

BUSINESS ANALYTICS

UNDERSTANDING YOUR SPATIAL DATA

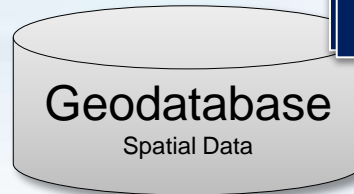
Joel Campbell
Avineon – VP Commercial Systems
GeoBuiz Summit
August 11, 2015?

- **Typical Geodatabase Implementation**
 - Lacks Historical Reporting
 - Manual Process for Creating and Sharing Reports
 - Limited Data Quality Governance
 - Qualitative Trending
 - Quantitative Trending
 - Disconnected Features
 - Data Changes across Versions
 - Lack of Integration with other Business Analysis



- **Counts | Length | Area**
 - By Type
 - By Region, Zip, District
 - By Circuit, Project, Work Order
 - By Size, Manufacturer
 - By Year Installed
 - By Status

Data Updates →



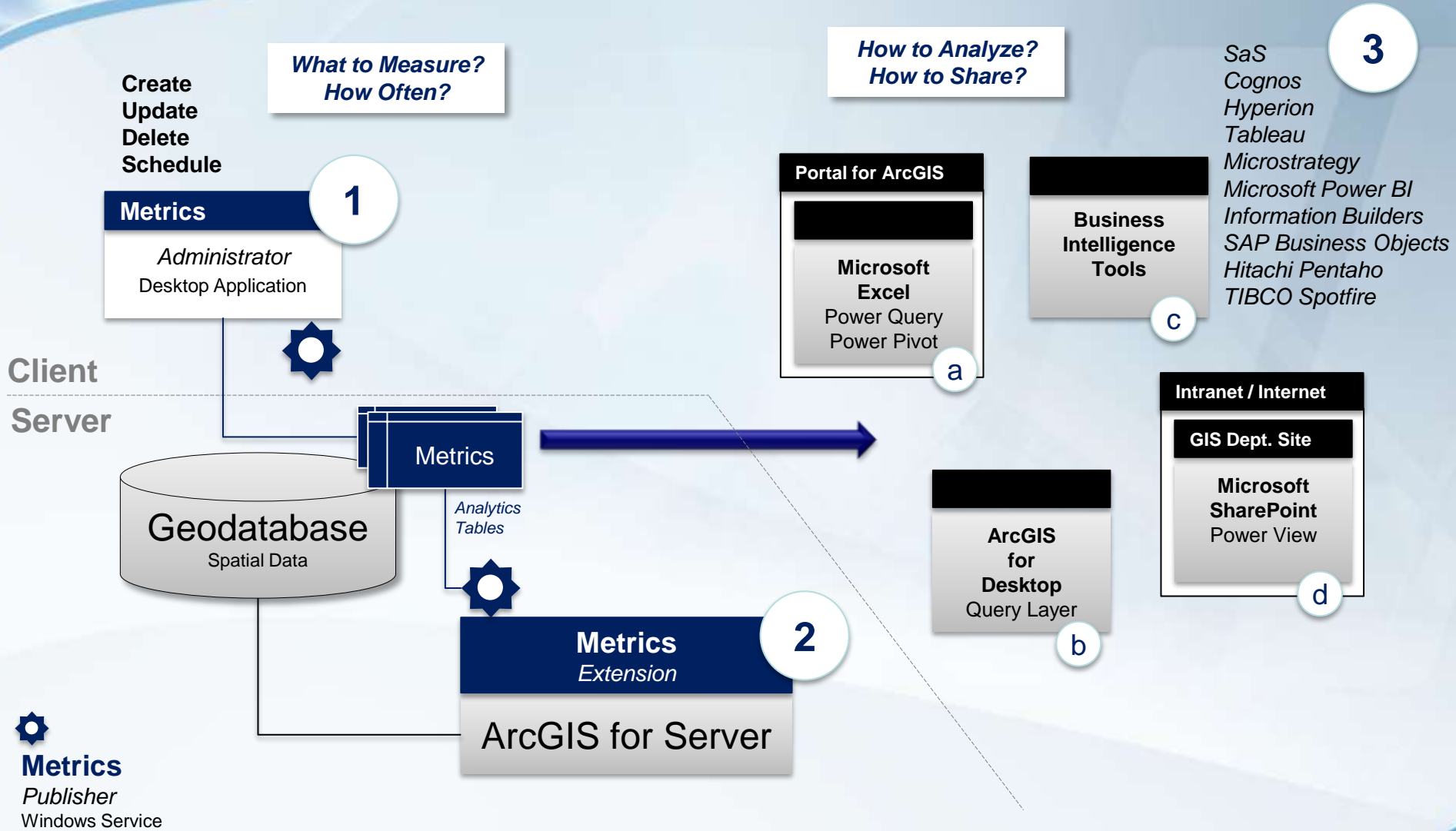
Analytics Tables

Metrics



**DAILY | WEEKLY | MONTHLY | QUARTERLY
DATA MONITORING AND TRENDING
OLAP Cubes**

Example Solution



Measure By Feature Class and Subtype

What did we have in the Geodatabase?
What do we have in the Geodatabase?

⏪
⏩
🔄

FILTER

By Subtype

- ▼ Featuretype (3)
- (All)
- esriGeometryPoint
- esriGeometryPolygon
- esriGeometryPolyline

▼ Featureclass (8 of 314)

- ELECTRIC.MVUnderGroun...
- ELECTRIC.MVUnderGroun...
- ELECTRIC.pinhistory
- ELECTRIC.plancdst
- ELECTRIC.planmncp
- ELECTRIC.planppln
- ELECTRIC.planzone
- ELECTRIC.Point
- ELECTRIC.Pole
- ELECTRIC.Polygon
- ELECTRIC.Polyline
- ELECTRIC.Schemes

Featureclass	Subtype	Count 1	Count 2	
ELECTRIC.Pole	LV Pole	6706	6718	
	MV Pole	19414	19262	
	Tower			
ELECTRIC.T_Joint	Insulation Joint		6	
	Issue		75	
	Outdoor Sealing			
	RSL		65	
	Sealing End Joint			
	Stop Joint		75	
	Straight Joint		11589	
	Transition Joint		174	
	ELECTRIC.Transformer	Distribution Transformer	16405	16405
	GAS.ControllableFitting	Bottom Out Standard		1337
Bottom Out Thin Wall			3	
Curb Valve Tee			68	
Flanged Tee			117	
Pin Off Tee			122	
Pressure Control - Unknown			4356	
Pressure Control Standard			3	
Pressure Control Thin Wall				
Punch Tee			678	
Service Tee			2800	
Spherical Tee				
Thin Wall - Unknown			7	
Top Half			81	
WATER.property_parcel_poly	Not Applicable		82079439	
WATER.public_streets	Not Applicable		1527615	
WATER.sewer_manholes	Not Applicable		32587	
WATER.water_distribution_mains	Not Applicable	1391200	1391200	

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Transformer Count By MFG Year

Is older infrastructure getting retired?



Xfmr By MFG Year and District

At	Metrics	Metricvalue										
		1952	1967	1968	1973	1974	1975	1976	1977	1978	1979	1980
7/8/2015 2:03:53 PM	AreaName1											
	District 1	0	1	0	0	1	4	13	2	3	16	10
	District 2	0	0	0	0	0	1	0	1	1	2	3
	District 3	0	0	0	0	0	1	0	0	0	0	1
	District 4	0	0	0	0	0	0	0	0	3	2	8
	District 5	0	0	0	0	0	0	0	0	0	0	1
	District 6	0	0	0	0	0	0	0	0	0	0	0
7/16/2015 11:05:20 AM	District 1	0	0	0	0	1	4	10	2	3	16	10
	District 2	0	0	0	0	0	1	0	1	1	2	3
	District 3	0	0	0	0	0	1	0	0	0	0	1
	District 4	0	0	0	0	0	0	0	0	3	2	8
	District 5	0	0	0	0	0	0	0	0	0	0	1
	District 6	0	0	0	0	0	0	0	0	0	0	0
	District 7	0	0	0	0	0	0	0	0	0	0	0

Parcel Count By Neighborhood

Which neighborhoods stayed the same?



Metrics	Parcel Count			
Areaname1	7/1/2005 3:48:45 F	6/10/2009 3:45:46 F	8/15/2013 3:42:25 F	7/16/2015 3:40:03 F
Arbutus Ridge	3003	3100	3256	3256
Downtown	850	1300	1367	1367
Downtown Eastside	1803	1976	2201	2353
Dunbar Southlands	2001	3908	5322	6693
Fairview	125	225	1765	2069
Grandview-Woodland	4003	4893	4986	4986
Hastings-Sunrise	3401	3408	3433	3433
Kensington-Cedar Cottage	4548	5278	5698	5698
Kerrisdale	3100	3501	3625	3749
Killarney	3209	3618	3712	3727
Kitsilano	2357	2366	5349	6400
Marpole	4100	4250	4378	4476
Mount Pleasant	1200	2879	3506	3506
Oakridge	2788	2560	2560	2560
Renfrew-Collingwood	3108	3108	3237	3237
Riley Park	4567	5211	5331	5440
Shaughnessy	800	1923	2100	2418
South Cambie	1500	1599	1611	1611
Strathcona	400	410	415	422
Sunset	3125	3228	3150	3173
Victoria-Fraserview	876	2701	4567	6097
West End	898	988	1256	1341
West Point Grey	3507	3589	3610	3628

Hydrants By Type and Pressure Zone

Where are the assets by make and model?



At	Metrics								Metricvalue	
	Fieldvalue	Olympic	Olympic	Olympic	Olympic	Olympic	Olympic	Olympic	Olympic	
	Areaname1	2780	BrigadierM	C712P	C71P	CENTURION	PD049 DFPS	TC1		
7/9/2015 3:12:44 PM	407	0	0	0	0	0	54	0		
	440	0	0	0	0	0	0	0		
	442	0	0	0	0	0	0	0		
	450	0	0	0	0	0	0	0		
	490	0	0	0	0	0	0	0		
	499	0	0	0	0	0	11	0		
	570	0	0	0	0	0	0	0		
	650	0	0	0	0	0	0	0		
	670	0	0	0	0	0	0	0		
	7/13/2015 6:33:57 AM	407	0	0	0	0	0	54	0	
440		0	0	0	0	0	0	0		
442		0	0	0	0	0	0	0		
450		0	0	0	0	0	0	0		
490		0	0	0	0	0	0	0		
499		0	0	0	0	0	11	0		
570		0	0	0	0	0	0	0		
670		0	0	0	0	0	0	0		

Where is the data trending?



Poles

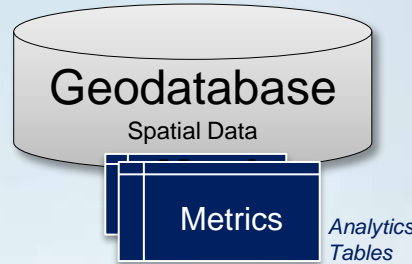
▼ Areaname1 (4 of 7)

- (All)
- District 1
- District 2
- District 3
- District 4
- District 5
- District 6
- District 7



Viewing and Sharing Metrics: Metrics Extension to ArcGIS Server

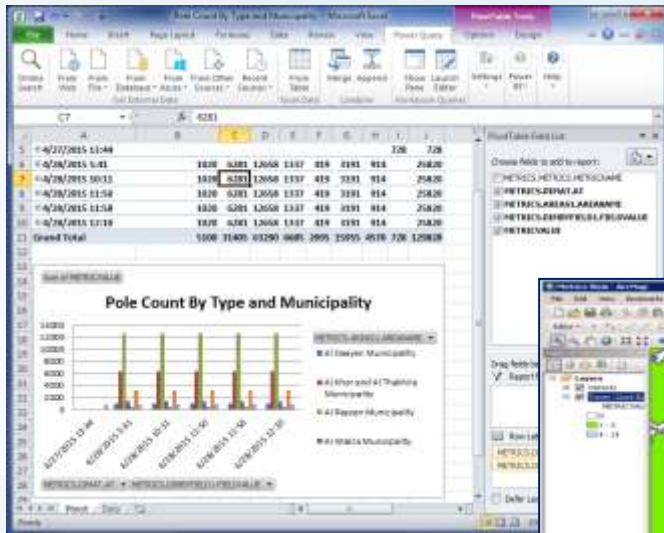
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Microsoft Excel
Power Pivot and Power Query Add On

**Business Intelligence, Analytics,
Visualization Tools**
Generated Using Microstrategy

Create Cubes for
Visualization and Analysis



Esri ArcMap
Time Slider Maps

- Leverage existing Geodatabase content
- Leverage existing Business Intelligence tools
- Simplifies Spatial / Temporal reporting and understanding
- Provides true insights into your spatial data
- Can help with data governance issues
- Provides meaningful data to all areas of the organization

Thank You