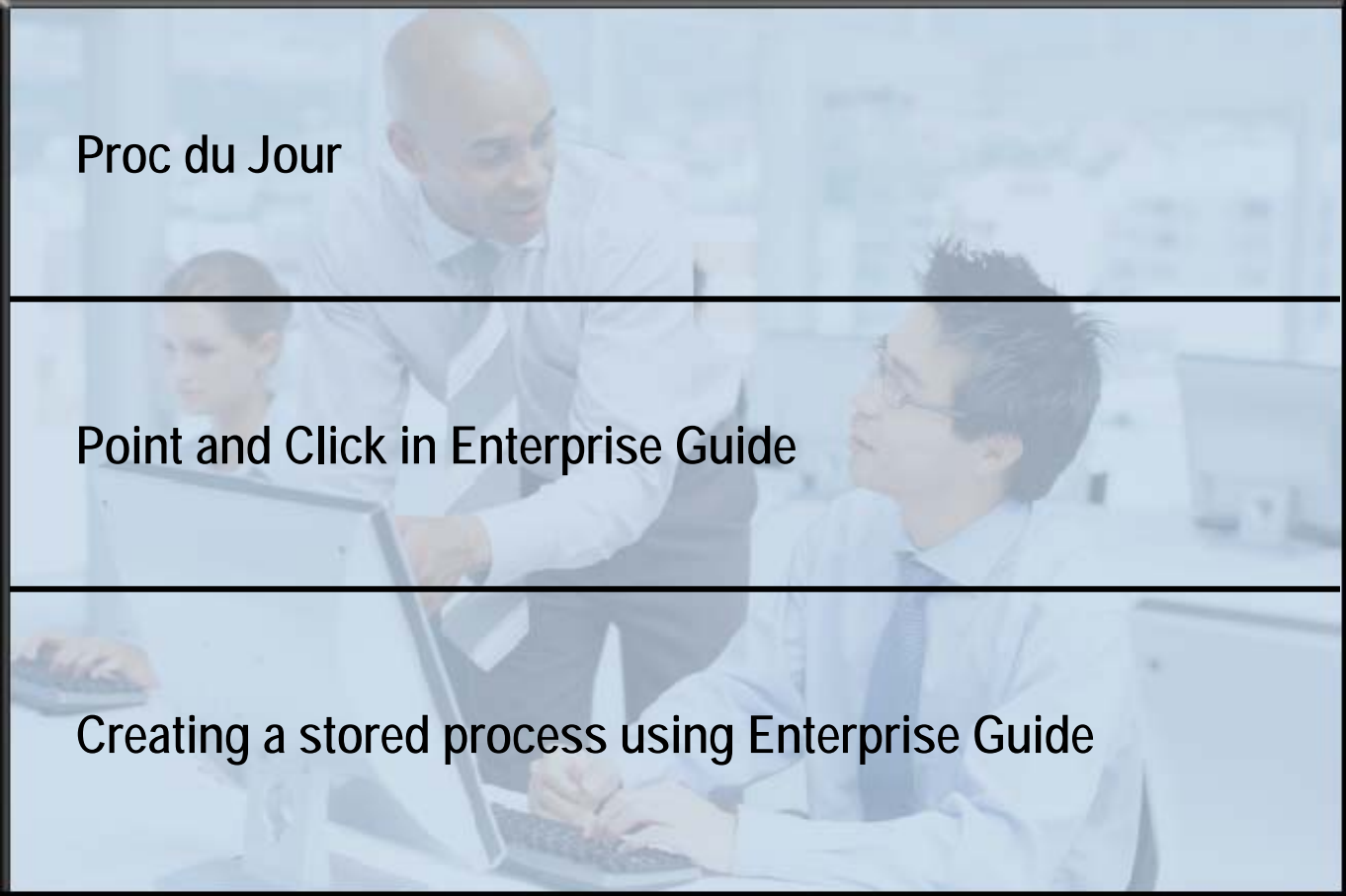


# Ottawa User Group Meeting, 2009



Proc du Jour

Point and Click in Enterprise Guide

Creating a stored process using Enterprise Guide

# Ottawa User Group Meeting, 2009

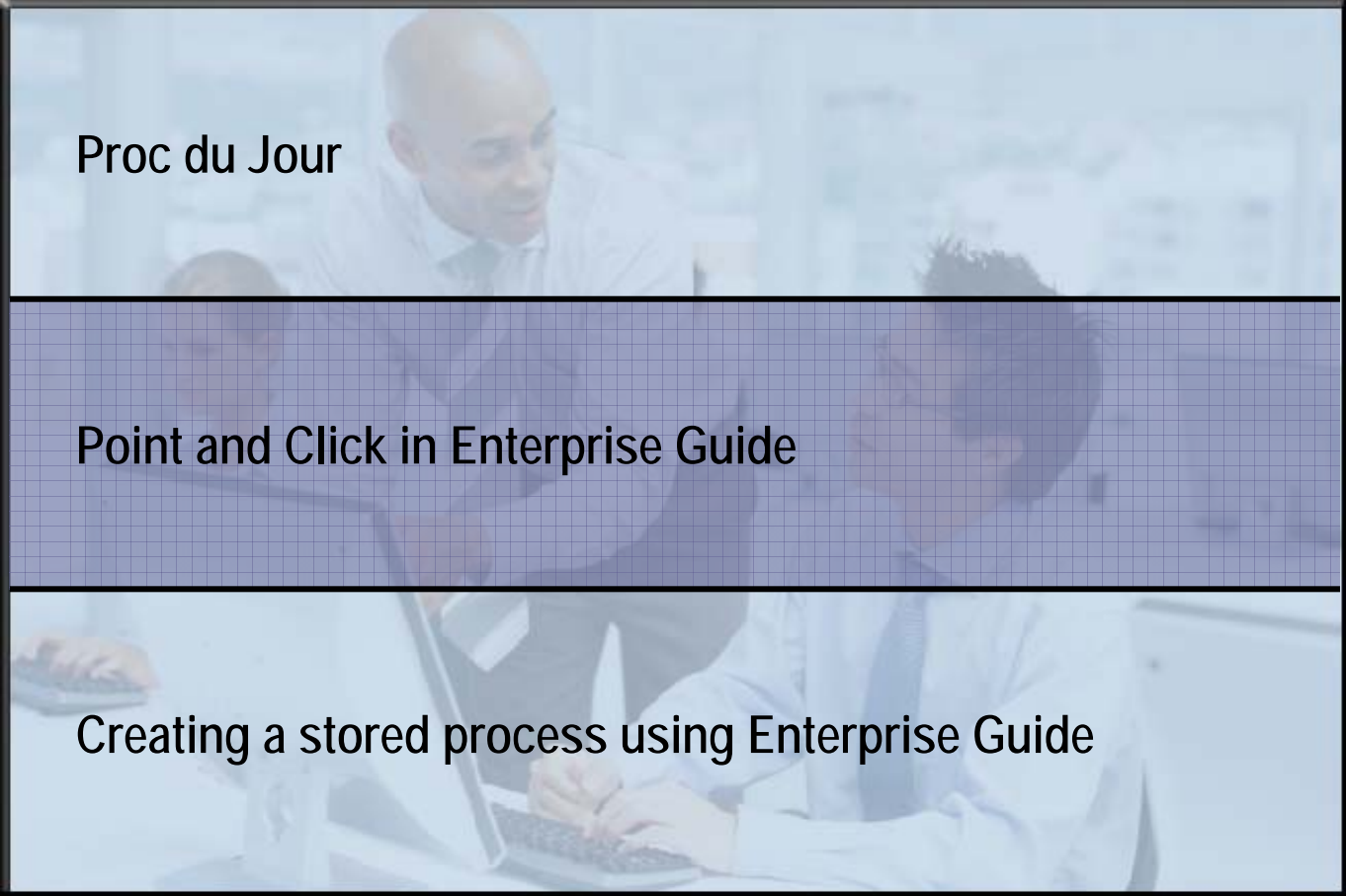


Proc du Jour

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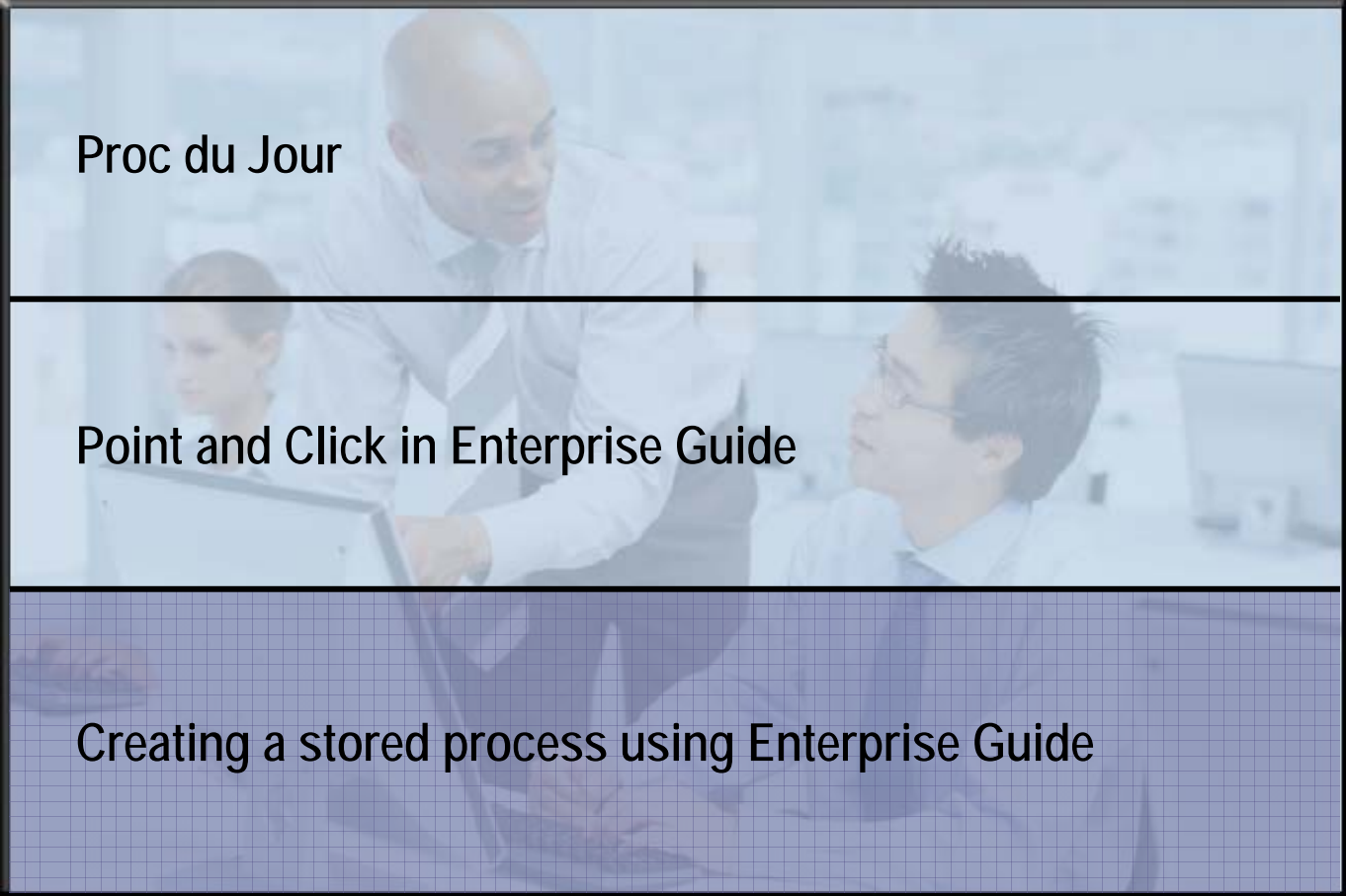


Proc du Jour

Point and Click in Enterprise Guide

Creating a stored process using Enterprise Guide

# Ottawa User Group Meeting, 2009



Proc du Jour

Point and Click in Enterprise Guide

Creating a stored process using Enterprise Guide

# Proc du jour - PROC FREQ

## Objectives

- Making a multi-way frequency easier to read with the Proc Freq procedure.
- Describe how to identify your OUTLIERS.
- ODS option - How Proc freq output looks like in 9.2.

# PROC FREQ – Syntax example

Proc freq example of a multi-way frequency table.

```
PROC FREQ DATA=Work.Company;  
TABLES City*Position;  
RUN;
```

# Proc Freq – Multi-Way Frequency Output

The SAS System

The FREQ Procedure

Table of CITY by POSITION

| CITY     | POSITION |                     |                     | Total  |
|----------|----------|---------------------|---------------------|--------|
|          | ADMIN    | SALES/MA<br>RKETING | TECHN. S<br>ERVICES |        |
| LONDON   | 2        | 12                  | 1                   | 15     |
|          | 4.17     | 25.00               | 2.08                | 31.25  |
|          | 13.33    | 80.00               | 6.67                |        |
|          | 11.76    | 54.55               | 11.11               |        |
| NEW YORK | 10       | 9                   | 6                   | 25     |
|          | 20.83    | 18.75               | 12.50               | 52.08  |
|          | 40.00    | 36.00               | 24.00               |        |
|          | 58.82    | 40.91               | 66.67               |        |
| TOKYO    | 5        | 1                   | 2                   | 8      |
|          | 10.42    | 2.08                | 4.17                | 16.67  |
|          | 62.50    | 12.50               | 25.00               |        |
|          | 29.41    | 4.55                | 22.22               |        |
| Total    | 17       | 22                  | 9                   | 48     |
|          | 35.42    | 45.83               | 18.75               | 100.00 |

## How can we change the output?

- NOPERCENT – removes the Percents
- NOCUM – removes the cumulative statistics
- LIST – eliminates the grid-like appearance of the output

One way of getting rid of the clutter and keeping only the things you want to see.



# Proc Freq – Cleaned up.

```
PROC FREQ DATA=Work.Company;  
TABLES City*Position / list nocum noperc;  
RUN;
```

The SAS System

The FREQ Procedure

| CITY     | POSITION        | Frequency |
|----------|-----------------|-----------|
| LONDON   | ADMIN           | 2         |
| LONDON   | SALES/MARKETING | 12        |
| LONDON   | TECHN. SERVICES | 1         |
| NEW YORK | ADMIN           | 10        |
| NEW YORK | SALES/MARKETING | 9         |
| NEW YORK | TECHN. SERVICES | 6         |
| TOKYO    | ADMIN           | 5         |
| TOKYO    | SALES/MARKETING | 1         |
| TOKYO    | TECHN. SERVICES | 2         |

**What will my output look like now?**

# Identifying Outliers using the Proc Freq

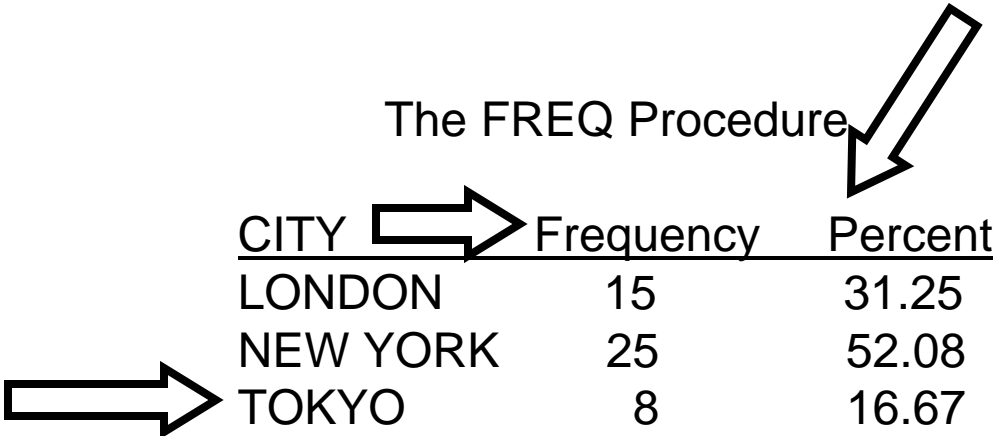
- An Outliers is an unexpected value in a variable that you do not want to see.
- Discuss how can we identify them using a Proc freq procedure?

# Outliers

```
PROC FREQ DATA=Work.Company ;  
TABLES City / list nocum;  
RUN;
```

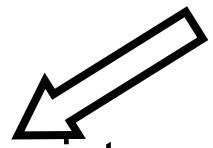
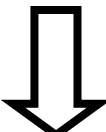
The FREQ Procedure

| <u>CITY</u> | <u>Frequency</u> | <u>Percent</u> |
|-------------|------------------|----------------|
| LONDON      | 15               | 31.25          |
| NEW YORK    | 25               | 52.08          |
| TOKYO       | 8                | 16.67          |



# Outliers

```
PROC FREQ DATA=Work.Company;  
TABLES City / out=ck_stats(where=(city = 'TOKYO')) noprint ;  
RUN;
```



```
Proc Print data=ck_stats;  
Run;
```

The SAS System

| Obs | CITY  | COUNT | PERCENT |
|-----|-------|-------|---------|
| 1   | TOKYO | 8     | 16.6667 |

# ODS and Proc Freq

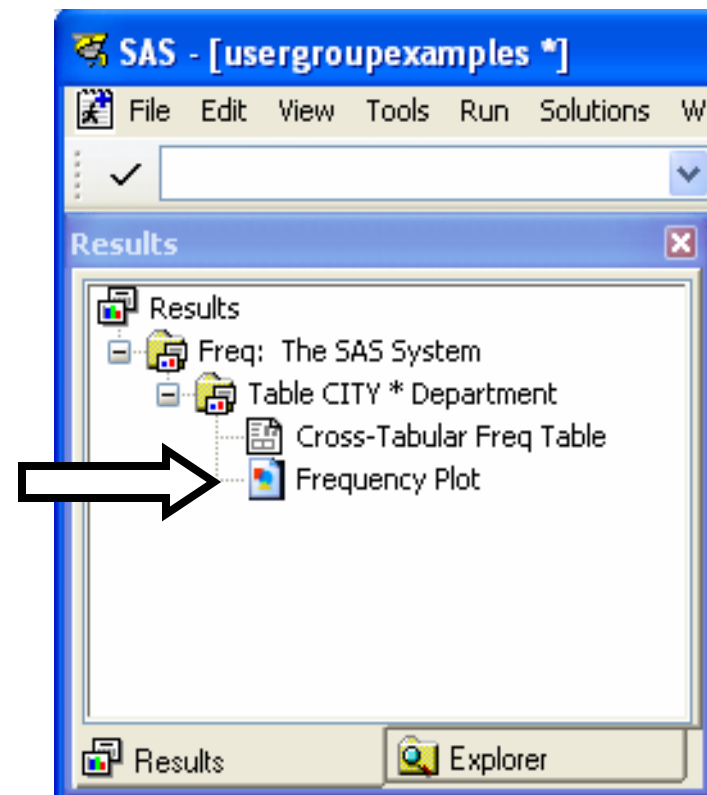
ODS Graphics ON;

```
PROC FREQ DATA=mydata order=freq ;
```

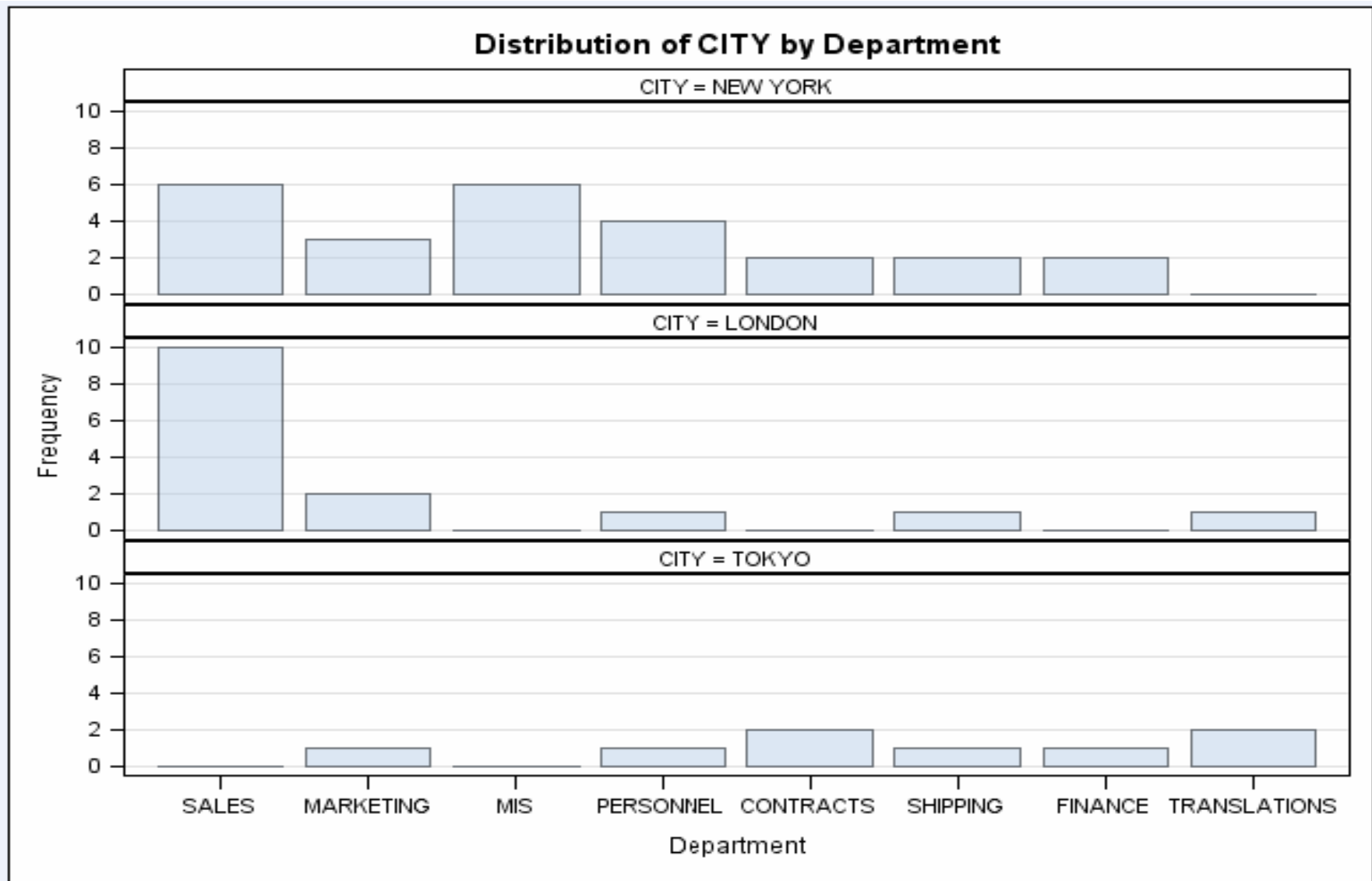
```
TABLES City * Depatment;
```

```
RUN;
```

ODS Graphics OFF;



## 9.2 Proc Frequency output

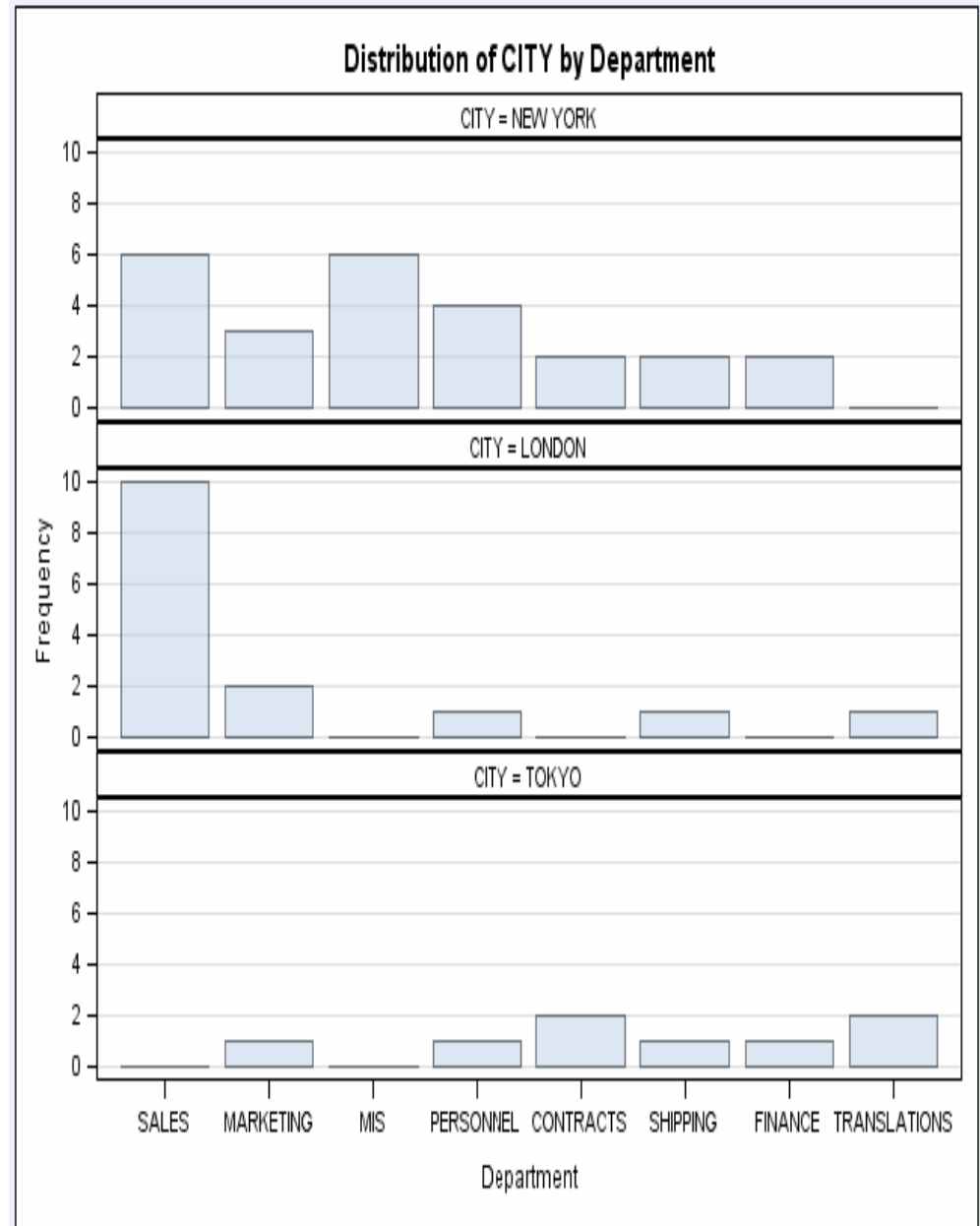


The SAS System

The FREQ Procedure

Table of CITY by POSITION

| CITY     | POSITION |                     |                     |  | Total  |
|----------|----------|---------------------|---------------------|--|--------|
|          | ADMIN    | SALES/MA<br>RKETING | TECHN. S<br>ERVICES |  |        |
| LONDON   | 2        | 12                  | 1                   |  | 15     |
|          | 4.17     | 25.00               | 2.08                |  | 31.25  |
|          | 13.33    | 80.00               | 6.67                |  |        |
|          | 11.76    | 54.55               | 11.11               |  |        |
| NEW YORK | 10       | 9                   | 6                   |  | 25     |
|          | 20.83    | 18.75               | 12.50               |  | 52.08  |
|          | 40.00    | 36.00               | 24.00               |  |        |
|          | 58.82    | 40.91               | 66.67               |  |        |
| TOKYO    | 5        | 1                   | 2                   |  | 8      |
|          | 10.42    | 2.08                | 4.17                |  | 16.67  |
|          | 62.50    | 12.50               | 25.00               |  |        |
|          | 29.41    | 4.55                | 22.22               |  |        |
| Total    | 17       | 22                  | 9                   |  | 48     |
|          | 35.42    | 45.83               | 18.75               |  | 100.00 |



# Point and Click in Enterprise Guide

- Introduction to SAS Enterprise Guide and how to get started.



# SAS Enterprise Guide Structure

To begin work with SAS Enterprise Guide, you

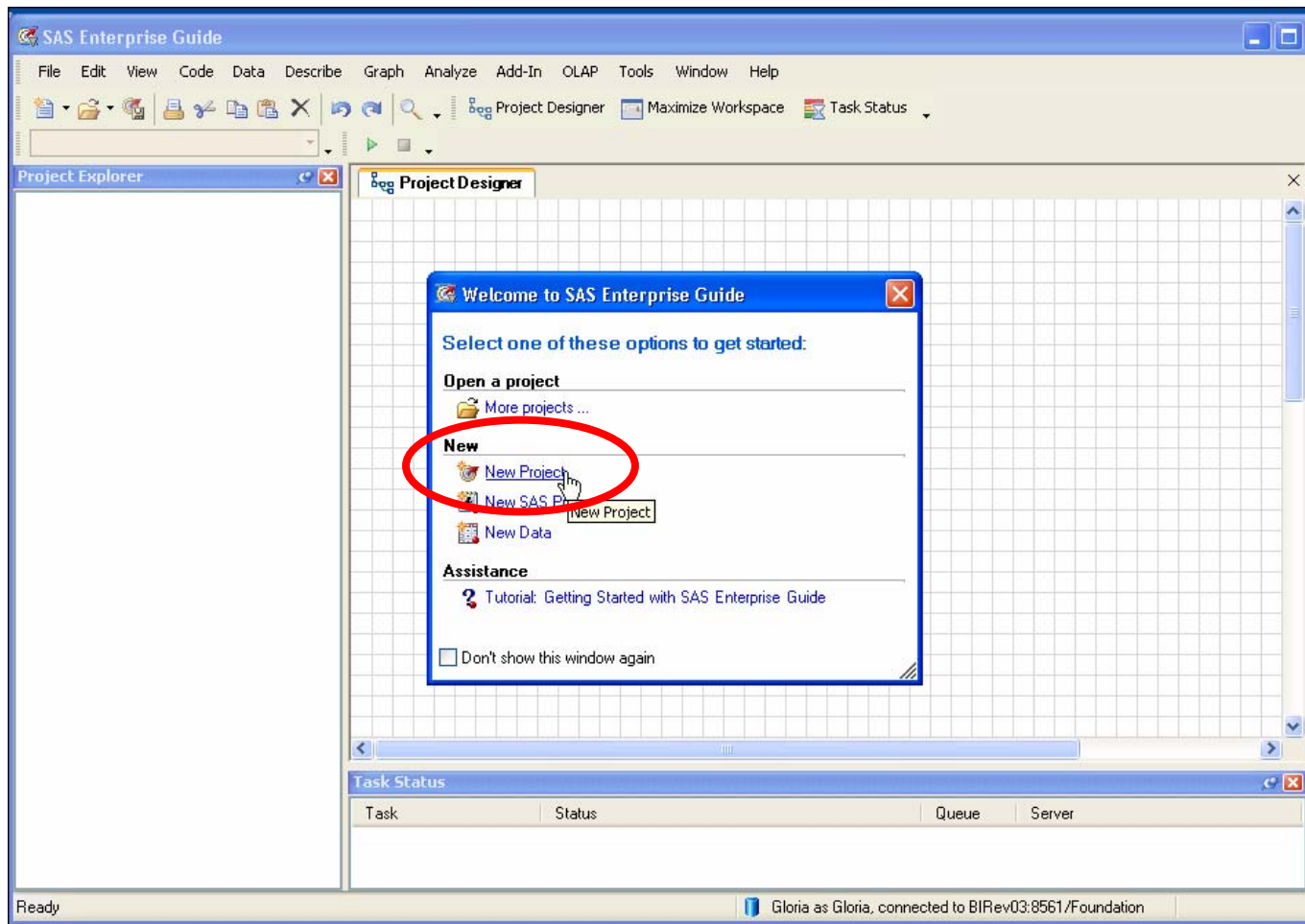
- 1. create a project
- 2. add data to the project
- 3. run tasks against the data.

Additionally, you can

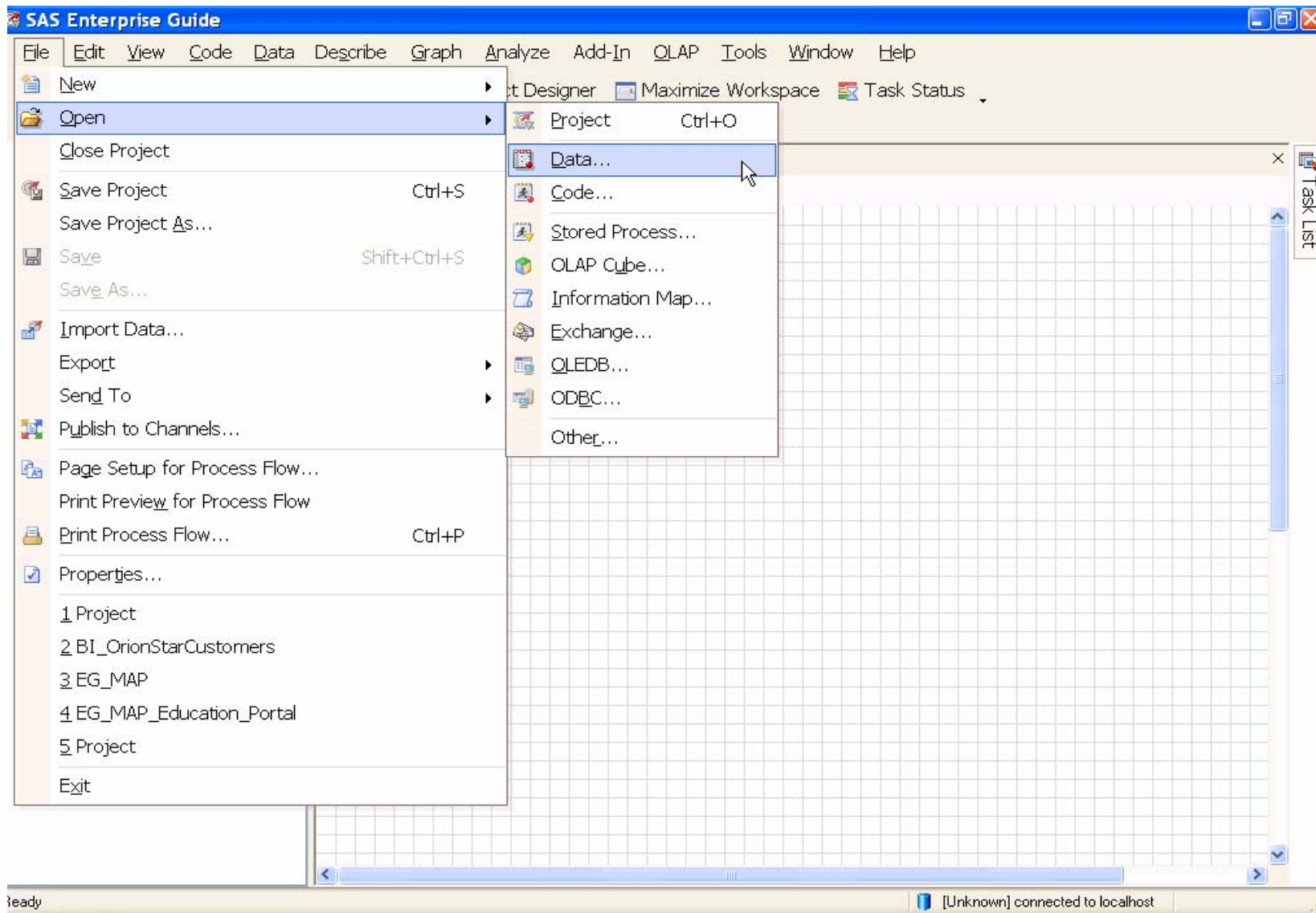
- 4. customize results
- 5. automate the process.

# Welcome to SAS Enterprise Guide

The welcome window enables the user to create a new project or open an existing project.



# Inserting Data



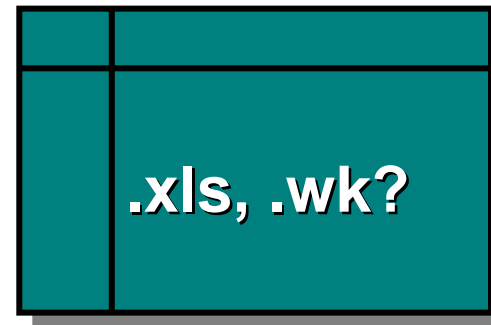
# Inserting Data

SAS Enterprise Guide can read data from a variety of different formats and convert the data into SAS table format.

## SAS Tables



## Spreadsheets



## Text Files



## Database Files



# Create a One-Way Frequency

The screenshot displays the SAS Enterprise Guide interface with three main windows:

- Project Explorer:** Shows a project structure with a 'Process Flow' containing a 'customer\_dim' task and a sub-task 'One-Way Frequencies'.
- Process Flow:** A visual representation of the task flow, showing a data source 'customer\_dim' feeding into a 'One-Way Frequencies' task.
- Code Preview for Task:** A window showing the SAS code generated for the task. The code includes a title, a footnote, and the PROC FREQ statement with options for sorting and displaying results as a table.

The 'One-Way Frequencies for CUSTOMER\_DIM' dialog box is open, showing the configuration of the task:

- Task Roles:** A list of roles including Statistics, Plots, Results, and Titles.
- Variables to assign:** A list of variables from the 'customer\_dim' dataset, including Customer\_ID, Customer\_Country, Customer\_Gender, Customer\_Name, Customer\_FirstName, Customer\_LastName, Customer\_BirthDate, Customer\_Age\_Group, Customer\_Type, Customer\_Group, and Customer\_Age.
- Task roles:** A list of roles assigned to the task, including Analysis variables, Customer\_Country, Frequency count (Limit: 1), and Group analysis by.

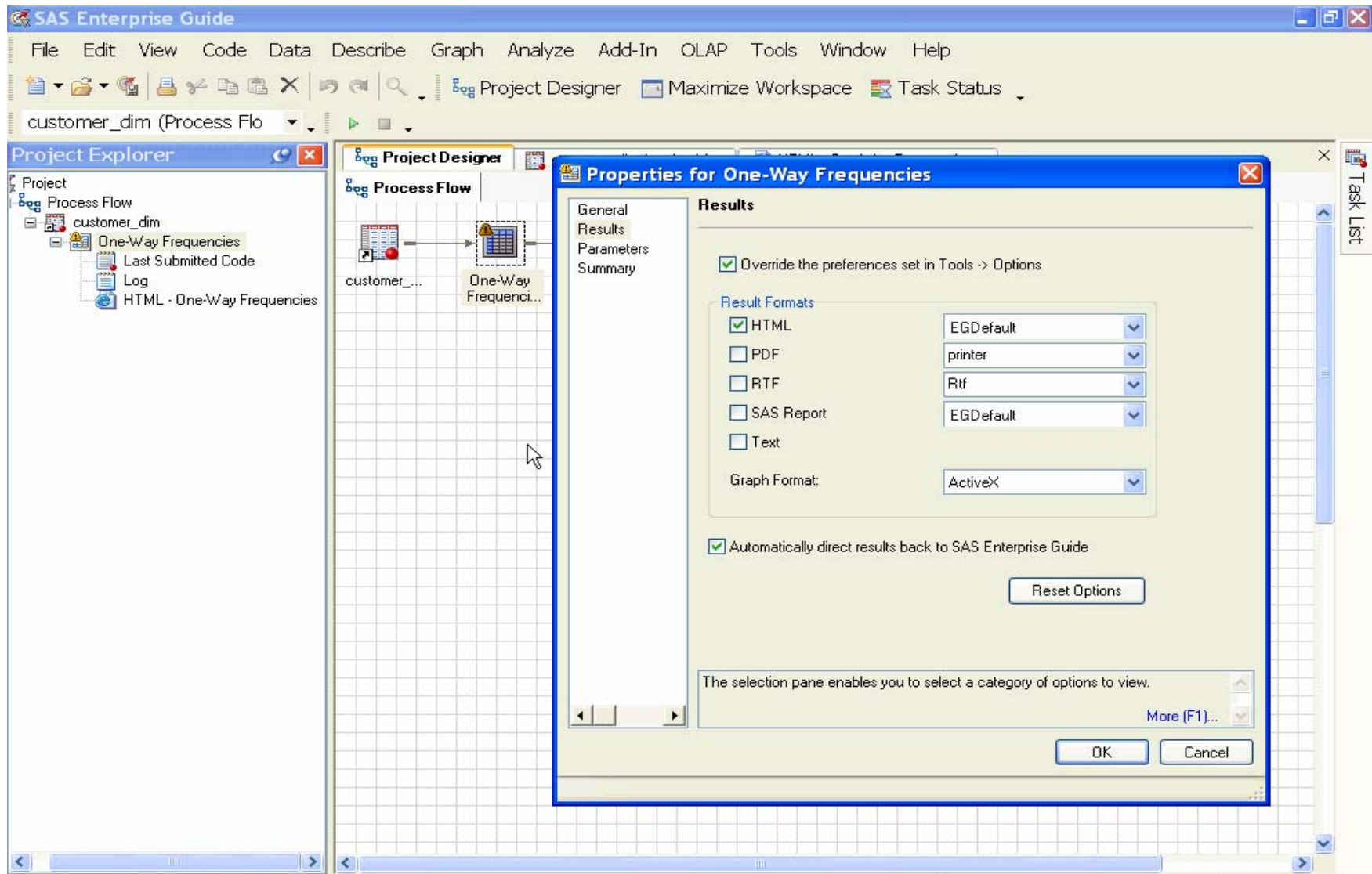
The dialog box also includes a 'Preview code' button and a 'Run' button. A note at the bottom states: "Enables you to preview the code that is generated automatically when you run a task. When you preview your task code, you can insert your own code into the automatically generated code."

```
TITLE2 "Results";
FOOTNOTE;
FOOTNOTE1 "Generated by the SAS System (& SAS);
PROC FREQ DATA=WORK.SORT
ORDER=INTERNAL
;
TABLES Customer_Country / SCORES=TABLE;
RUN;
RUN;
/* -----
End of task code.
```

The screenshot displays the SAS Enterprise Guide interface. The top window is the 'SAS Enterprise Guide' application with a menu bar (File, Edit, View, Code, Data, Describe, Graph, Analyze, Add-In, OLAP, Tools, Window, Help) and a toolbar. Below the toolbar is the 'Project Explorer' pane on the left, showing a project structure with 'customer\_dim' and 'HTML - One-Way Frequencies' highlighted by a white arrow. The main workspace is 'Project Designer', showing a 'Process Flow' diagram with three steps: 'customer\_dim', 'One-Way Frequencies', and 'HTML - One-Way Frequencies'. A white arrow points to the 'HTML - One-Way Frequencies' step. Below the process flow is the 'SAS Output - Microsoft Internet Explorer' window, which displays the results of the 'HTML - One-Way Frequencies' step. The output page features the SAS logo and the text 'Enterprise Guide. The Power to Know.' followed by the title 'One-Way Frequencies Results' and the subtitle 'The FREQ Procedure'. A table titled 'Customer Country' is displayed, showing the following data:

| Customer Country |           |         |                      |                    |
|------------------|-----------|---------|----------------------|--------------------|
| Customer_Country | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
| AU               | 876       | 5.11    | 876                  | 5.11               |
| BE               | 376       | 2.19    | 1252                 | 7.30               |

# Different Output Types



# Point and Click in Enterprise Guide

- Creating a stored process using Enterprise Guide



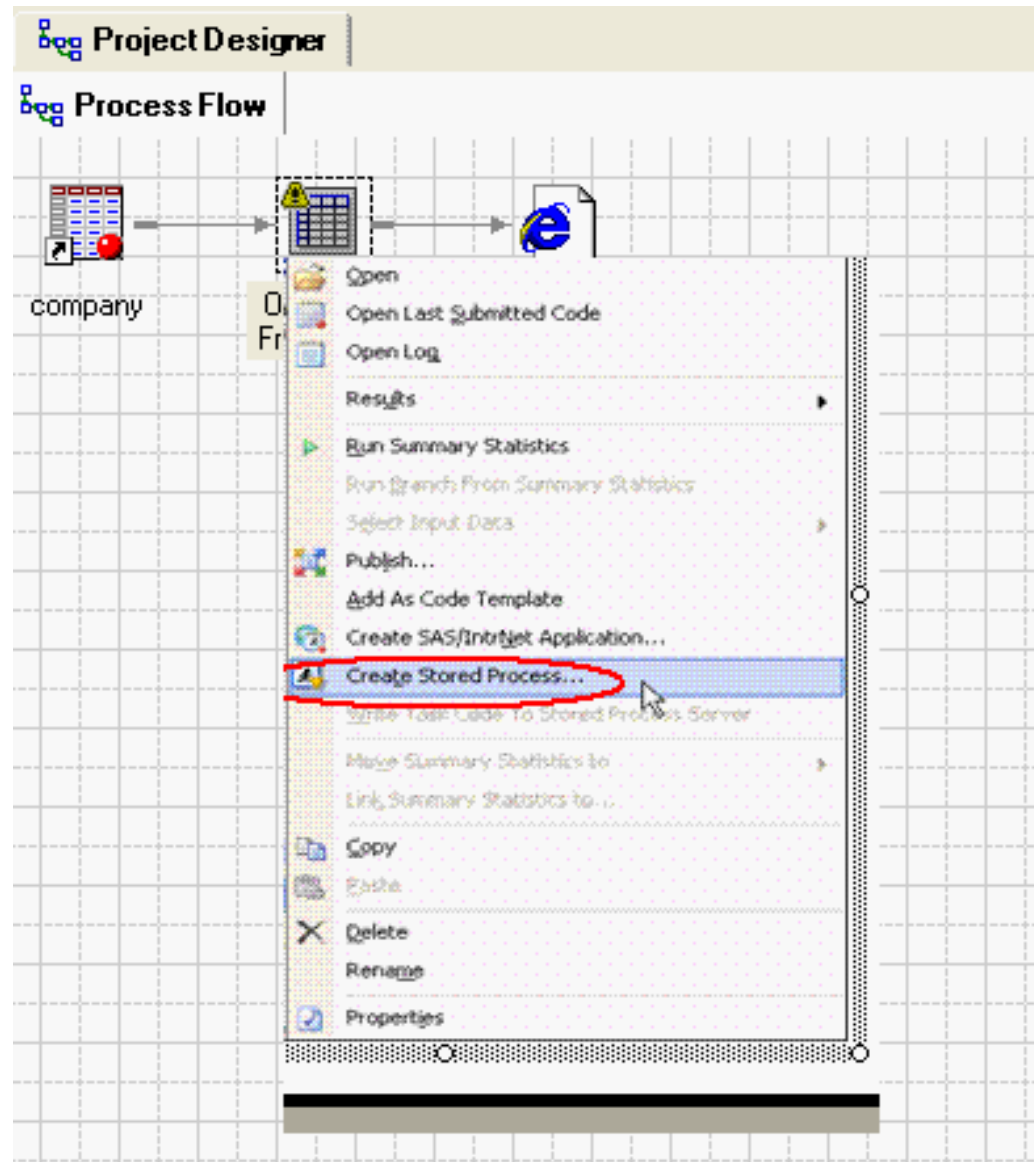
# Create a Stored Process

There are several ways to create a stored process through SAS Enterprise Guide:

- ★ Use the Stored Process Wizard to generate a stored process from a task.
- Use the Stored Process Wizard to insert code into a new stored process. This code can be generated by
  - exporting the code from one or more tasks in a project
  - using code written through SAS Enterprise Guide or another SAS programming interface
  - typing the code into the wizard.

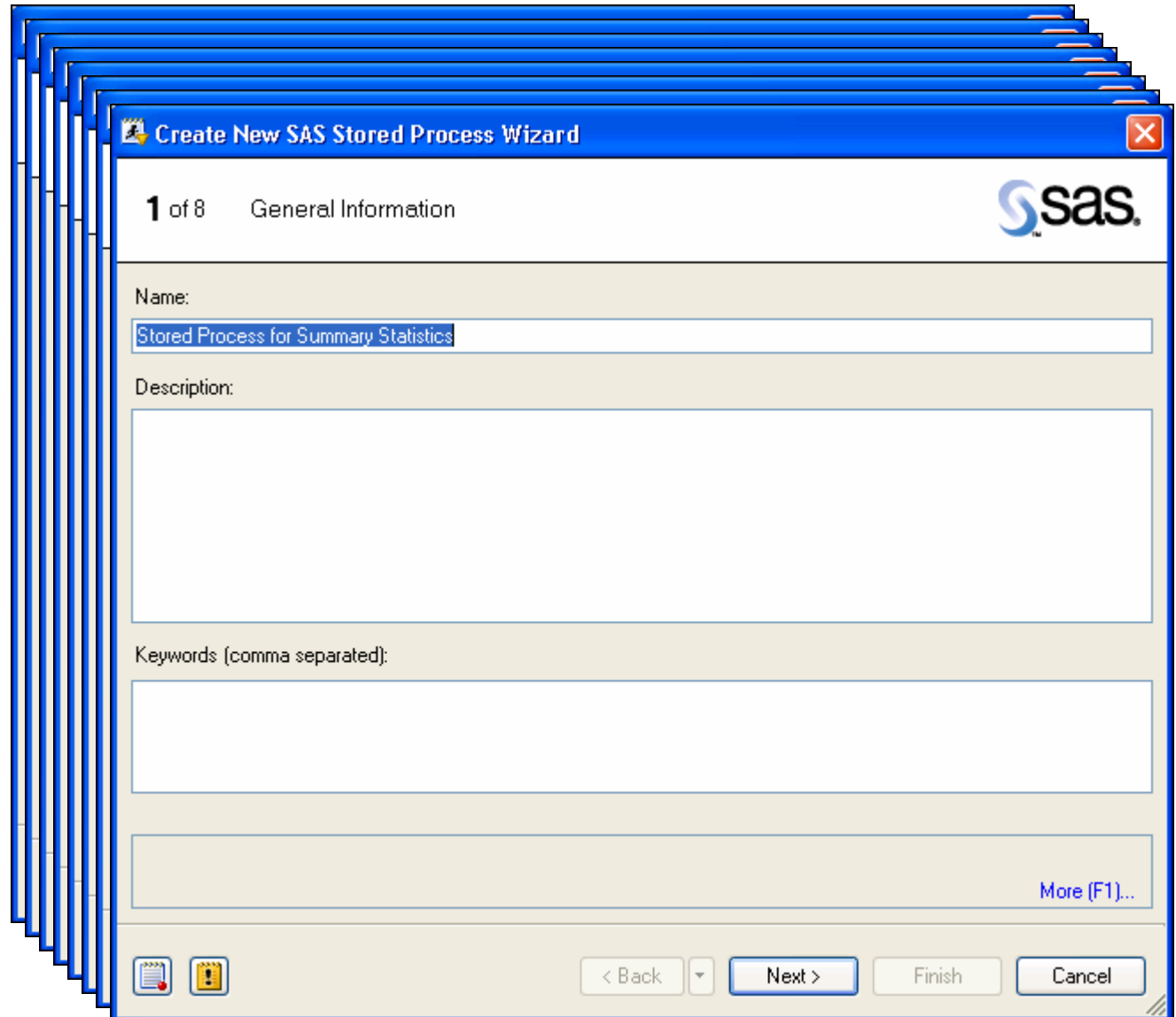
# Create a Stored Process from a Task

Right-click on a task in the project and select **Create Stored Process....**



# The Stored Process Wizard

The Stored Process Wizard guides you through a series of steps to create a stored process. The number of steps needed depends on how you create the new stored process.



# Step 1: Name, Description, and Keywords

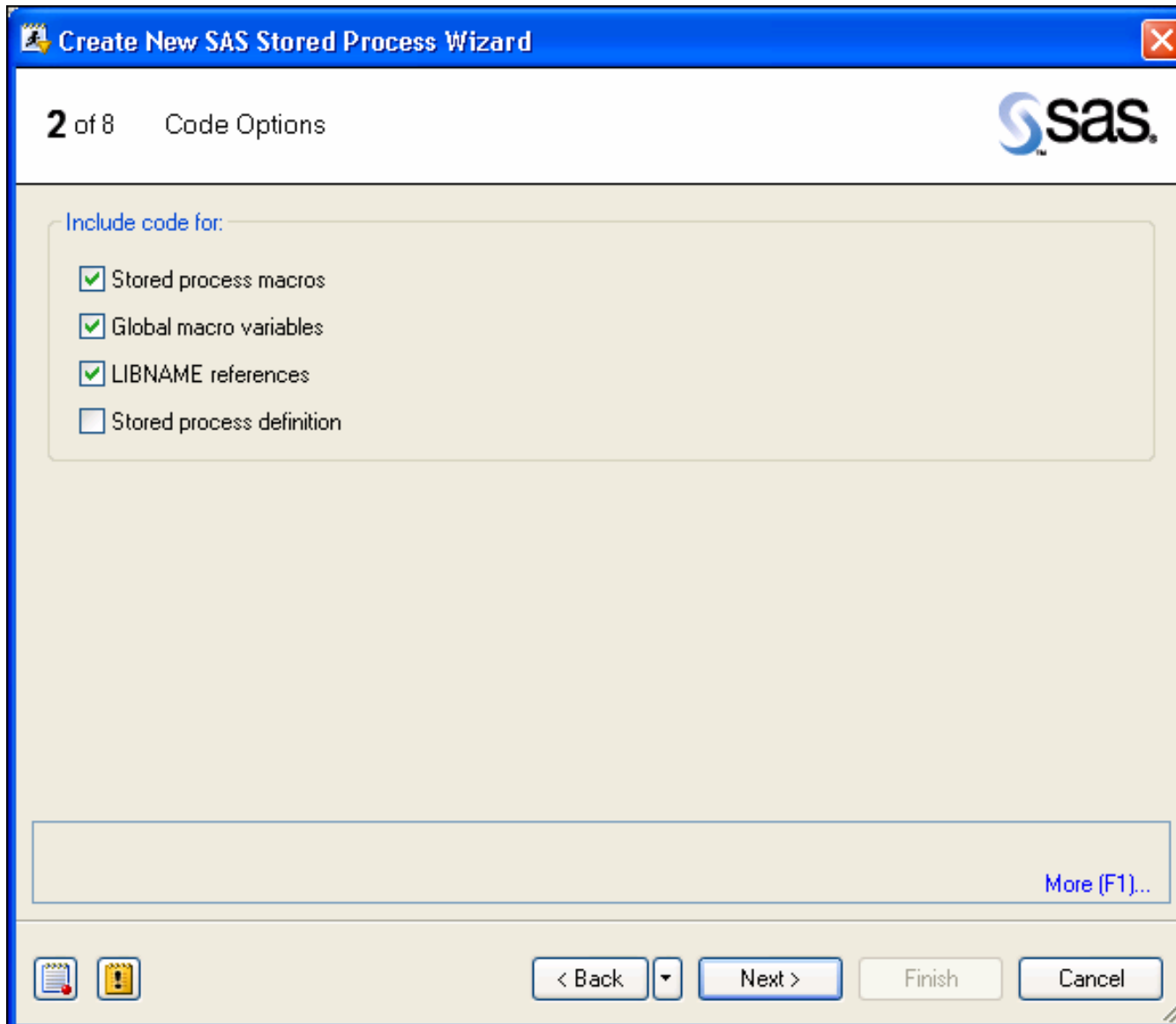
The screenshot shows a Windows-style dialog box titled "Create New SAS Stored Process Wizard". The title bar includes a close button (X) on the right. Below the title bar, the text "1 of 8 General Information" is displayed on the left, and the SAS logo is on the right. The main area of the dialog is divided into three sections:

- Name:** A text input field containing "SP Example".
- Description:** A large, empty text area for entering a description.
- Keywords (comma separated):** A text input field for entering keywords, currently empty.

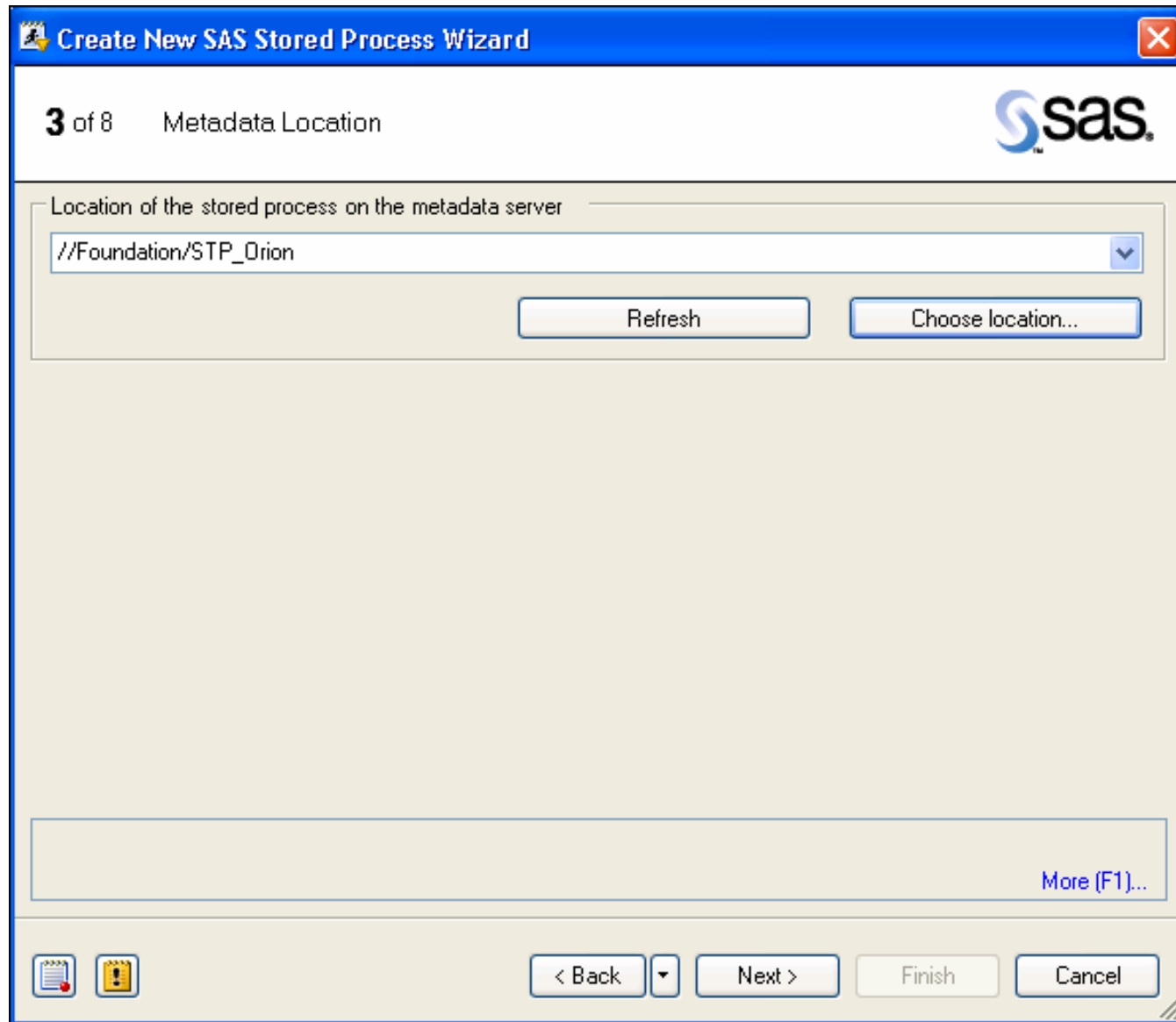
At the bottom right of the main area, there is a link that says "More (F1)...". The bottom of the dialog features a navigation bar with several icons and buttons:

- On the left, there are icons for a document with a red checkmark and a yellow warning sign.
- In the center, there are buttons for "< Back", "Next >", "Finish", and "Cancel".

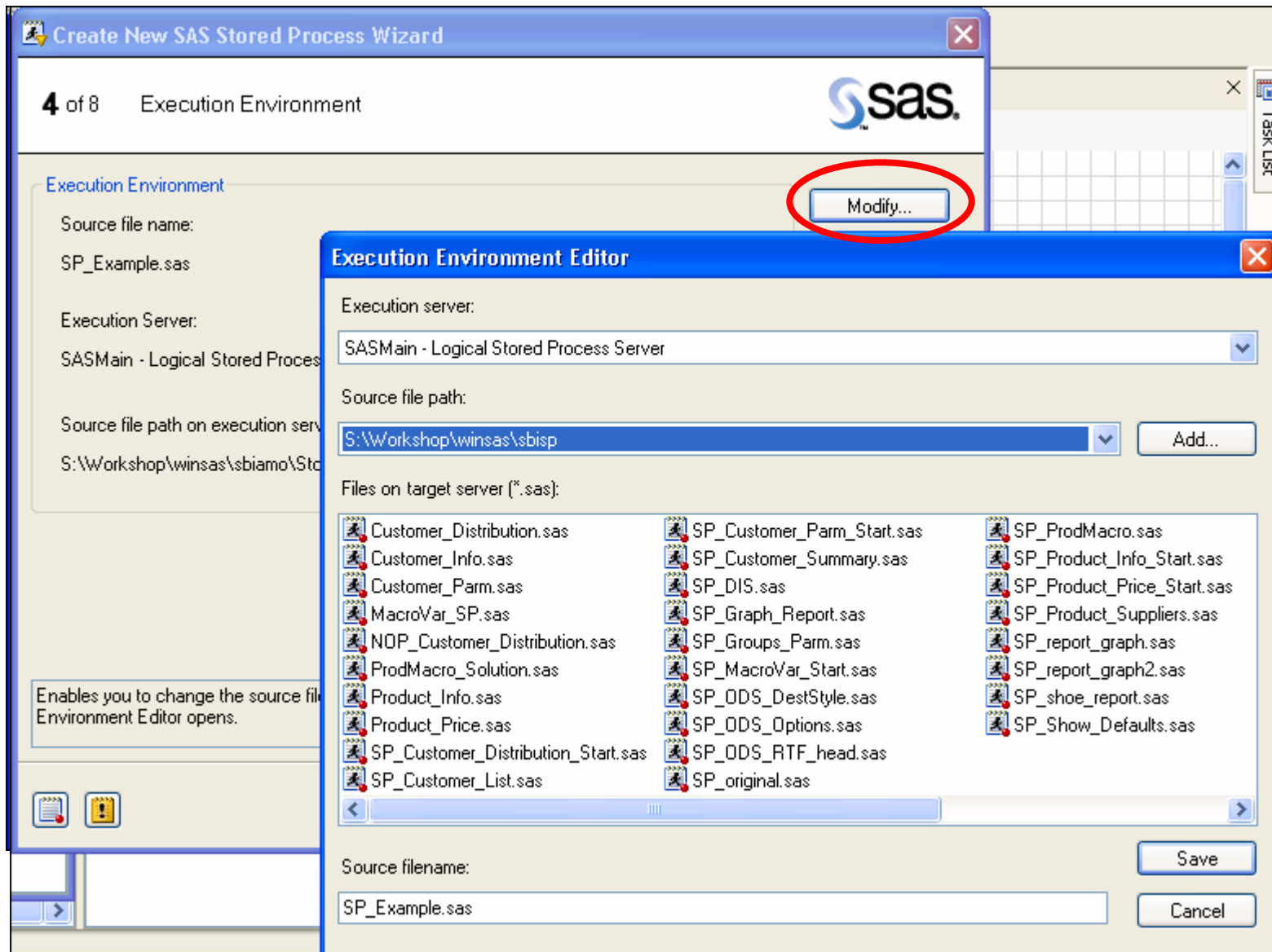
# Step 2: Code Options



# Step 3: Select BI Folder



# Step 4: Execution Information



# Step 5: Librefs

**Create New SAS Stored Process Wizard**

5 of 8 Librefs

| Library                                      | LIBNAME statement   |
|--|---|
| <input checked="" type="checkbox"/> SP_Orion | Libname ORIONSTP META ipaddr='BIRev03' port=8561 protocol=bridge userid='Gloria' pw='{... |

Include LIBNAME statement in SAS code

Library Name:

Type:

Host name:

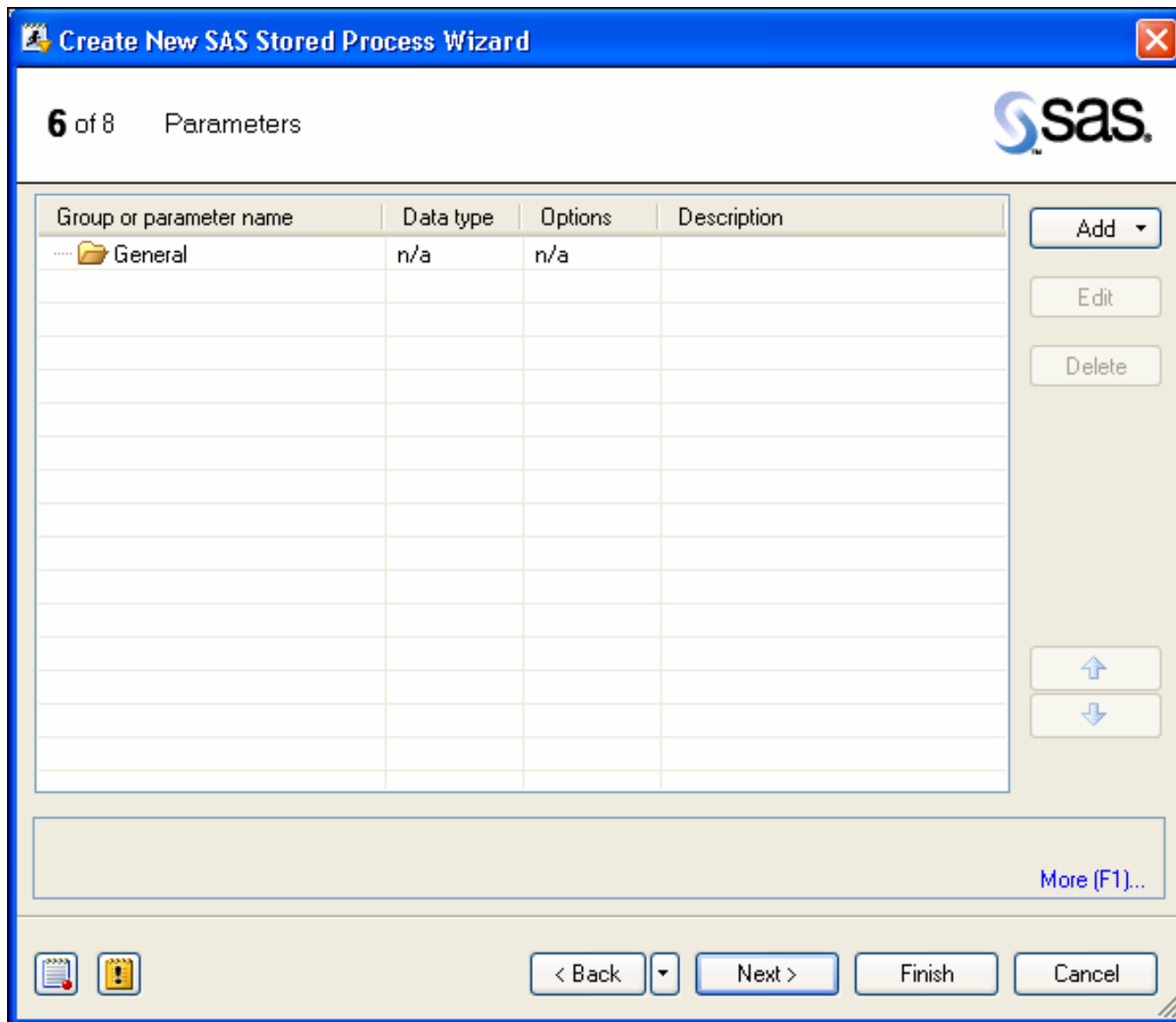
Use custom LIBNAME statement

```
Libname ORIONSTP META ipaddr='BIRev03' port=8561
protocol=bridge userid='Gloria'
pw='{sas001}U3R1ZGVudDE='
repid=A0000001.A5RRILYV libid=A5RRILYV.BH0000RZ
```

Select the check box of library assignment that you want to include in your code. Each library in the table is associated with a LIBNAME statement. [More \(F1\)...](#)



# Step 6: Specify Parameters



# Step 7: Output Options

The screenshot shows the 'Create New SAS Stored Process Wizard' dialog box, specifically the 'Output Options and Input Streams' step (7 of 8). The window title is 'Create New SAS Stored Process Wizard' and the SAS logo is in the top right corner.

**Output Options:**

- None
- Streaming output
  - Create HTML user interface
- Transient package of files
- Permanent

A dropdown menu below the radio buttons is set to 'File system'.

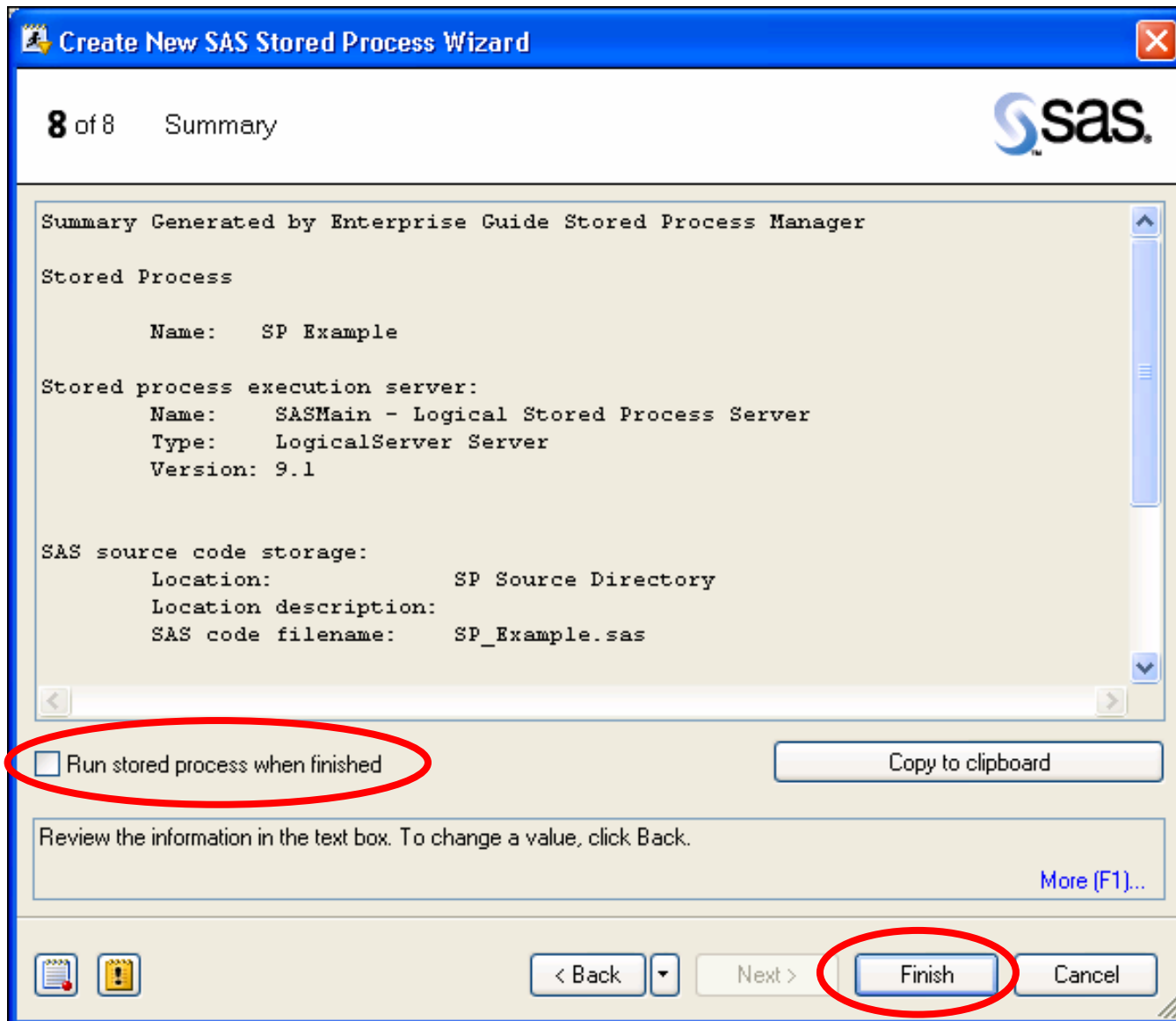
**Input Streams:**

| Name | Multi-read | Description |
|------|------------|-------------|
|------|------------|-------------|

Buttons for 'Add...', 'Edit...', and 'Delete...' are located to the right of the table. A 'More (F1)...' link is at the bottom right of the table area.

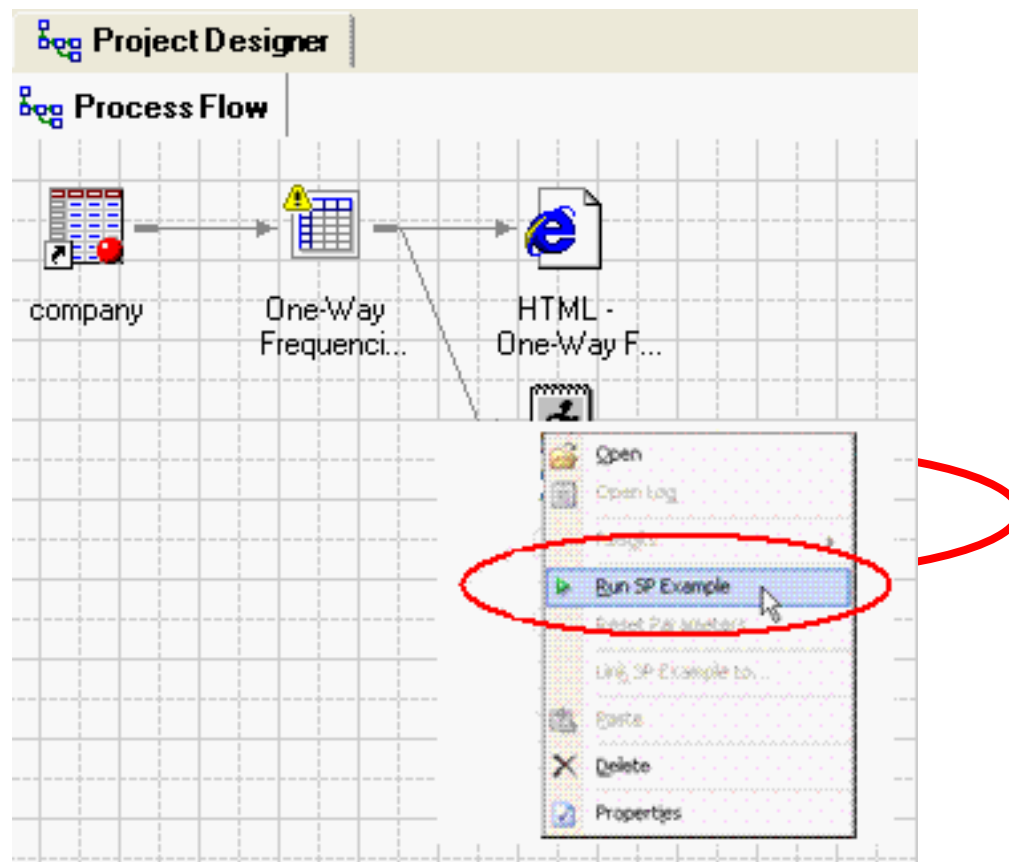
At the bottom of the dialog, there are icons for help and a warning, and navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

# Step 8: Review and Finish



# Running a Stored Process

After the stored process has been added to the project, right-click on it to run the stored process. Note how the stored process name appears automatically.



# Methods for Invoking Stored Processes

Stored processes can be invoked from several of the SAS Intelligence Platform applications.

