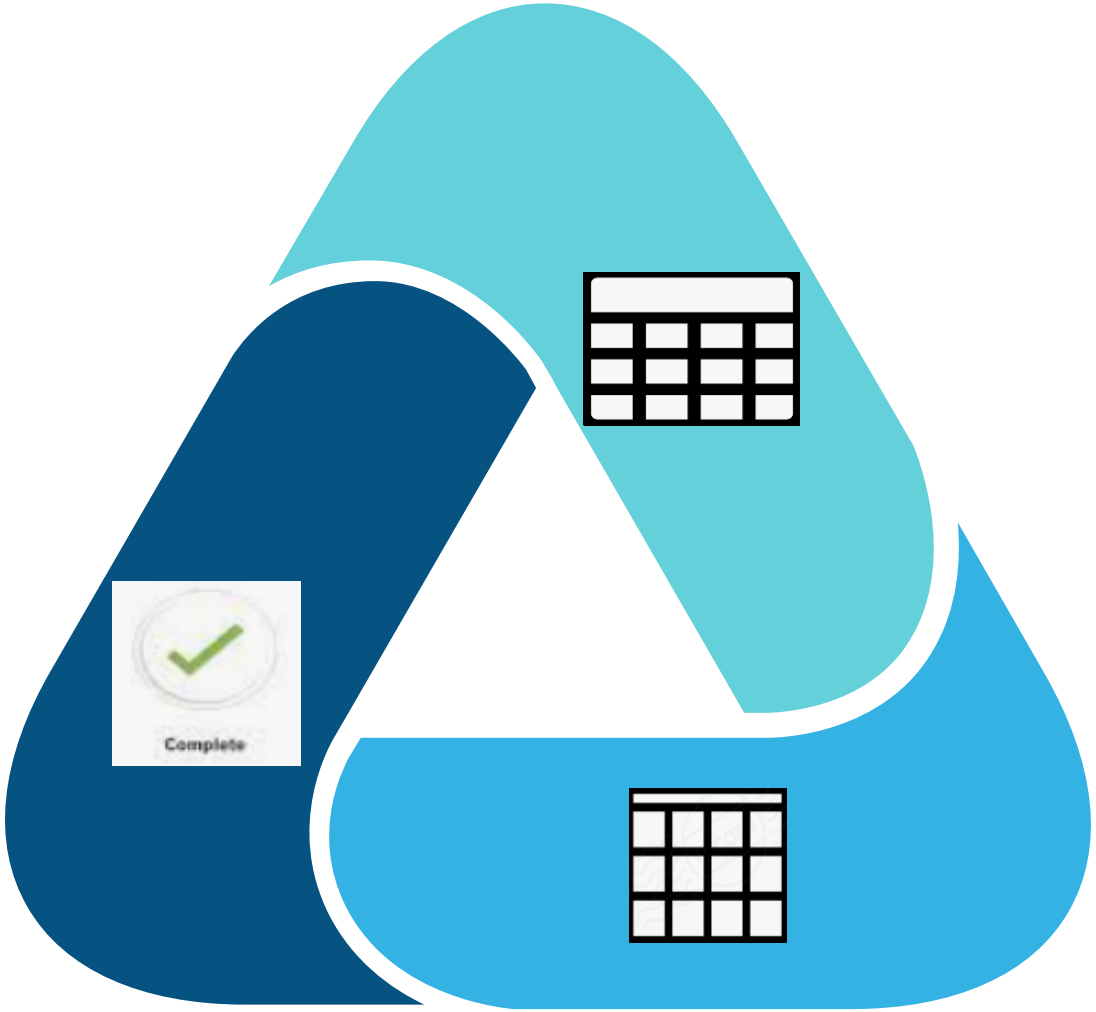
STANDARDS INVENTORY FOR DATA CUSTODIAN

FINDINGS

RECOMMENDATION

IMPLEMENTATION

1. SPATIAL DATA INVENTORY



1 TABLE

- Showing the various datasets
- Captured and shared with the Data Hub
- and the custodianship information.

2 TABLE

- Reflects fundamental spatial datasets and
- All the feature classes assigned to the relevant data themes adopted by FGIMC

3 STATUS

Completed – JUNE 2021

FIJI GEOSPATIAL DATASET REGISTER

COUNTRY ACTION PLAN IMPLEMENTATION

DATASET	FEATURE CLASSES	GEOMETRY	AGENCY	METADATA	FUNDAMENTAL DATA THEMES
1. ADMINISTRATION	Division	Polygon	MOIA	ANZLIC	Functional Areas
	Province	Polygon	MOIA	ANZLIC	Functional Areas
	District	Polygon	MOIA	ANZLIC	Functional Areas
2. AERIAL SURVEY	AAM 1994 Flight Lines	Line	MLMR	ANZLIC	Orthoimagery
	AAM 1994 Photo Points	Point	MLMR	ANZLIC	Orthoimagery
	1978 Flight Lines	Line	MLMR	ANZLIC	Orthoimagery
	1985 Flight Lines	Line	MLMR	ANZLIC	Orthoimagery
	2009 Flight Lines	Line	MLMR	ANZLIC	Orthoimagery
	2010 Flight Lines	Line	MLMR	ANZLIC	Orthoimagery
	1978 Photo	Point	MLMR	ANZLIC	Orthoimagery

2.

IDENTIFICATION OF

FUNDAMENTAL

DATA THEMES

FUNDAMENTAL DATA

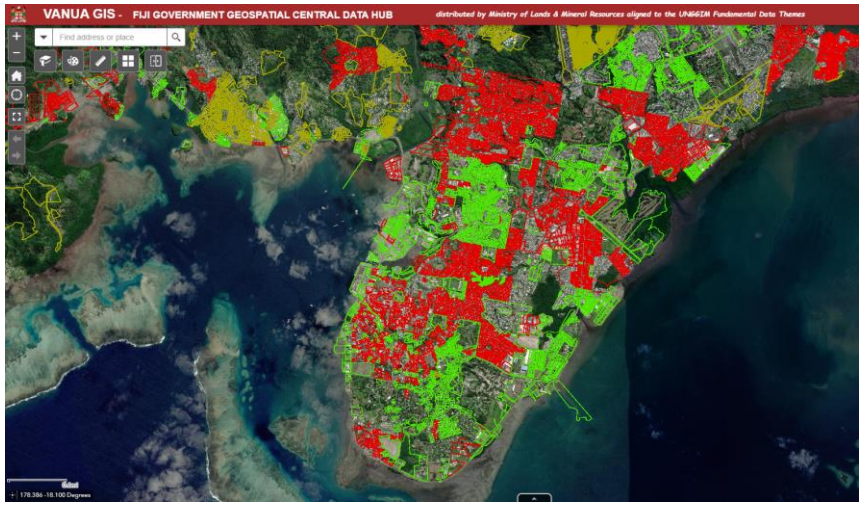
MLMR Implemented and published to VanuaGIS

METADATA

Data custodian provided and published on SDE

STANDARD

Consultation with ANZLIC Secretariat is in progress



	NLC Qoliqoli Boundary	Polygon	MOIA	ANZLIC	Land Parcels
11. FOREST COVER	Forest Cover 2012	Polygon	MOF	ANZLIC	Land Cover and Land Use
	Forest Cover 2016	Polygon	MOF	ANZLIC	Land Cover and Land Use
	Forest Cover 2000	Polygon	GFW	ANZLIC	Land Cover and Land Use
	Forest Gain 2001-2017	Polygon	GFW	ANZLIC	Land Cover and Land Use
	Forest Loss 2001-2017	Polygon	GFW	ANZLIC	Land Cover and Land Use
12. GEOLOGY	Faults	Line	MLMR	ANZLIC	Geology and Soil
	Folding Lines	Line	MLMR	ANZLIC	Geology and Soil
	Folding Points	Point	MLMR	ANZLIC	Geology and Soil
	Geology	Polygon	MLMR	ANZLIC	Geology and Soil
	Ground Surface	Polygon	NZDF	ANZLIC	Geology and Soil
	Soil	Polygon	MOA	ANZLIC	Geology and Soil
	Strike Dip	Point	MLMR	ANZLIC	Geology and Soil
13. HARMONISATION	Completed Files	Polygon	MLMR	ANZLIC	Land Parcels
14. HERITAGE AND ARTS SITES	Heritage Built	Point	MEHA	ANZLIC	Physical Infrastructure
	Museum	Point	MEHA	ANZLIC	Physical Infrastructure
	Performing Arts Venue	Polygon	MEHA	ANZLIC	Physical Infrastructure
	Social Spaces	Polygon	MEHA	ANZLIC	Physical Infrastructure
15. HYDROGRAPHY	Beach	Point	NZDF	ANZLIC	Geographical Names

2. IDENTIFICATION OF FUNDAMENTAL DATA THEMES

3. STANDARDS INVENTORY FOR DATA CUSTODIANS

DATA THEME
1. BUILDINGS & SETTLEMENTS
2. ELEVATION & DEPTH
3. FUNCTIONAL AREAS
4. GEOGRAPHICAL NAMES
5. GEOLOGY & SOILS
6. LAND COVER/ LAND USE
7. LAND PARCELS
8. ORTHOIMAGERY
9. PHYSICAL INFRASTRUCTURE
10. POPULATION DISTRIBUTION
11. TRANSPORT NETWORKS
12. WATER

- Standards was compiled using the following format :
  - Theme Sponsor
  - Committee/Affiliated Organization
  - Description
  - Datasets & Feature Classes
  - Standards Used
    - Geometry
    - Attributes
    - Symbology
    - Dissemination
    - Metadata
    - Surveying Equipment's
    - Processing Software's
    - Mapping Software's

3. STANDARDS INVENTORY FOR DATA CUSTODIANS

TRANSPORT DATA THEME

1. **Theme Sponsor**

The roads network is captured and distributed by the following data custodians:

- Ministry of Lands and Mineral Resources (MLMR)
- Fiji Roads Authorities (FRA)
- Civil Aviation Authorities (CAAF)
- Maritime Safety Authority of Fiji (MSAF)

2. **Committee/Affiliated Organizations**
   - International Federation of Surveyors (FIG)
   - European Petroleum Survey Group (EPSG)
   - United Nations Committee of Experts on Global Geospatial Information Management (UNGGIM)
   - ISO Geodetic Registry (ISOGR)
   - ISO Technical Committee (TC 211)
   - Open Geospatial Consortium (OGC)
   - International Association of Oil & Gas Producers (IOGP)
   - Pacific Geospatial and Surveying Council (PGSC)
   - Fiji Institute of Surveyors (FIS)
   - Fiji Geospatial Information Management Council (FGIMC)
   - National Mapping Committee (dissolved)
3. **Description**

The transportation network provides the link for moving people, goods, and services from one location to another in the form of land, sea, and air transport. Fiji is comprised of two major islands whereby land transport is the most common form of transport whereas the 300 small islands is mostly accommodated with maritime or air transport. Transport datasets is crucial to facilitate the business sector and ensures the services is well distributed across Fiji.

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Feature Classes	Description
1. Topographic Roads	These features were mapped during the National Mapping Program that initiated in 1986 and was completed in 1996 using aerial photographs by Lands Department. The data is represented in line vector format and shows the road names, hierarchy, and length.
2. Surveyed Roads/Roads Realignment	The surveyed roads are basically land parcels dedicated for roads, road reserves and road widening. The roads are represented in polygon for the purpose of area demarcation and shows other parcel information derived from the survey plans.
3. Airport	These features are in vector point format and shows location, operator, type of airdrome and service areas. The data is approved under the Civil Aviation Reform Act – 1999 and is mapped by MLMR.
4. Bridges/Jetties/Roads Assets	The bridge dataset is mapped and maintained by FRA however the jetties are looked after by MSAF. It is mapped in point format and shows the location, adjoining routes, priority, crossing type and status.
5. Tramlines	Tramline data is the property of MLMR which is derived from the National Topographic Map 1986. The data is in line format and only shows the locations and length.

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6. **Standards & Specifications**

Description	ISO Standard	Supporting Legislation/Act
1. Geometry	i. **Surveyed Roads/Realignment** • Notice to Surveyors (NTS) • Fiji Surveyors Act 1969 • Fiji Surveyors Act Amendment 2022 • ISO 6709:2022 – Standard Representation of Geographic Points Location by Coordinates (ISO/TC 211) • ISO 19101 – 1:2014 – Geographic Information Reference Model Part 1 Fundamentals • ISO 19101 – 2: 2018 – Geographic Information Reference Model Part 2 Imagery • ISO 19103: 2015 – Geographic Information – Conceptual Schema Language • **Topographic Roads** • Specifications for Topographic Map Series	• New Zealand Mapping Services • Royal Australian Survey Corps • National Mapping Council of Australia
2. Attributes	• Roads Name conforms with the Fiji Roads Authority Road Naming Policy • The certification for Aerodrome Operators is certified under the Civil Aviation Reform Act – 1999	• Fiji Roads Decree 2012 • *None stated for bridges/jetties*
3. Symbology	• Specifications for Topographic Map Series • ISO 19117 – Symbology	

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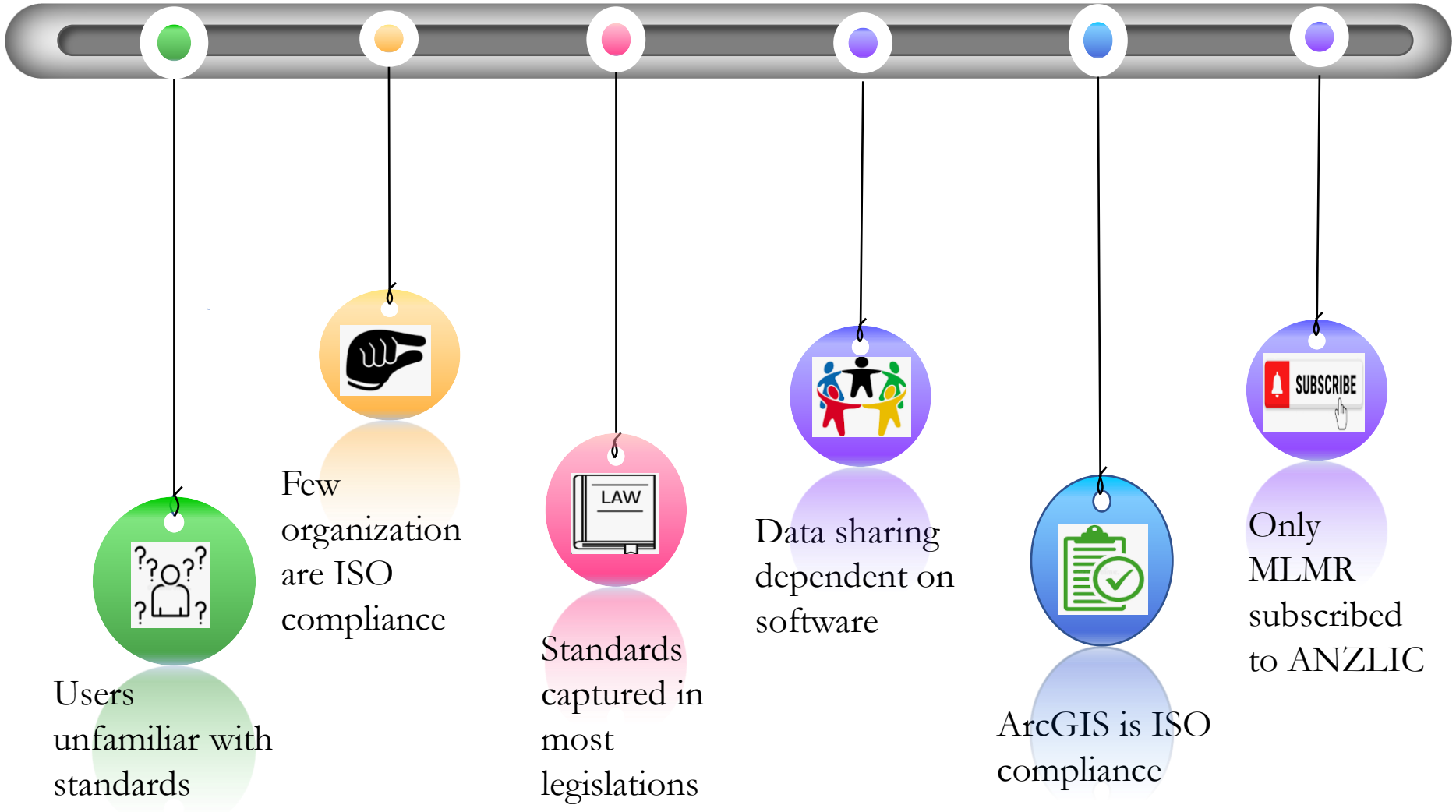
	• ISO/IEC 2382 – 15 & ISO 19145 – Format	
5. Metadata	• AS/NZS ISO 19115 – ANZLIC Metadata Profile Version 1.1	
6. Surveying Equipment's	•	
7. Processing Software's	**Arc GIS** ▪ ISO 19131: 2008 Geographic Information – Data product specifications ▪ ISO 19133 – Road Network ▪ ISO 19107 – Roads Topology ▪ ISO 19123 – Vector ▪ ISO 19109 – Geographic Data ▪ IS0 19111 – Geographic Coordinate System	

4. FINDINGS



Users unfamiliar with standards

Few organization are ISO compliance

Standards captured in most legislations

Data sharing dependent on software

ArcGIS is ISO compliance

Only MLMR subscribed to ANZLIC

RECOMMENDATION

RESPONSIBILITIES

Data Custodian to compile and update their datasets standards

DATA CUSTODIAN

Awareness of existing standards

ANZLIC MEMBERSHIP

PGSC to request for ANZLIC partnership

METADATA

All updates will be recorded with metadata in the Data Hub

DATASETS

Record and Publish all historical data for comparison purposes

UPDATE

MLMR to continue updating the data inventory

CONCLUSION