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Kscope19 
SEATTLE, WASHINGTON • JUNE 23-27

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YOUR EVALUATIONS

SEATTLE

 Washington State
Convention Center

Become an Equilibrista

Find the Right Balance in The Analytics Tech Ecosystem

Francesco Tisiot
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rittmannmead 
A DATA AND ANALYTICS COMPANY



Francesco Tisiot

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10 Years in Analytics



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@FTisiot



Oracle ACE





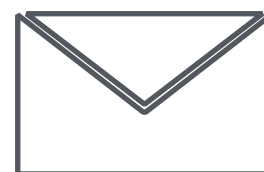
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What's
Wrong with this
Picture?



A bit of History



Excel Hell



SIX



NINE



Unique Source of Truth







SIX



NINE



SIX



Calculated
from
Scratch



NINE



Calculated
from
Scratch



AGREEMENT





Sourced
from
Certified
Datasource



Calculated
from
Scratch



Approach to Data Certification



Top-Down Approach

Data Model Definition

Implementation

Analysis



Centralized BI

OBIEE - RPD
LOOKER

Bottom-Up Approach

Datasource Publication

Analysis

Self Service

Tableau

Oracle
Data Visualization

Datasource Creation

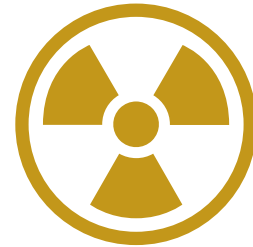


Top-Down

vs

Bottom-Up

Time To KPI



KPI Duplication



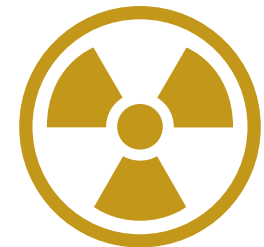
Reusability



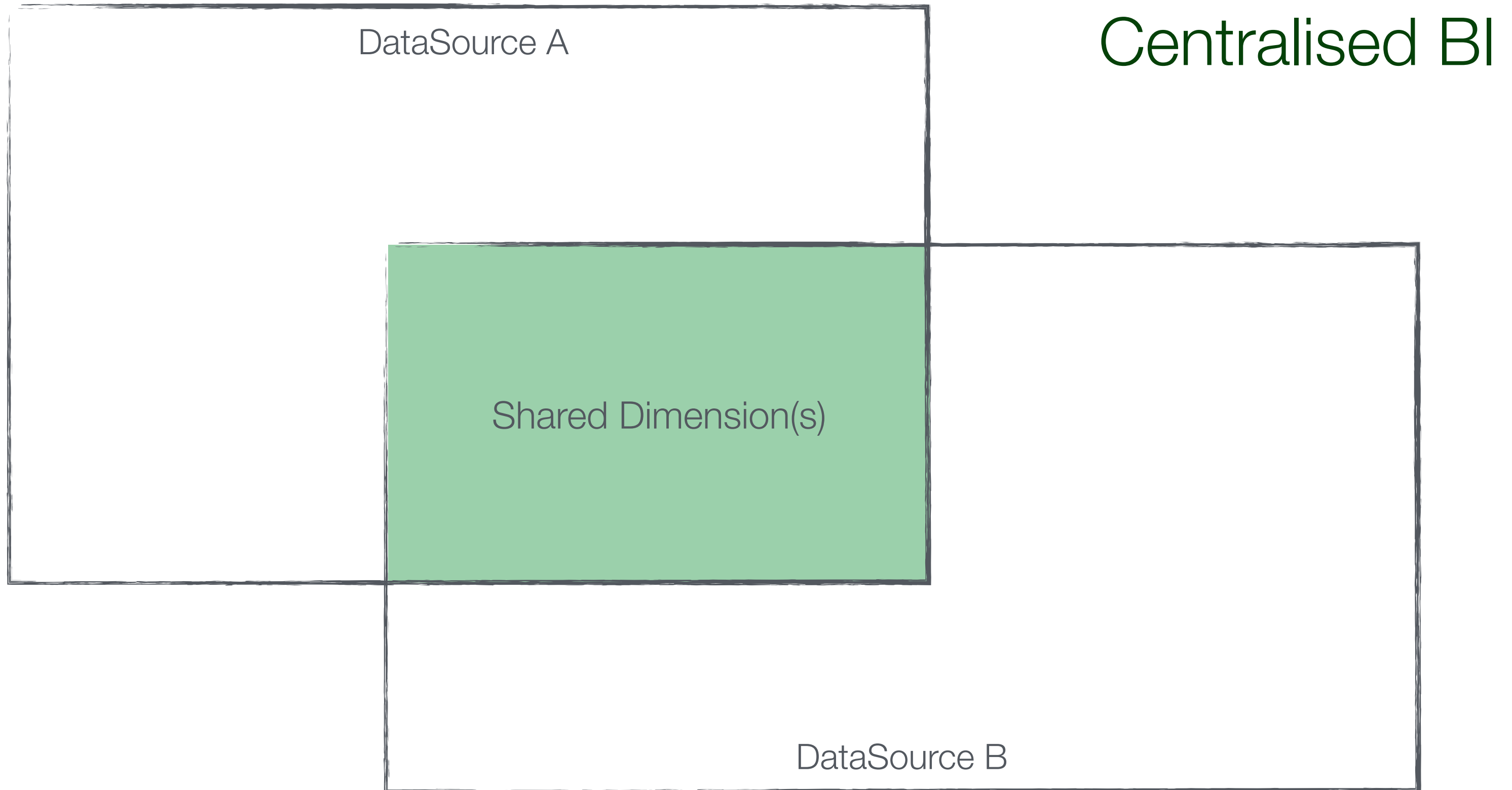
Security



Performance

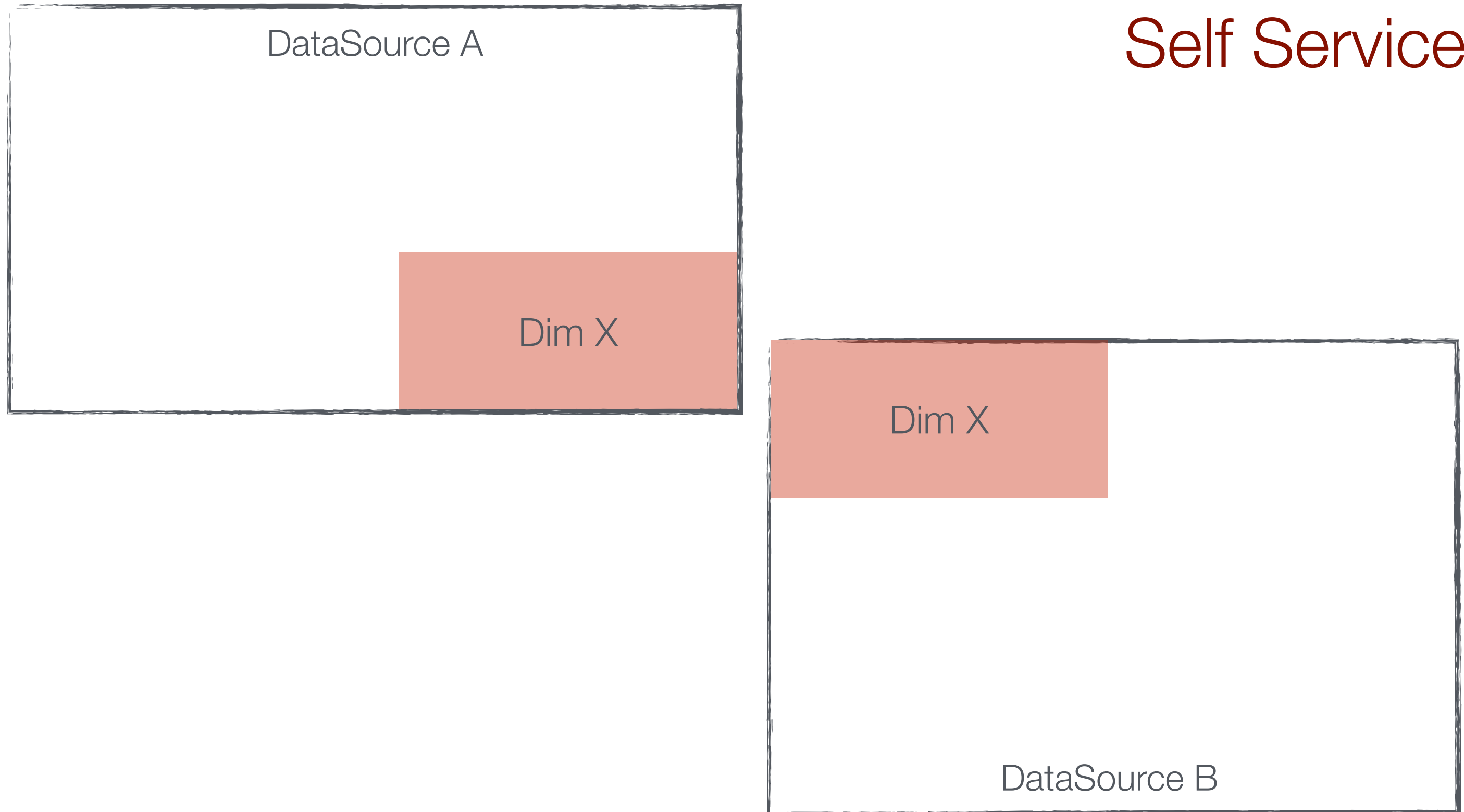


Reusability / Security



Reusability / Security

Self Service BI



~~Self-Service
BI~~





Self Service



Centralised

Sourcing from Central System

```
Select
```

```
"Dim Account"."Account Code",  
"Fact Churn"."Churn Prediction"  
from "Churn"
```

No Formula Recalculation

No Join, Filtering, Aggregation Knowledge

Security Inheritance

No Code Duplication



What to Pick?

Key Factors



Complexity

The diagram consists of four colored circles arranged in a loose cluster. A purple circle labeled 'Complexity' is at the top left. A green circle labeled 'Interest' is at the bottom center. An orange-red circle labeled 'Security' is at the top right. A smaller orange circle labeled 'Data Volumes' is at the bottom right. The circles are of varying sizes, with 'Security' and 'Interest' being the largest.

Security

Interest

Data
Volumes

$$\frac{dN}{dt} = \frac{1}{qV_{act}} - q_0(N-N_0)(1-\epsilon S)S + \frac{N_e}{T_m} - \frac{N}{T_r}$$

$$\frac{dS}{dt} = T_0 q_0(N-N_0)(1-\epsilon S)S + \frac{q_0 N}{T_m} - \frac{S}{T_d}$$

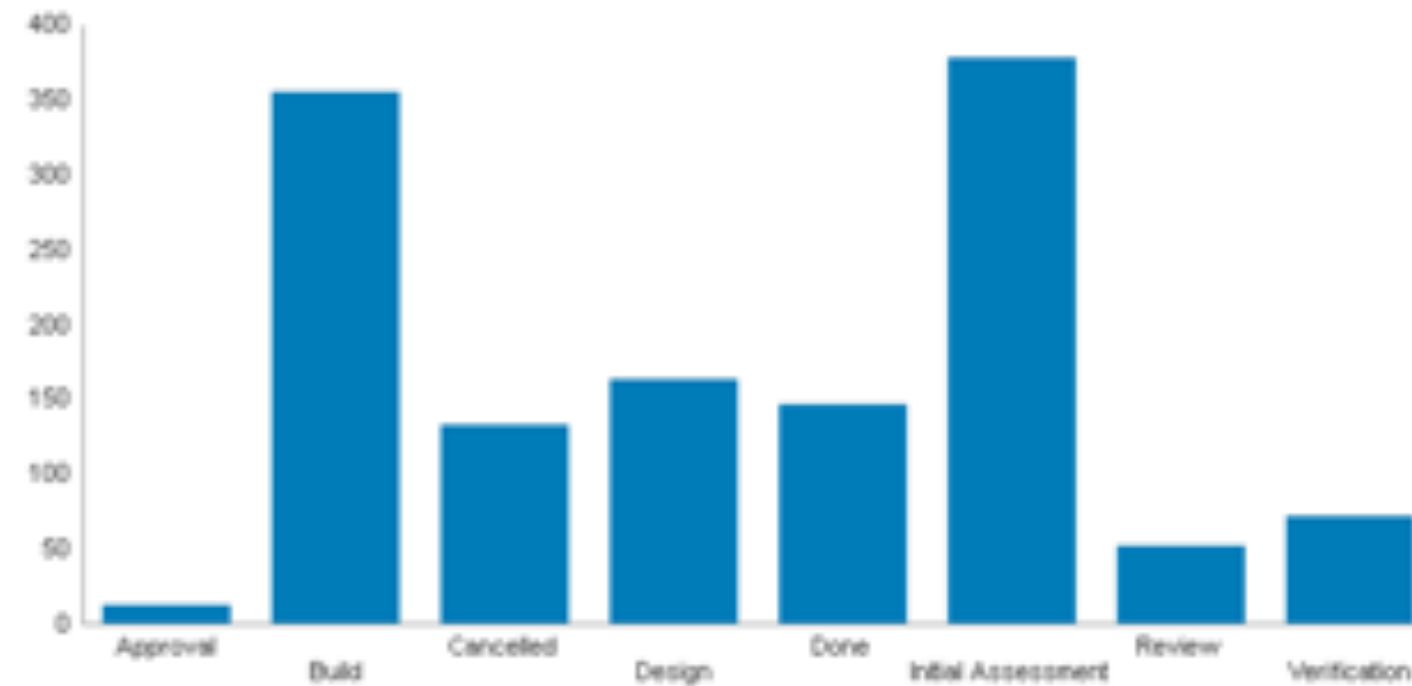
$$\frac{N}{P_k} = \frac{T_0 p \lambda_0}{V_{act} \mu_{mc}} \quad \text{--- (2)}$$

$$\left[\frac{S}{N} \right]$$

$$\left\{ \begin{array}{l} N = \\ P_d = (n \end{array} \right.$$

Calculation

Metadata



```
<saw:report ...>
```

```
  <saw:criteria xsi:type="..." subjectArea="&quot;Jira Reporting&quot;">
```

```
    <saw:columns>
```

```
      <saw:column ...>
```

```
        <saw:columnFormula>
```

```
          <sawx:expr xsi:type="...">"Dim Issue Status"."Issue Status"</sawx:expr><...>
```

```
      <saw:column ...>
```

```
        <saw:columnFormula>
```

```
          <sawx:expr xsi:type="...">"Fact Issue KPI"."# of Issues"</sawx:expr><...>
```

REST Endpoints

PUT	/v4/dataflows/{dataflow-id}	Update a dataflow
POST	/v4/dataflows/{dataflow-id}/actions	Perform execute/stop action on a dataflow
GET	/v4/dataflows/{dataflow-id}/jobs	Get all jobs in a dataflow
GET	/v4/dataflows/{dataflow-id}/jobs/{job-id}	Get status of a particular job in a dataflow
GET	/v4/dataflows/{dataflow-id}/last-ingest-values	Get datasets last values
GET	/v4/dataflows/{dataflow-id}/status	Get dataflow status
GET	/v4/dataflows/{dataflow-un}/acl	Get the ACL for the dataflow
PUT	/v4/dataflows/{dataflow-un}/acl	Set the ACL for the dataflow
GET	/v4/datasets	Get metadata for datasets
PUT	/v4/datasets	Finalize datasets
POST	/v4/datasets/{dataset-id}/actions	Invoke profile job on a particular dataset
DELETE	/v4/datasets/{dataset-un}	Delete a dataset
GET	/v4/datasets/{dataset-un}	Get attributes of a dataset
POST	/v4/datasets/{dataset-un}	Set attributes of a dataset
PUT	/v4/datasets/{dataset-un}	Replace a dataset and metadata
GET	/v4/datasets/{dataset-un}/acl	Get the ACL for a dataset
PUT	/v4/datasets/{dataset-un}/acl	Set the ACL for a dataset
GET	/v4/datasets/{dataset-un}/biserver-metadata.xml	Get the BI Server metadata xml of a dataset
PUT	/v4/datasets/{dataset-un}/biserver-metadata.xml	
GET	/v4/datasets/{dataset-un}/canonical-data	Get the canonical data for a dataset
GET	/v4/datasets/{dataset-un}/provider-options.xml	
PUT	/v4/datasets/{dataset-un}/provider-options.xml	
GET	/v4/datasets/{dataset-un}/rawfile	Get the raw file of the dataset
PUT	/v4/datasets/{dataset-un}/rawfile	Replace the rawdata for a dataset
GET	/v4/datasets/{dataset-un}/schema	Get schema of a dataset
POST	/v4/datasets/{dataset-un}/schema	Set schema of a dataset
GET	/v4/datasets/{dataset-un}/type-options.xml	Returns the type options xml of a dataset
PUT	/v4/datasets/{dataset-un}/type-options.xml	Replace the type options xml of a dataset
PUT	/v4/providers/managed/upload	Upload a managed dataset
POST	/v4/providers/{provider-name}/{path-separator}/{version}/cert	Upload certificate for a provider

GET	/v4/connections	Returns a list of all connections
POST	/v4/connections	Create a connection with parameter job
DELETE	/v4/connections/{connection-un}	Delete a connection
GET	/v4/connections/{connection-un}	List information of a single connection
PUT	/v4/connections/{connection-un}	Update the metadata of a connection
GET	/v4/connections/{connection-un}/acl	Get the ACL for a connection
PUT	/v4/connections/{connection-un}/acl	Set the ACL for a connection
PUT	/v4/connections/{connection-un}/actions	Delete all or selective replication schema tables for a target cloud replication connection object
GET	/v4/connections/{connection-un}/connection-metadata.xml	Get the metadata XML for a connection
PUT	/v4/connections/{connection-un}/connection-metadata.xml	Replace the metadata XML for a connection
PUT	/v4/connections/{connection-un}/credential	Update a connection credentials
GET	/v4/connections/{connection-un}/object-list{path-separator}{directory-un}	Get object listing for a connection
GET	/v4/connections/{connection-un}/objects{path-separator}{object-id}	Get replication runtime details for a target cloud replication connection object
PUT	/v4/connections/{connection-un}/objects{path-separator}{object-id}	Update replication runtime details for a target cloud replication connection object
PUT	/v4/connections/{connection-un}/objects{path-separator}{object-id}/filters	Validate filter query for a source cloud replication connection object
GET	/v4/dataflows	Get metadata for dataflows
POST	/v4/dataflows	Create a dataflow
GET	/v4/dataflows/jobs	
DELETE	/v4/dataflows/{dataflow-id}	Delete a dataflow
GET	/v4/dataflows/{dataflow-id}	Get the metadata of a dataflow

REST Endpoints

```
curl "https://<0AC>/datasetsvc/  
public/api/v4/datasets" \  
-u '<USER>:<PWD>'
```

REST Endpoints - CSV

```
{
  "provider": "managed",
  "requiresImpersonation": false,
  "semicolonDelimited": false,
  "customDelimiter": false,
  "name": "train",
  "namespace": "francesco.tisiot@rittmanmead.com",
  "business-model": "\"\"",
  "description": "Uploaded from train.csv.",
  "display-name": "train",
  "locale": "sys",
  "file-length": 460676,
  "type": "text",
  "data-last-modified": "2019-04-08T08:19:34.481+0000",
  "private-connection": false,
  "mime-type": "application/csv",
  "owner-guid": "francesco.tisiot@rittmanmead.com",
  "metadata-last-modified": "2019-04-08T08:22:20.928+0000",
  "bdp-profile": "{\"profile\": \"784c4626-ebd6-4a01-b5dc-1a3ccd0fee1a\"}",
  "is-temporary": false
}
```


REST Endpoints - DB

{

...

"name": "OPEN_INCIDENTS",

"namespace": "francesco.tisiot@rittmanmead.com",

"business-model": "\\\"\\\"",

"indexable": "BOTH",

"description": "External Data Set",

"display-name": "OPEN_INCIDENTS",

...

"data-last-modified": "2019-03-19T16:07:22.732+0000",

"connection-namespace": "francesco.tisiot@rittmanmead.com",

"private-connection": false,

"connection-name": "LGI",

"provider-type": "db",

"provider-name": "oracle",

"owner-guid": "francesco.tisiot@rittmanmead.com",

...

}

REST Endpoints - DB Details

`api/v4/datasets/{dataset-uri}`

`{dataset-uri} = '<USERNAME>'. '<DATASET_NAME>'`

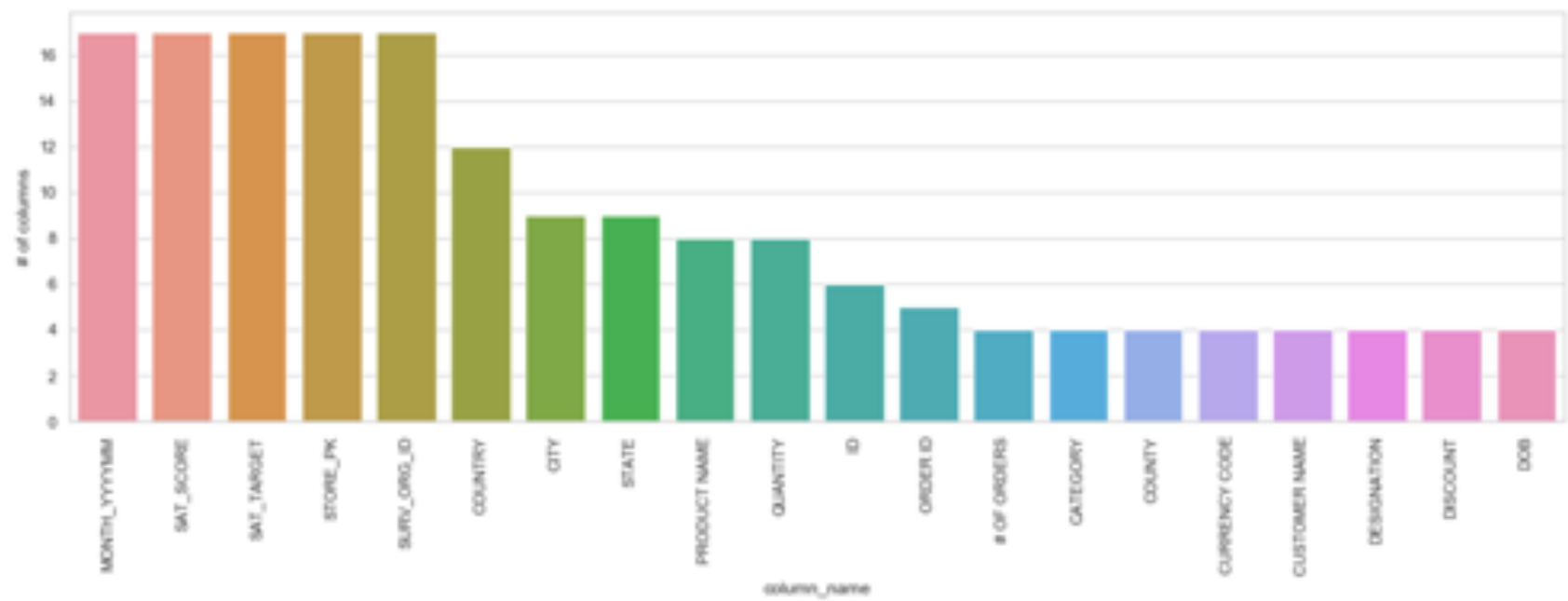
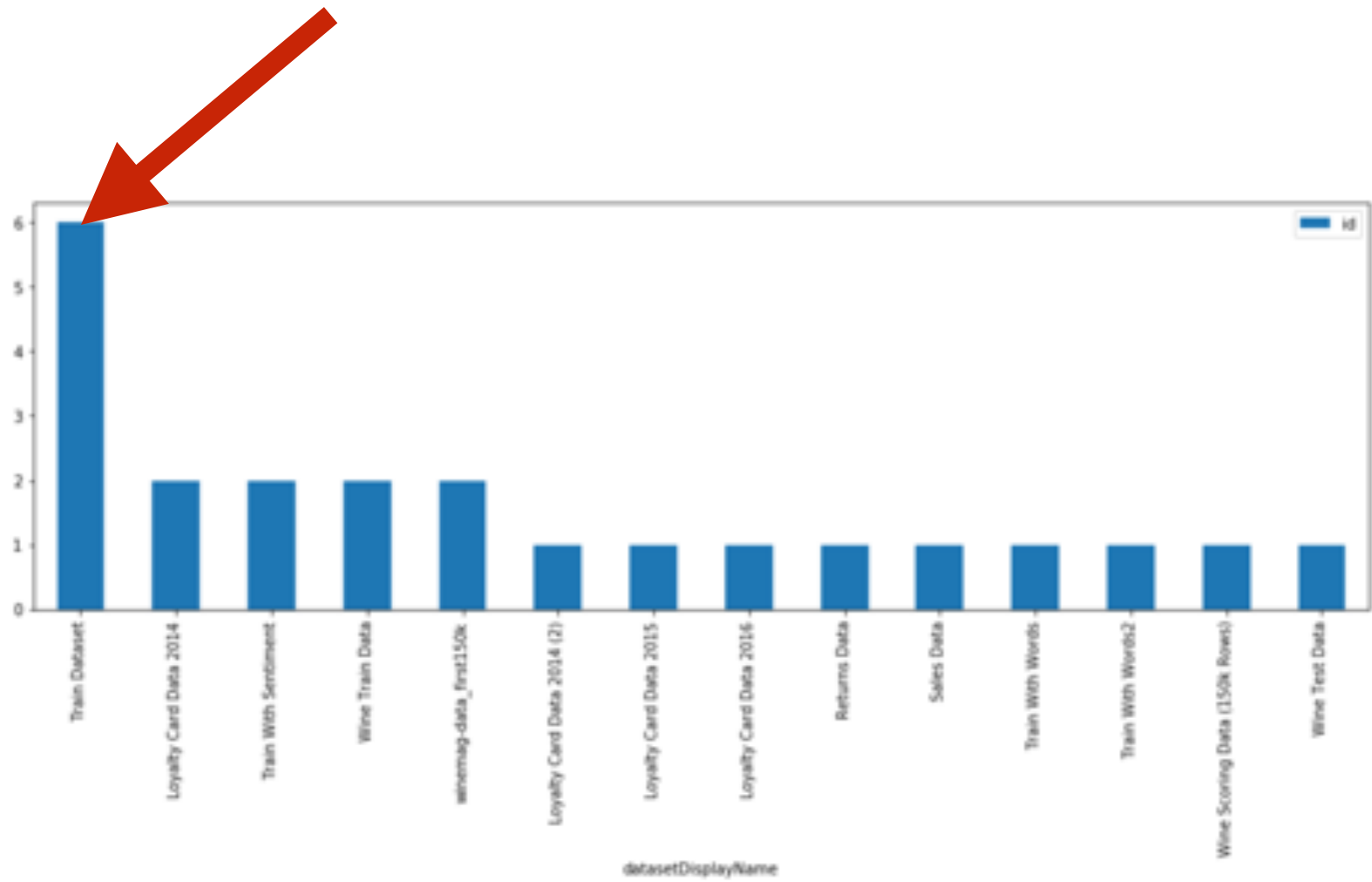
REST Endpoints - DB Details

```
<ds:datasetImportOptions xmlns:ds="com.oracle.bi/datasetimport/v1">
  <ds:tables>
    <ds:table name="Data" totalRowNumber="-1">
      <ds:dataptr>
        <ds:connection_id>'francesco.tisiot@rittmanmead.com'. 'LGI'</ds:connection_id>
        <ds:subquery>
          select OPEN_INCIDENTS, COUNTRY_CODE, ISO_YEAR_WEEK, ISO_YEAR_WEEK_UNIQUE_ORDER from LGI.OPEN_INCIDENTS
        </ds:subquery>
        <ds:target_type>Oracle 11g</ds:target_type>
        <ds:object_name/>
      </ds:dataptr>
    <ds:columns>
      <ds:column>
        <ds:name>OPEN_INCIDENTS</ds:name>
        <ds:datatype>number</ds:datatype>
      </ds:column>
      <ds:column>
        <ds:name>COUNTRY_CODE</ds:name>
        <ds:datatype>varchar(10)</ds:datatype>
      </ds:column>
      <ds:column>
        <ds:name>ISO_YEAR_WEEK</ds:name>
        <ds:datatype>varchar(30)</ds:datatype>
      </ds:column>
      <ds:column>
        <ds:name>ISO_YEAR_WEEK_UNIQUE_ORDER</ds:name>
        <ds:datatype>number</ds:datatype>
      </ds:column>
    </ds:columns>
  </ds:table>
</ds:tables>
```

REST Endpoints - DB Details

📁 LGI
📄 OPEN_INCIDENTS
📄 OPEN_INCIDENTS
📄 COUNTRY_CODE
📄 ISO_YEAR_WEEK
📄 ISO_YEAR_WEEK_UNIQUE_ORDER

```
{
  "id": "LGI",
  "leaf": false,
  "otype": "Schema",
  "name": "LGI",
  "children": [
    {
      "id": "LGI.OPEN_INCIDENTS",
      "leaf": false,
      "otype": "dbtable",
      "name": "OPEN_INCIDENTS",
      "allColumns": [
        {
          "datatype": "number",
          "name": "OPEN_INCIDENTS",
          "is-supported": "TRUE",
          "otype": "Column",
          "leaf": true,
          "id": "LGI.OPEN_INCIDENTS.OPEN_INCIDENTS"
        },
        {
          "datatype": "varchar(30)",
          "name": "ISO_YEAR_WEEK",
          "is-supported": "TRUE",
          "otype": "Column",
          "leaf": true,
          "id": "LGI.OPEN_INCIDENTS.ISO_YEAR_WEEK"
        }
      ]
    }
  ]
}
```



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Data Governance Extension



DV Governance

Oracle

May 12, 2019

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Displays only objects
visible to you!





BAR File

 Snapshots

Create Snapshot





	Name	Created On	Status
	source_snapshot	4/25/2019, 7:24:03 PM	
	Pre-Workshop (excluding U...	4/25/2019, 1:02:55 PM	
	Pre-patch (105.2.0-307) sn...	4/12/2019, 11:21:19 AM	
	Pre-Workshop	2/22/2019, 9:36:10 AM	

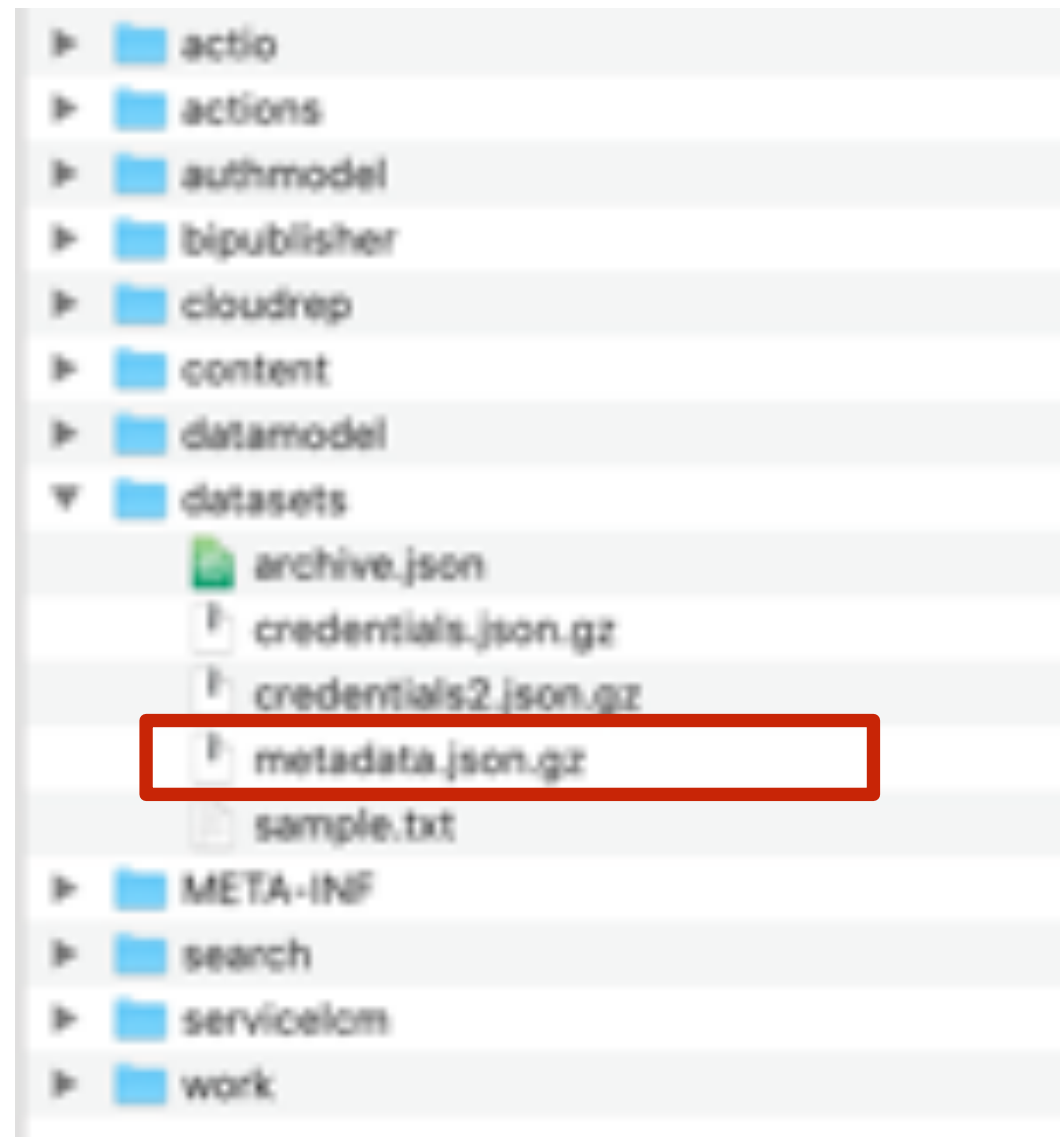
Restore

Edit Name

Download

Delete

BAR File





DEMO

RM Metadata Explorer

ORACLE®

DATA VISUALIZATION

ORACLE®

BUSINESS INTELLIGENCE



Informatica™

COGNOS®

ORACLE®

DATA INTEGRATOR



RM Metadata Explorer Use Cases



Data Lineage

GDPR

DataFlow -> ODI Mapping



Metadata Search Tool

Data Capital



Self Service Analytics



Centralized Reporting

Measure



Become an Equilibrista

Find the Right Balance in The Analytics Tech Ecosystem

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