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GeoSmart Asia 2015

The importance of Geospatial Data Standardisation in GIS Corporate Database

30 September 2015

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Presentation Outline

1. Backgrounds
2. Challenges of Standardisations
3. Determine Geospatial Data Standard
4. Criteria on Standardisations
5. Discovery
6. Conclusion

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Life of Field (LoF) Upstream Activities



Geospatial Data

Seismic



Well



Pipeline



Platform



Production



Challenges of Standardisations

- Different vintages from several vendors
- Multiple discipline data types – dependences with data source activities
- Data formats, Native data – data identify in locally format and not in universal format
- Metadata – data about data
- Unknown data quality – completeness and integrity

Standardisations Definition

- The process of establishing and applying standards.
- Standardisation is defined by the International Organisation for Standardisation (ISO) as “the process of formulating and applying rules for an orderly approach to a specific activity for the benefit and with the cooperation of all concerned, and in particular for the promotion of optimum overall economy, taking due account of functional conditions and safety requirements”.

Article from International Organization for Standardization (ISO)

Accredited Bodies in Geospatial Industry

IMCA – The International Marine Contractors Association

IOGP – International Association of Oil & Gas Producers

SIRIM – Standards and Industrial Research Institute of Malaysia

ISO – International organization for Standardization

PPDM – The Professional Petroleum Data Management Association

OGC – Open Geospatial Consortium

GSDI – Global Spatial Data Infrastructure Association

FGDC – Federal Geographic data Committee

UN-GGIM – United Nations Committee of Expert on Global Geospatial Information Management

MyGDI – Malaysian Geospatial Data Infrastructure

Approach of Geospatial Data Standard

- Identify requirements or organisation needs
- Check with industry practices
- Develop business workflows
- Implement the standard
- Update requirements



Criteria on Standardisations

Defining main elements in Geospatial Data Standards

- Connection – data link
How will two systems physically connected?
- Encoding – data format
What format will be used to represent the data elements?
- Structure – data model mapping
What entities will be allowed, what attributes will be mandatory?
- Enumerations - reference value
Which attributes have limitations or potential values?
- Conventions – business rules
There are always inherent usually undocumented relationship between two elements
- Control – house keeping
One essential element that is often neglected is that of controlling the process

Article from "The Management of Oil Industry Exploration & Production Data by Steve Hawtin"

PETRONAS Standard and References

PPGUA – PETRONAS Procedures and Guideline for Upstream Activities

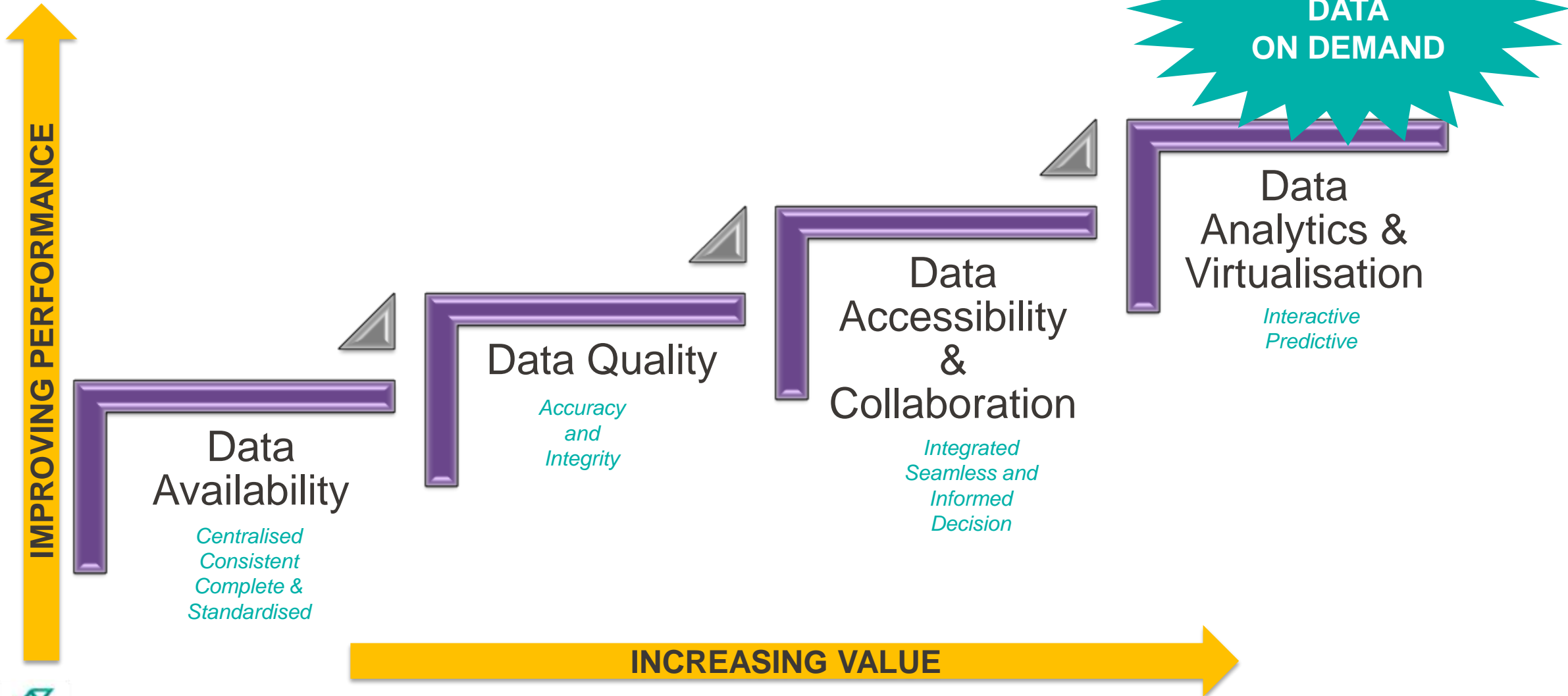
PTS – PETRONAS Technical Standard

Technical Data Frameworks

Technical Data Guideline & Workflow



Outcome of Standardisations



Conclusion

- Reduce cost in term of man-hours to manage data
- Data available and readiness for the business
- Generate high value on data quality
- Provide trusted data to users
- Accelerate process on data update and easy access
- Simplify process and easy to understand by users
- Seamless data interoperability with others repository & database



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Thank you