Spatial Data Warehouse
SDW/ADP Stakeholder Consultations

November 17, 2014
Radisson Hotel and Conference Centre

1. What is the impact of Open Government and Open Data on your organization?

Current State	Desired Future State	Roles
- There is a lack of understanding about what open data is, but it could be useful	- Better understanding of open Gov + the data available - Standards - Policy - Integrity - Sustain - From authoritative sources	- Outreach by gov't

Notes:

- Taxpayer – data, data should be open and free
- Liability impacted, professional product, open data accuracy specification is transparent (1)
- Concern for the non-spatially aware
- "free"
    - How to make money as a pro?
    - Taxpayers can't pay for everything
- Consistent access to open data
- Needs to have prov/govt guidance to mandate open data stds/policies/integrity (4)
- Needs to be managed (properly)
- Free & accessible – web portals (1)
- Data sources should be maintained e.g. municipal, prov, industrial etc. (1)
- Sustainable (funding) model in order to update data
- Open data – fused together into useful data service
- Authoritative data becomes trusted data (1)
    - if gathered in collective manner, it becomes reliable and not considered untrusted
- helps ppl be more productive, collaborate, innovate, reduces overall costs (1)
- $$$$ ---> $$
- Open data source - $$?? less cost?
- Evens the playing field for innovation + innovated ppl (1)

2. How can we improve the DIDs product to meet your business needs?

Current State	Desired Future State	Roles
- Crown land only - Updated daily shapefile + monthly DWG - Format Shapefile + DWG - Mostly theoretical, few as-builts - Loss of spatial accuracry at times when tied into existing plans - Limited DISP types - Electronic applications - Does not go back to correct old data - AER/SRD split of Apps – slowed process - R/W & Easement/Road Allowance not continuous - Link to governing plan not available - Non-existent dispositions - Dispositions exist in life but not in DIDs	- More regular DWG updates - Keep spatial accuracy - All DISP types (1) - Private land - Other format types like file geodatabase, Web map (2) - As-builts (4) - Additional attributes included from surveyors (e.g. survey company) - More accurate data available current reliable (2) - Integrate better - Allow continuous line/polygon for analysis (1) - Be able to hyperlink to plan on file (3) - Include private lands DIDS - Human footprint instantly updated and accurate - Streaming DIDS layer – accessibility - Include temporary/incidental activities	- Disposition holders submit accurate data - SDW provides updates and delivery - SDW can QC w/ other data sources like remote sensing - Forestry/energy industry consultant
Notes:		

3. How important is a Private Lands DIDs to your organization?

Current State	Desired Future State	Roles
- Private DIDs non-existent - Spending time creating private land "DIDs" many agencies doing it - Duplicate efforts, no reference for private lands - Crown DIDs is one source, consistent - Lots of "holes" without private DIDs - Digging into old plans to create/confirm private DIDs or call people - Private – no timeframe to register/prepare sketch/plan unlike crown DIDs - Sometimes do not need to register! - critical	- Contiguous dataset, same standard as Crown DIDs (1) - Process, policy require plans to be submitted for private DIDs (surveyors doing it for other plans already) - Compiled provincial dataset – "timely" - Water wells, residences as other datasets to include - Geotechnical surveys, etc.	

Notes:

- What is private lands DIDs?
- Critical, important
- Concerns:
    - Accurate (spatial)
    - Owner's name
    - Up-to-date
    - Accessible
    - Coverage completeness
    - Cost of acquiring
- Accurate as-built location of buried facilities, abandoned fac. (2)
- Crowdsourcing – have the public, private indvids identify erroneous parcels, data, etc.
- Freehold minerals and its tax
- Future infrastructure planning
- Continuity of data (1)
- Protection & conservation – environment and restrictions

- Policy review and integration
- Inform and possibly reduce land use impact and improve land use planning (reduce fragmentation) (2)
- Increase in transparency (1)
- Need an accurate as-built public database of all buried infrastructure
- One-stop shopping for data
- Get rid of gov't dept. silos
- Not vital for forest industry

4. What is your vision for a provincial wide road and addressing network?

Current State	Desired Future State	Roles
- Only aware of dataset from NRN - TID is more thorough - Disjointed data based on regions - Access data w/ lease ownership available only in a polygon (DIDs) format - Minimal for forestry - Municipal gov is the authority	- Hwy's UAR's, PAR's datasets - Control sections in dataset - AT ranking List provided as a map rather than an Excel list - Available as a WFS would be a dream - Province wide standardized data is useful - Reliable linear data sets for provincial access with ownership info essentially DIDs access data in a linear format rather than polys. - Standard addressing code - Common data structure	- Consultant in forest/energy industries - Opportunity for sharing

Notes:

- Standard addressing node/system (1)
- Centralized address nodes
- Opportunity for shared data w/orgs that already have it & want to share it
- Uses: emerg. Response, utilities, endless uses (1)
- Make data open + accessible – a public good

- Common data structure
- Municipalities all authorities/ source – need to be mandated to share
- Latitude/longitude is main component that is missing from existing data + titles structures
- Updates need to be current + not on annual basis – related to safety issues (e.g. emergency dispatches) (4)
- Include development staged addressing – diff stages of dev. Need to be tracked
- Helpful for emergency responses – e.g. flooding
    - Up to date
    - Address nodes
    - Help for tracking where emerg. response has already been
- 911 – source for them
- Give all address node unique ID w/lat/long
- Rural addressing issues – standardize (1)
- Compliment roads system also
- Create civic address registry (1)
- Consistency in addressing province-wide? In rural & cities (3)
    - Across all platforms & mapping services (google, OSM, etc.)
    - Crowd sourcing
- Access to Alb. Transportation data – TIMS is useless
- Consistent attr. and road geometry
- Clearance restriction hwy's high load usage (1)
- Control section hwys
- Bridges & culverts
- Railway crossings
- Railways & high load usage
- Road geometry attr. for linear ref.

5. How can we better support your business processes with Cadastral and Titles mapping?

Current State	Desired Future State	Roles
- Cadastral mapping used in CAD causes immense headache when transferred to GIS - Often basemapping is performed in CAD	- Cadastral to be provided as shapefiles - Input GIS format means output to GIS is less painful	

Notes:

- Different file format – updated format
- CAD files need to have projection file (3)

- CAD format is problematic – many clients desire shapefile format
- Also provide web mapping service for updating (2)
- Keep update everyday via simple source (WMS) – always connected to current version (1)
- WMS/WFS of CAD updates (2)
- Idea of dynamic web mapping service (4) – store it once, share many times
- Ownership info accessible & open
- Tentative mapping of development stages (2)
- Customer may only want recent changes
- Reduce cost – esp. under subscription
- Confusion over products for CAD vs. GIS (1)
    - when ordering
    - over use in mapping (shp)
    - remove cadastral? (1)
- Edm, Calgary integrated to provincial data as well (3)
- Data (lines and attr) available + extractable from webmapping interface (1)
- Titles mapping attr. detail close to DIDs +
- Legal interest as an attr in the Title

6. How should spatial data be delivered?

Current State	Desired Future State	Roles

- Independently
- AltaLIS
- Gov't department
- Member driven
- Archived data w/ no access
- Format specific
- Some things you want don't exist
- Some things do exist but are difficult to find or don't allow access (1)
- Many different providers/sources formats
- Downloads vs. web based
- Spending lots of time finding this so you can do your work vs. doing the
	- On demand (2)
	- Up-to-date (2)
	- Standard time frames
	- Complete with Metadata (1)
	- One stop shop or broker (3)
	- Be able to link across AB, interprovincial national
	- Open language
	- Google earth-like access
	  - Speed (1)
	  - Index
	  - Searchable (2)
	  - Historical (2)
	  - Real-time
	  - Catalogue
	- Advanced find/search
	- Incentive for companies to submit data (6)
	- Open data (3)
	- Trustable data (2)
	- Data that covers a larger portion of the promise vs
		- WMS
		- WFS
		- Gov't
		- Industry
		- CSA standard for mapping

work - Monthly downloads - Manual checks on the AltaLIS website - Shapefiles are archaic! But GDB's are closed - Online download	very small data sets - Viewable vs. usable - Push-updates so there is no need for my org's own resource to fetch/seek updates manually - Data as a service – WMS, WFS - Streaming	

Notes:

- WMS/WFS dynamic (real time) common building block data (4)
- Data governance (1)
    - Defined roles/responsibilities (1)
    - Stewardship
    - Standards
    - Data architecture
    - METADATA
    - Reduce duplication – definitive source (1)
    - Review distribution models
    - Application architecture (SOA)
    - Interoperability – application neutral (1)
    - Delivery infrastructure
    - Multi-temporal support
    - Information products (results)
    - Open source compliants
    - Support for large volumes (1)
    - Geoprocessing services (2) – geometry services
    - Cloud technology

7. What does Human Footprint mean to you and your organization?

Current State	Desired Future State	Roles
- Datasets that exist are theoretical - Interpret from stereo imagery - Surface disturbances, any time dirt/vegetation is disturbed - Timeline is critical - No enforcement currently exists? - "proposal plan" is good; "as-built" is best	- Different companies/Gov to share - Knowledge of datasets should be shared - Spatial representation of footprint by company that disturbed, and other METADATA (4)	- Legislation needs to change - Stakeholders to submit data - SDW to collect, standardize and manage data - Pre-classfied - Up-to-date

- Currently supplementing w/other datasets (imagery/etc.)
- AER cares, SRD doesn't …
- Ducks unlimited, utility companies
- Data exists, but not open
- Migratory patterns
- Habitat areas
  o Gathering info is difficult
  o Need info to make proper analysis
  o Industry opposed to sharing (e.g. seismic)
- Current datasets are theoretical
- No provincial dataset
- Many layers of data from many sources
- Follow rules
- Know how much you can get resources back
- How much is allowable
	- As-built by company/private citizen (1)
	- Crown/FREEHOLD needed
	- One stop shop (5)
	- Use 2D not 3D
	- A definitive layer that is constantly update
	- Accuracy
	- Accurate
	- Current
	- Updated
	- Change detection
	- Central collected + maintained
	- Land identified	

Notes:

- Impact on landscape for env'l, wildlife reasons land cover mapping (1)
- GIS modeling as component for disturbance
- Accuracy + current status/updates (1)
- Changes detection (1)
- Utilities – infrastructure already in place – for planning
- Local govt – assessments – taxes etc.
- e.g. use of drones to detect changes during disasters – insurance companies
- forestry
  - bring to orig. state
  - how much you can get it back
  - how much is allowable
  - reasonable extraction
- risk mitigation
- central place where updates can be collected & maintained
- pre-classified (2) – agric. – well sites – e.g. urban – pipelines
- combo of imagery + vector data
- openly accessible
- hosted mapping service linked to it
- before embarking on a new project, find out what exists first
- establish a baseline

- common definitions (4)
- understanding application is critical (1)
- complicated – permanent vs. temporal
- processes and sources to derive disturbance importance (scale)
- must be measurable, repeatable, and defensible – based on sound science
- needs update (maintenance frequency) (1)
- vital – forest industry depends on sustainable management
- use to calculate volume (timber) drain, operational accessibility, loss of forested land base

8. In your view, what authoritative datasets (public or private) provide the greatest value to Albertans?

Current State	Desired Future State	Roles

- transportation – primary & secondary highways – good quality
- National Road Network
  o Info comes from transp.
  o Municipalities submit to transp. & then sent to NRN
  o Info does not always come from source
- DID's
  o Historical data
  o Clean up not done until renewals or amendments
- Cadastral/Titles
- Metis land
- Federal land cadastral
- City of Calgary
- City of Edmonton
- Most value to industry – title mapping
- Most value to Albertans – utilities data, proposed & existing
- Not much is authoritative
	- Gov't lead to set standard for all road data in AB
	- Get data from source
	Need all (Cadastral/Titles
	Metis land
	Federal land cadastral
	City of Calgary
	City of Edmonton) for full picture of Alberta (2)
	- Watercourses
	- Wetlands
	- Roads
	- State of linear disturbances (overgrown, trails, road class, etc.)
		- Collaboration
		- Can be determined through remote sensing

Notes:		

- Authoritative data does not equal quality data
- Roads/addresses (1)
- Cadastral
- Titles
- DIDs
- Resource tenure
- Weather
- Powerlines/pipelines
- Trails/recreation areas
- Disaster warning
- Census

9. Industry constantly creates data. Is there data that you'd like to access on a provincial wide basis?

Current State	Desired Future State	Roles
- No concrete prov. data sets beyond admin layers - Proprietary – can't access - Government – where do you find it? - Telus – proprietary - Fortis – proprietary - Utilities – proprietary, some shared - Emergency access to data - Rural addressing - Aerial photography/ satellite imagery - Older photography - Archival data (not accessible format) - Proprietary - GoA - Telus - Fortis - Atco - Edmonton - Calgary - No confirmation of construction w/out	- Vegetation inventories (3) - Resilience data - Water wells - Human footprint data (4) - All data sets described under directive 56 (1) - Wildlife data (e.g. caribou) - Lidar/DEM15 - Include federal lands data - Easily accessible - Affordable - Communicated - Open - Construction confirmation of footprint/DIDs - Show theoretical (planned) vs actual (constructed/cleaved)	- Gov't - Private sector - Open data portals - Coordinator or broker - Gov't to lead policy standards protocols & budget commitment - Major implications for major forest licenses

comment aerial pho or other raster format data		

Notes:

- SDW has focused on GoA
- Leverage SDW board members to incorporate industrial data (6)
- Priority data
    - Pipelines + related infra
    - Railway – sidings, crossings
    - Municipal dev. Plans
    - Zoning
    - Land use
    - Transmission lines
    - Municipal & rural addressing
- Tenure – who has right to what?
    - Definitive authorities?
- Monitoring data (mostly GoA but some industry) (3)
    - Air/water quality – emissions
    - Water licenses – usage
    - Invasives
    - Wildlife sensitivity
    - FWMIS/ACIMS
    - WAM – high res DEM
    - Highways – industry monitoring traffic patterns – industry roads
    - Call coverage
    - Flood coverage data
- In order of priority
    - Road network from A.T.
    - Wellsites & pipelines, powerlines & substns – utility data that is as spatially accurate as they have it (1)
    - Alberta air photos + historical imagery
    - Land dev. Zoning
    - FWMIS data
    - Geo Discover should be aware of SDW data + all others that lead to be dug up so provincial data are searchable in one portal (6)
- Industry – private corps or organization
- Utilities – where are they? – powerlines, cutlines, cutblocks, pipelines, access roads – e.g. forestry to access existing lines (3)
- Crown land vs. private land info (2)
- Addressing from province
- High res. Imagery or other imagery
- Topography info
- Water feature w/ good title info (1)
- DEMS (2)
- Lidar – cloud format: high res – gov't should own it and make open and accessible to all orgs (like New Brunswick)

- Footprint layer updated
- Underground infrastructure (3)
- Central repository
- Lard cover info
- Integration of Fed. Lands into prov. – e.g. First Nations