

# Dynamic Data Management System

International Circumpolar Surveillance Tuberculosis Working Group  
(ICS-TB) Meeting

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PROTECTING CANADIANS FROM ILLNESS



Public Health  
Agency of Canada

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publique du Canada

Canada

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## Organizational Need

### Data collection process

- Varied processes for collection from paper forms, to varied file formats, to some standardized formats

### Data consolidation process

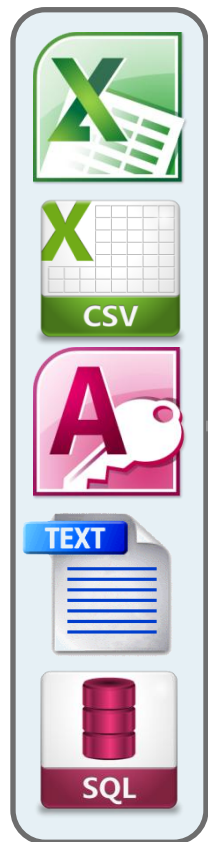
- Varied processes but typically depending on resources working on the file
- Included consolidating data in MS Excel, MS Access, SAS, SPSS

### Data export and analysis

- Varied processes also depending on resources working on the file

# DDMS Introduction

## FILE FORMATS



## IMPORT PROCESS



## ANALYSE



## STANDARDIZED DATA



## EXPORT



## DDMS Overview

### Data collection process

- One tool to empower user to import data through interface
- Imports different data types
- Saves import history for comparison
- Removes need to have standard data-entry technology for sites

IMPORT PROCESS



### Data consolidation process

- One tool to consolidate data from different data types
- User able to map fields from different data types
- Saves templates

STANDARDIZED DATA



### Data export and analysis

- Allows basic analysis within DDMS (SQL)
- Query builder empowers user to build export files for analysis
- Saves export history (user does not have to re-build)
- Analysis done outside of DDMS using specialized tools (SAS, SPSS, etc.)

EXPORT



# DDMS Key Features - Functionality

## Data import



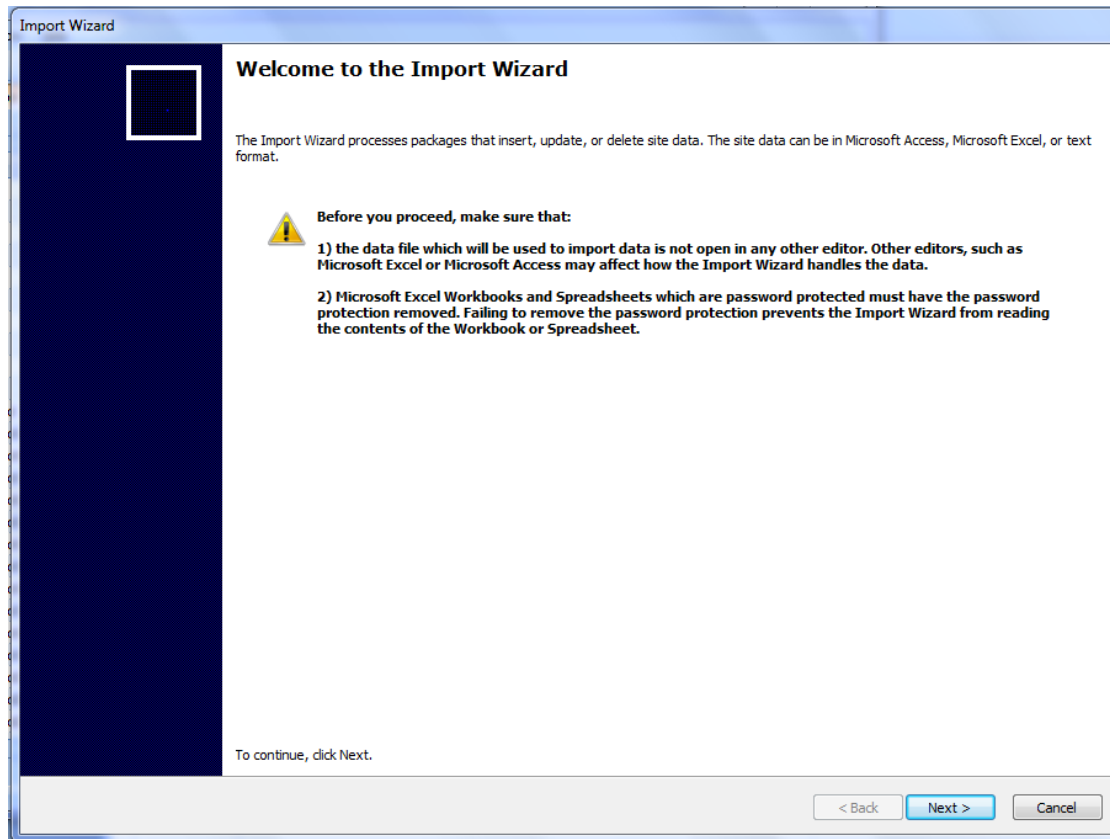
- Imports different file types

**Import** → Consolidate → (Analyse) → Export

# DDMS Key Features – Functionality (cont.)

## Data import

- Step by step import wizard

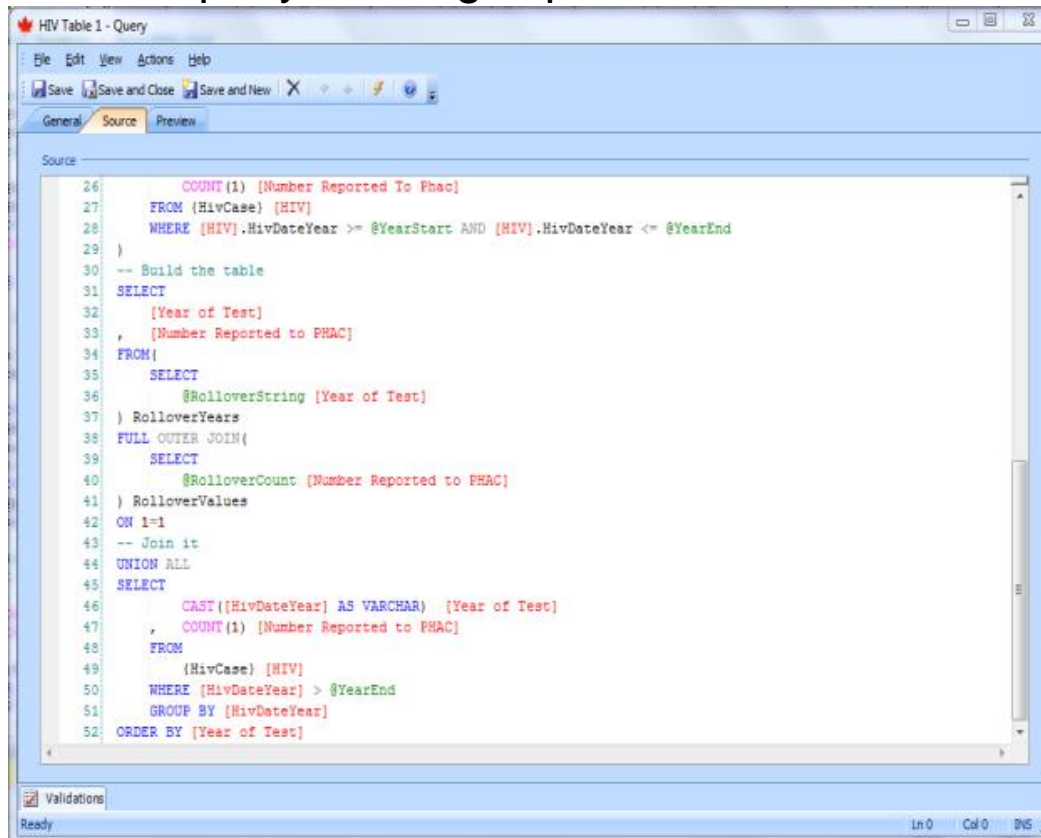


**Import** → Consolidate → (Analyse) → Export

# DDMS Key Features – Functionality (cont.)

## Analyse Data

- Custom SQL query building capabilities



```
26      COUNT(1) [Number Reported To Phac]
27  FROM (HivCase) [HIV]
28  WHERE [HIV].HivDateYear >= @YearStart AND [HIV].HivDateYear <= @YearEnd
29  )
30  -- Build the table
31  SELECT
32  [Year of Test]
33  , [Number Reported to PHAC]
34  FROM(
35  SELECT
36  @RolloverString [Year of Test]
37  ) RolloverYears
38  FULL OUTER JOIN(
39  SELECT
40  @RolloverCount [Number Reported to PHAC]
41  ) RolloverValues
42  ON 1=1
43  -- Join it
44  UNION ALL
45  SELECT
46  CAST([HivDateYear] AS VARCHAR) [Year of Test]
47  , COUNT(1) [Number Reported to PHAC]
48  FROM
49  (HivCase) [HIV]
50  WHERE [HivDateYear] > @YearEnd
51  GROUP BY [HivDateYear]
52  ORDER BY [Year of Test]
```

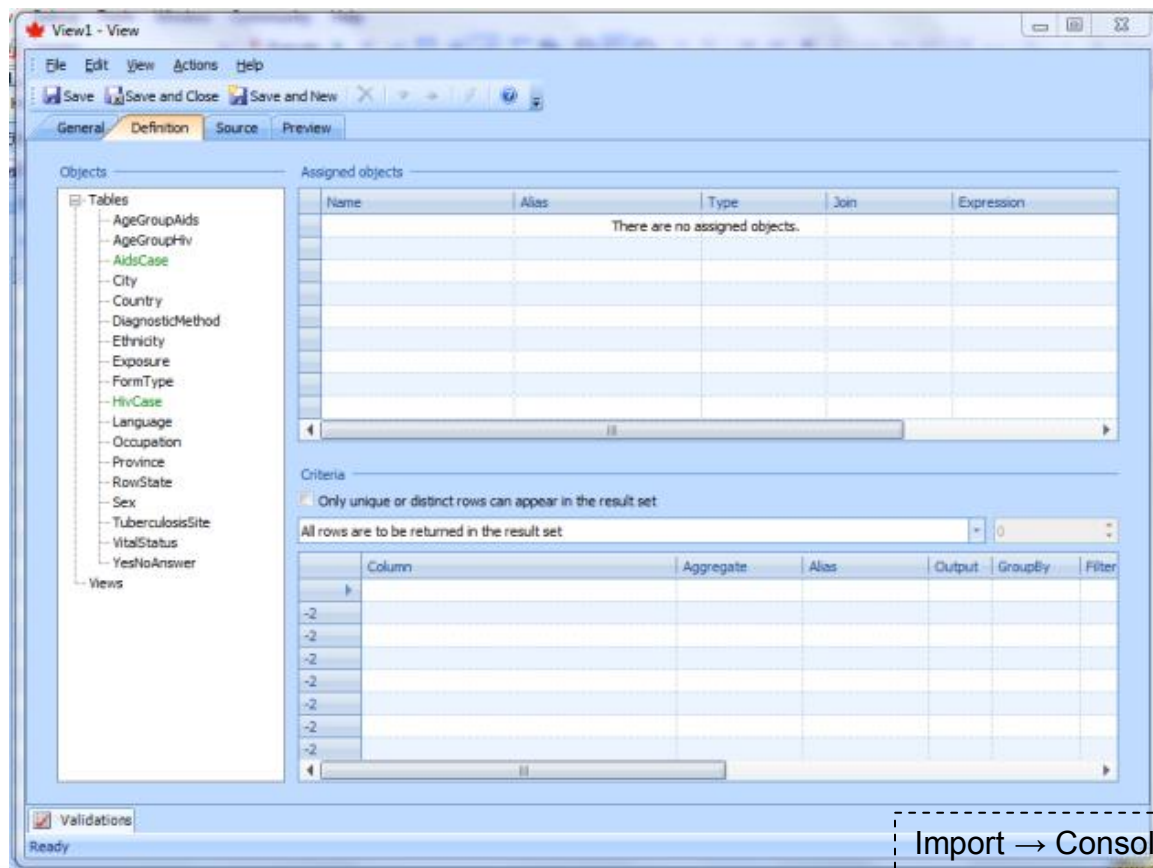
Import → Consolidate → **Analyse** → Export



# DDMS Key Features – Functionality (cont.)

## Analyse Data

- Interface to aid in query design



## DDMS Key Features – Functionality (cont.)

### Data Export

- Export data for use with various applications

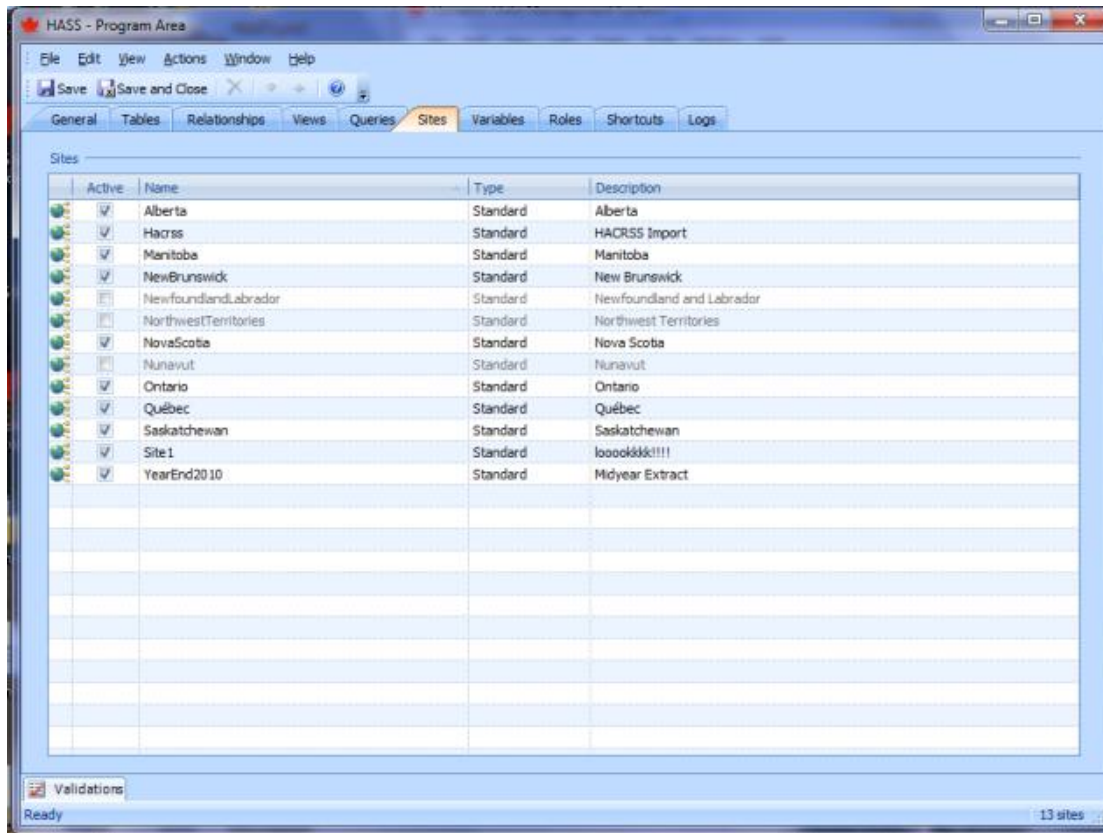


Import → Consolidate → (Analyse) → **Export**

## DDMS Key Features – Adaptability

### Various data sources and program areas

- Specify different sources of data (data from various organizations)

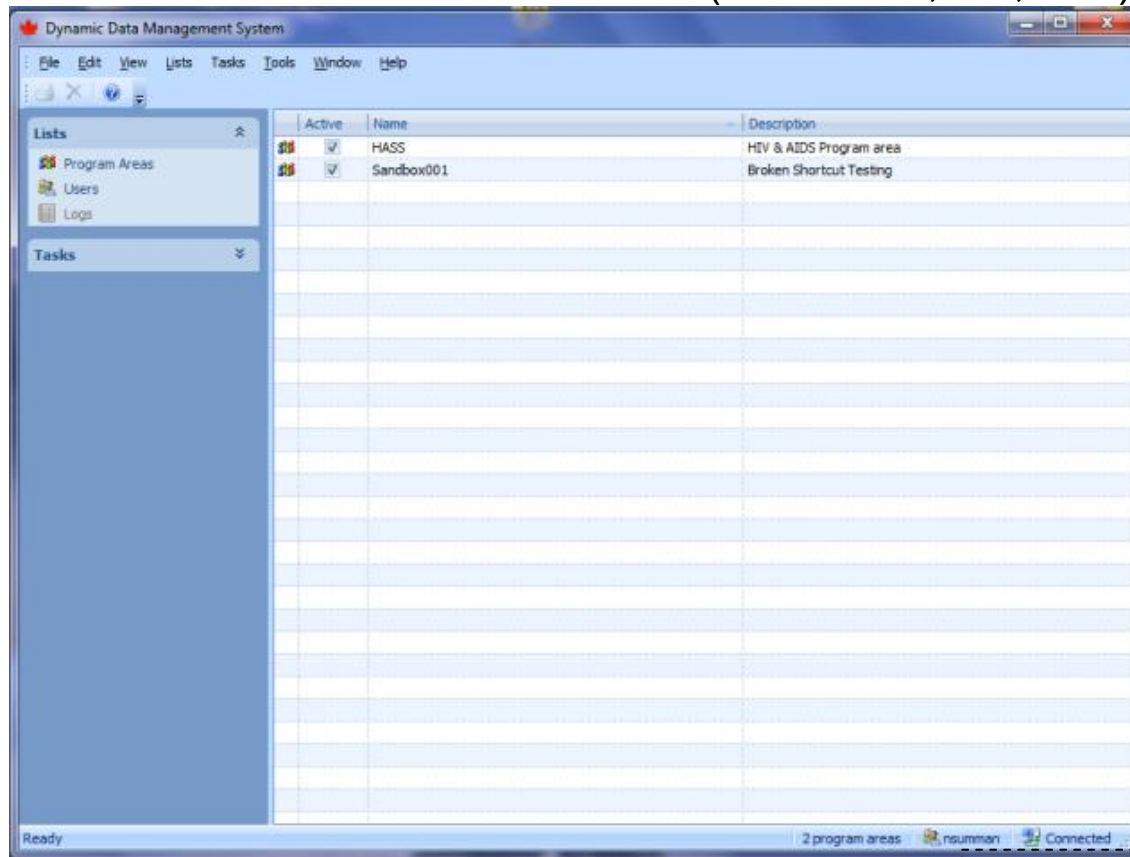


**Import** → Consolidate → (Analyse) → Export

## DDMS Key Features – Adaptability (cont.)

### Various data sources and program areas

- Create isolated work environments (HIV/AIDS, TB, etc.)

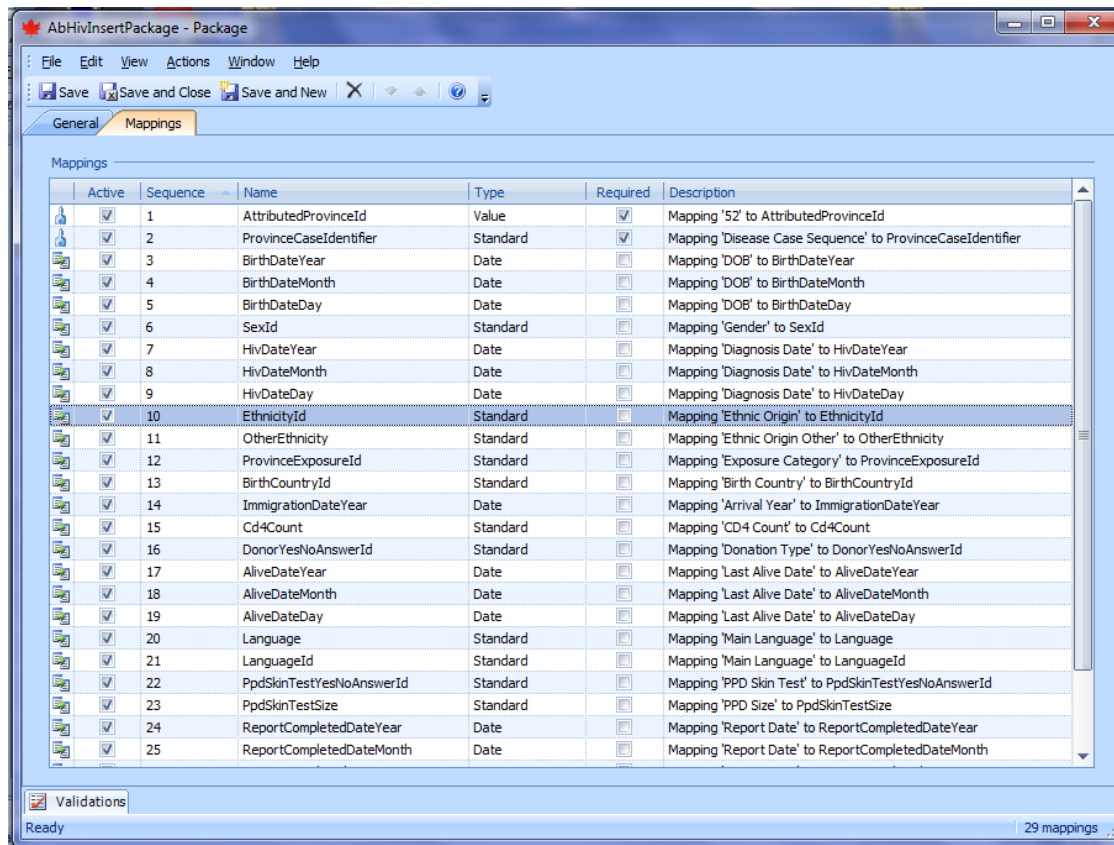


**Import** → Consolidate → (Analyse) → Export

# DDMS Key Features – Adaptability (cont.)

## Data Mappings

- Translate source data columns to organization specified variables

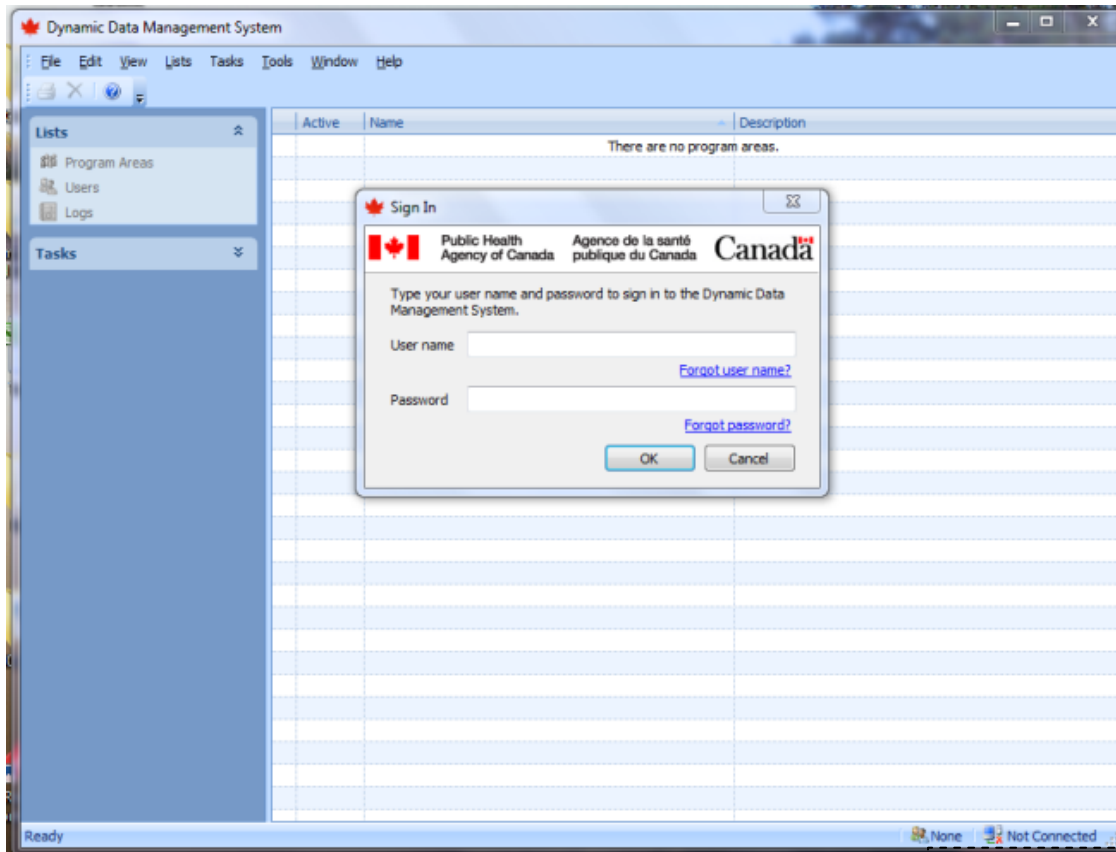


Import → **Consolidate** → (Analyse) → Export

# DDMS Key Features – Security

## Roles and Permissions

- Password protected accounts

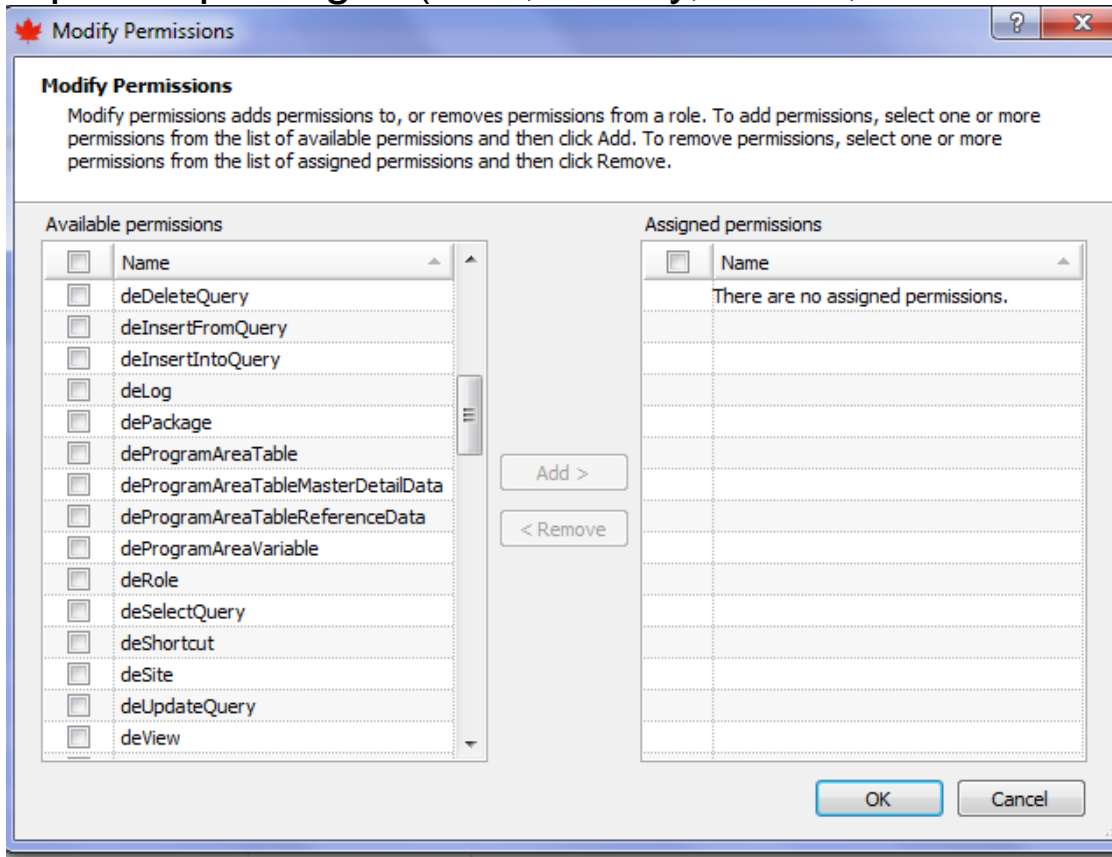


Import → Consolidate → (Analyse) → Export

# DDMS Key Features – Security (cont.)

## Roles and Permissions

- User specific privileges (view, modify, delete, and create permissions)

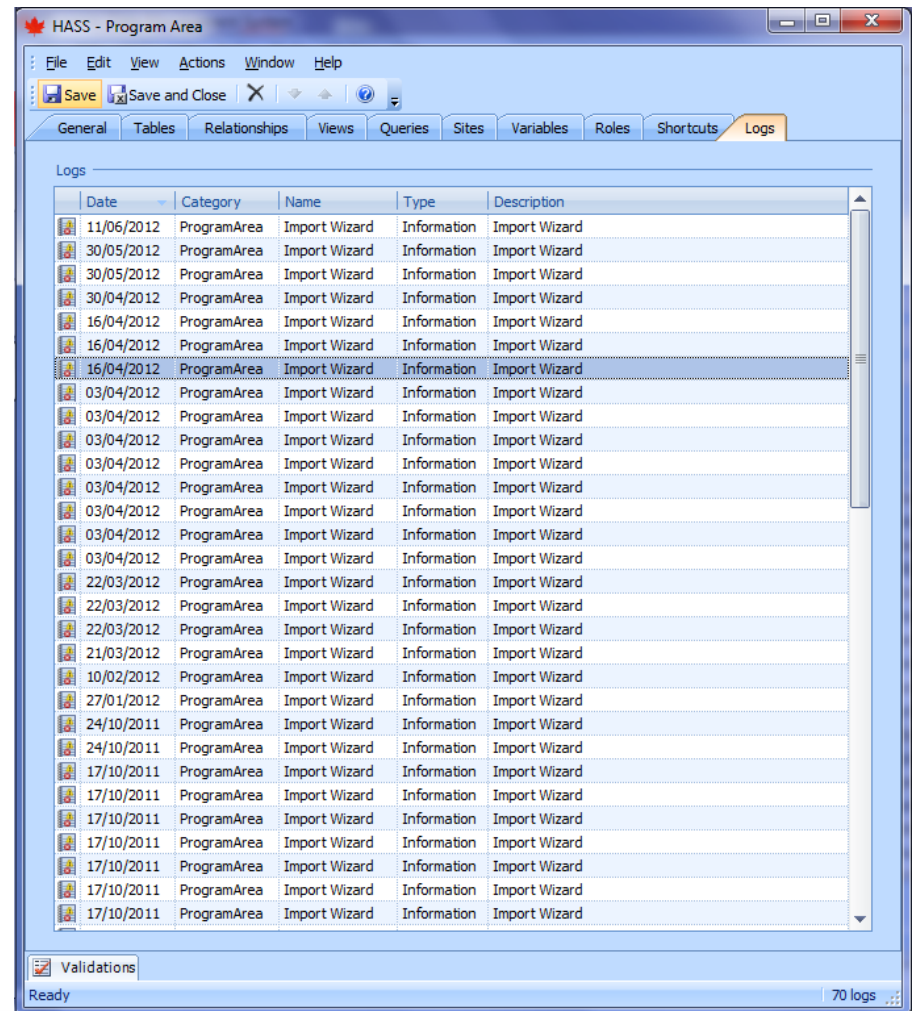


Import → Consolidate → (Analyse) → Export

## DDMS Key Features – Security (cont.)

### Logging

- Saves import and export history
- View all actions within program area



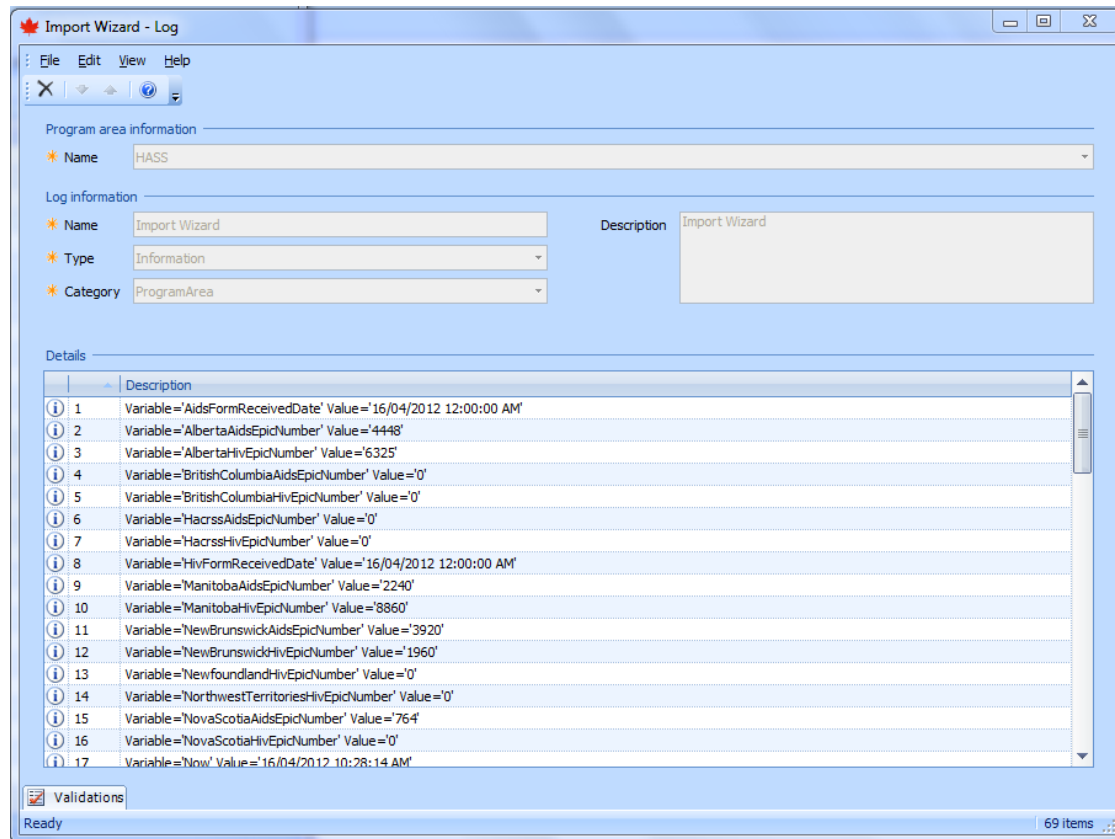
Import → Consolidate → (Analyse) → Export



# DDMS Key Features – Security (cont.)

## Logging

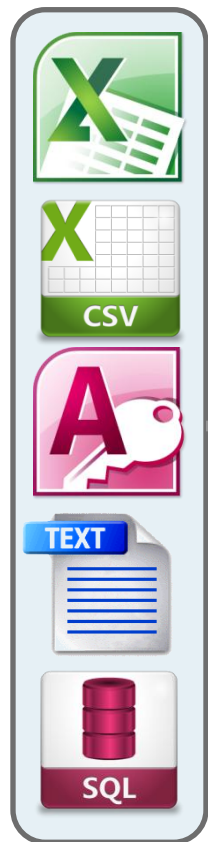
- Logs all user activity within program area



Import → Consolidate → (Analyse) → Export

# DDMS Conclusion

## FILE FORMATS



## IMPORT PROCESS



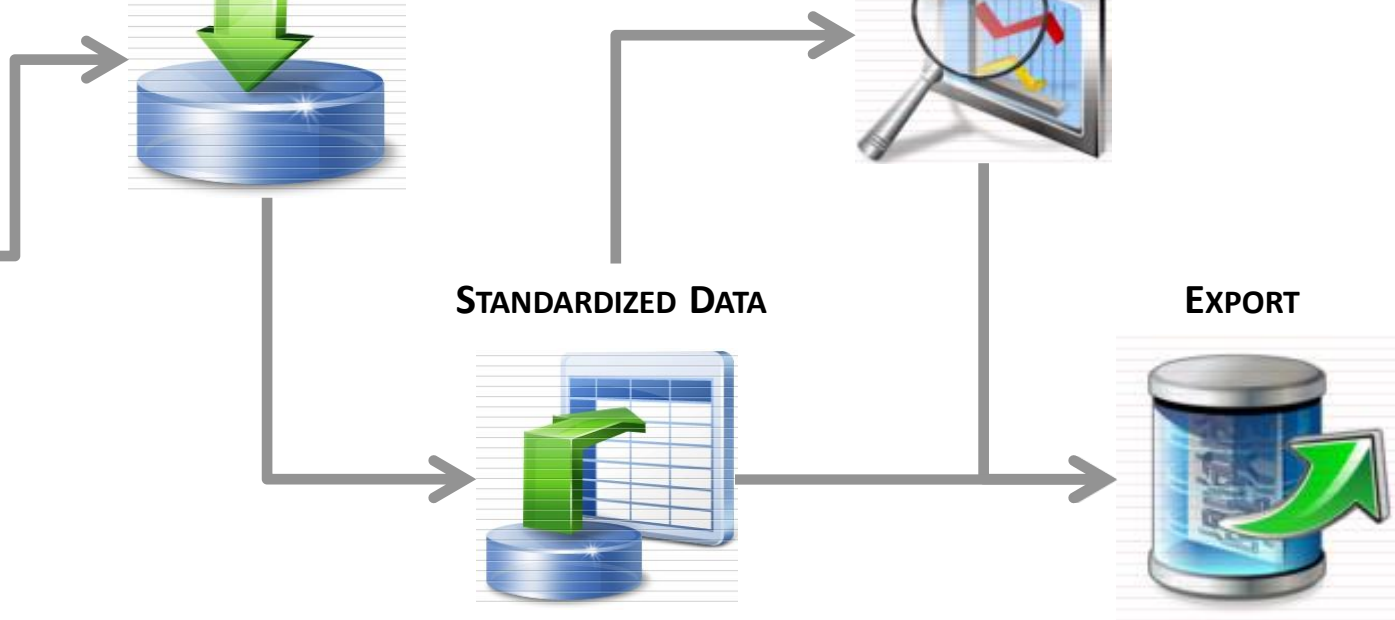
## ANALYSE



## STANDARDIZED DATA



## EXPORT



# Acknowledgements

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**THANK YOU!!!**