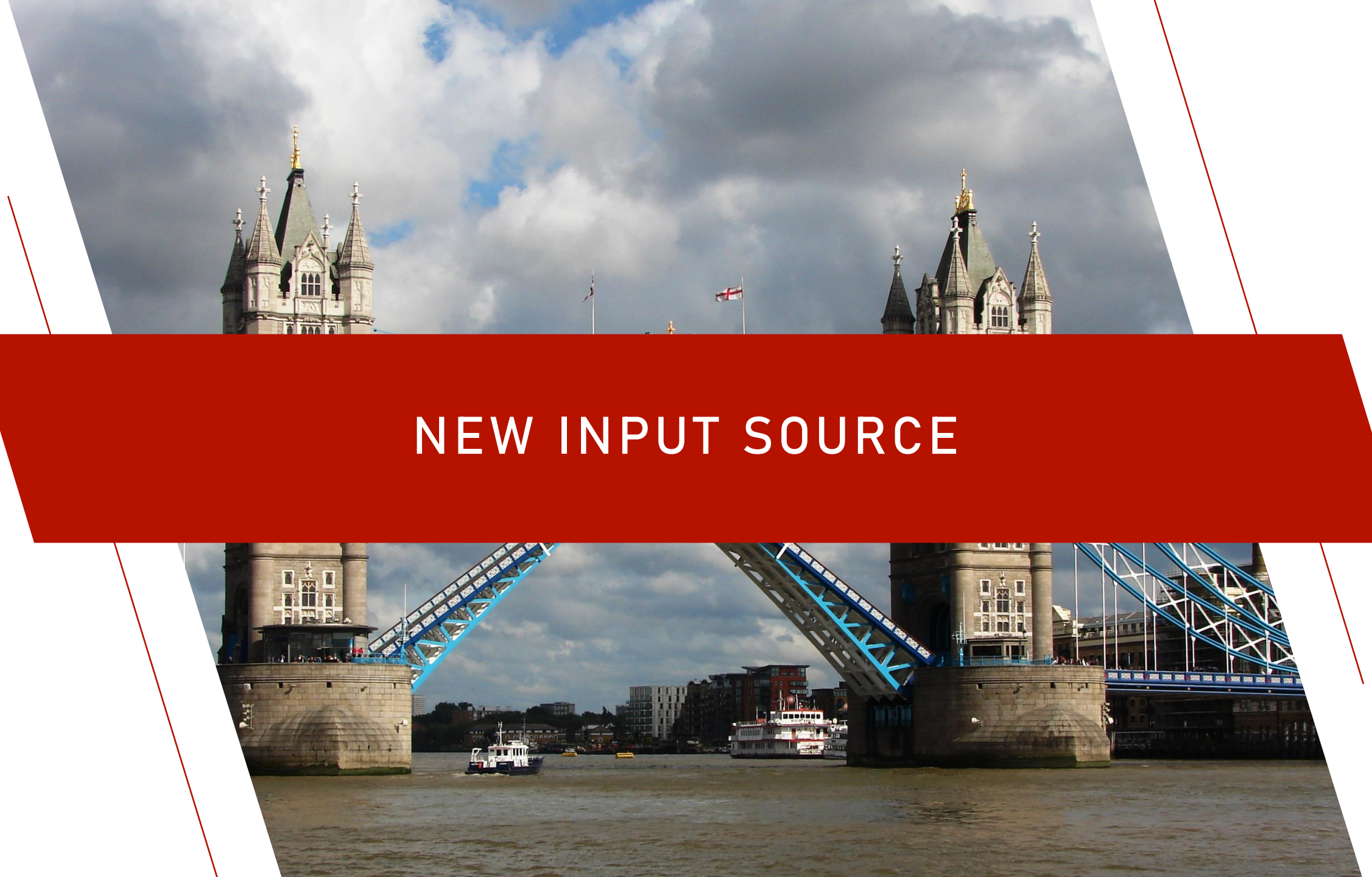
REPORT WRITER ENHANCEMENTS 2020 - 2024

DireXions 2024

AGENDA

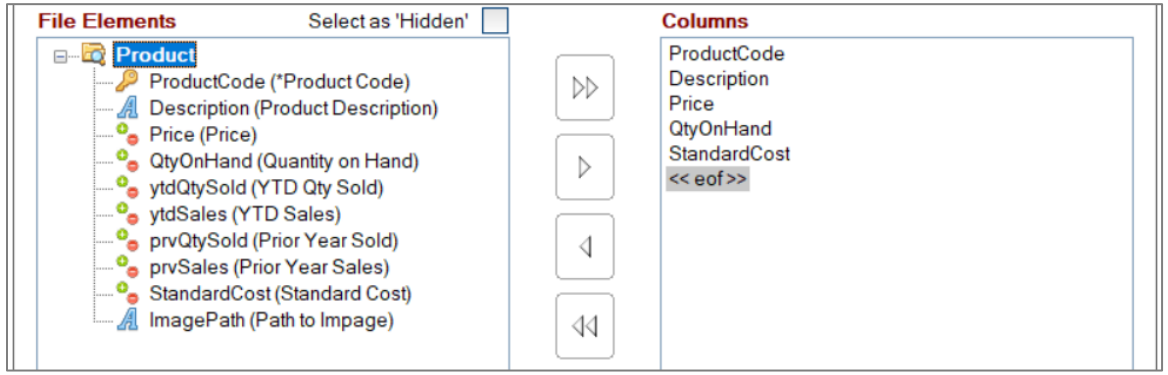
1. New Input Source
2. Parameter Specifications
3. Report Designer Enhancements
4. New Report Options
5. Dynamic Run-Time Filters



NEW INPUT SOURCE

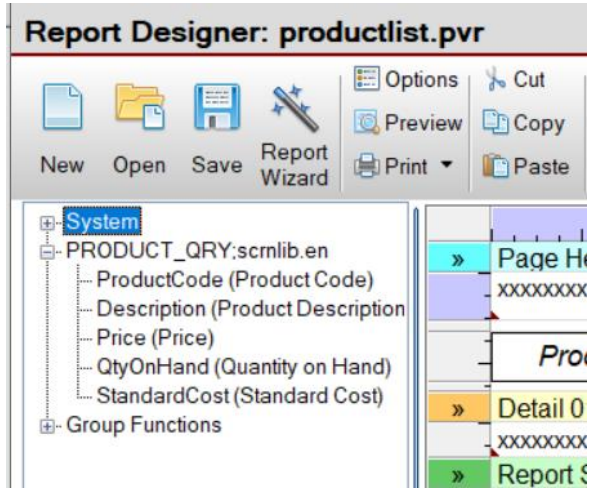
New Input Source

- Query Definition as an Input Source
  - Supports Query Definitions based on PxPlus files with embedded dictionaries, View definitions or external database
  - Adds another way to access a dataset comprised of multiple related files



Query Definition

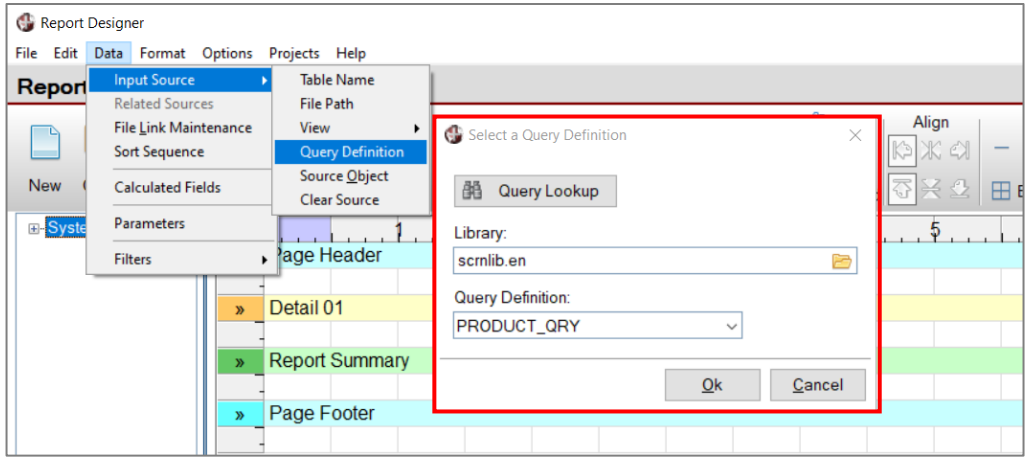
Report Data



REPORT WRITER – NEW INPUT SOURCE

New Input Source

- To assign a query as an input source
  - Data > Input source > Query Definition

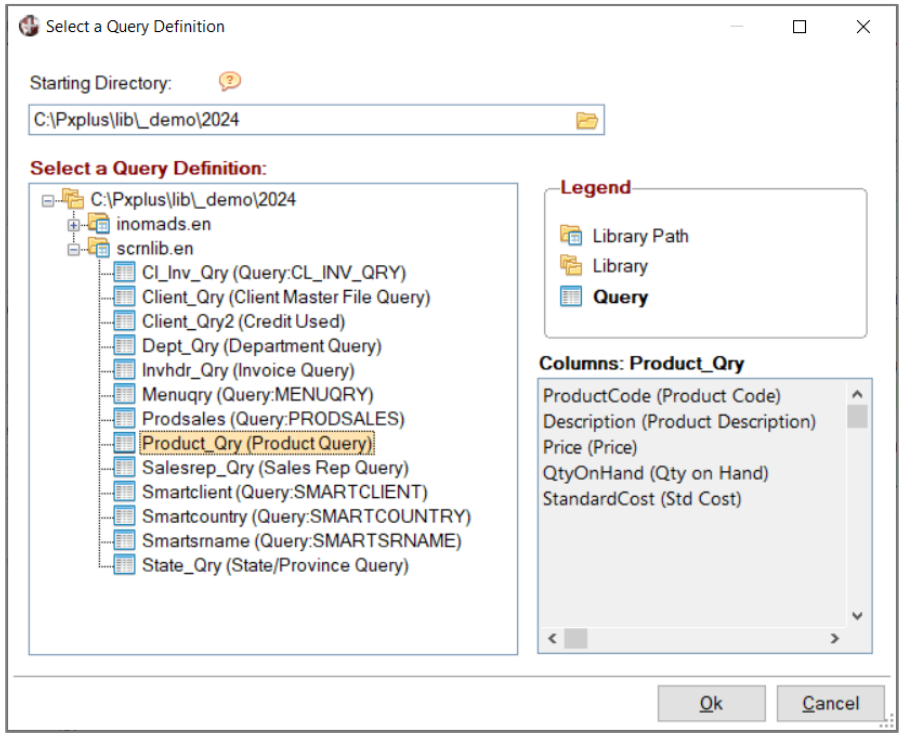


Select the query by identifying the library and query name or by clicking the *Query Lookup* button.

REPORT WRITER – NEW INPUT SOURCE

New Input Source

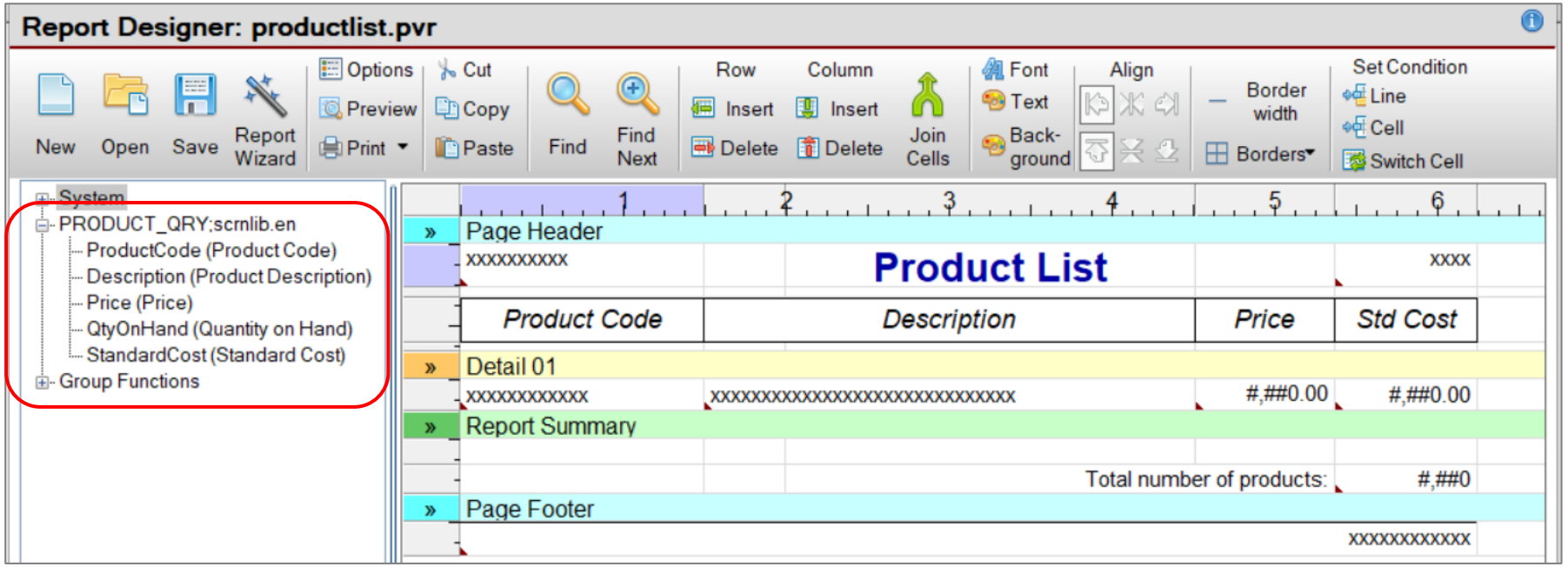
- *Query Lookup* – Select a Query Definition
  - Lists queries that exist in the current directory level and lower



REPORT WRITER – NEW INPUT SOURCE

New Input Source

When selected, the query columns are listed in the Report Designer data pane for inclusion in the report layout



PARAMETER SPECIFICATIONS

PARAMETER SPECIFICATIONS

Parameters

- Values that are supplied by the user or application program when a report is generated.

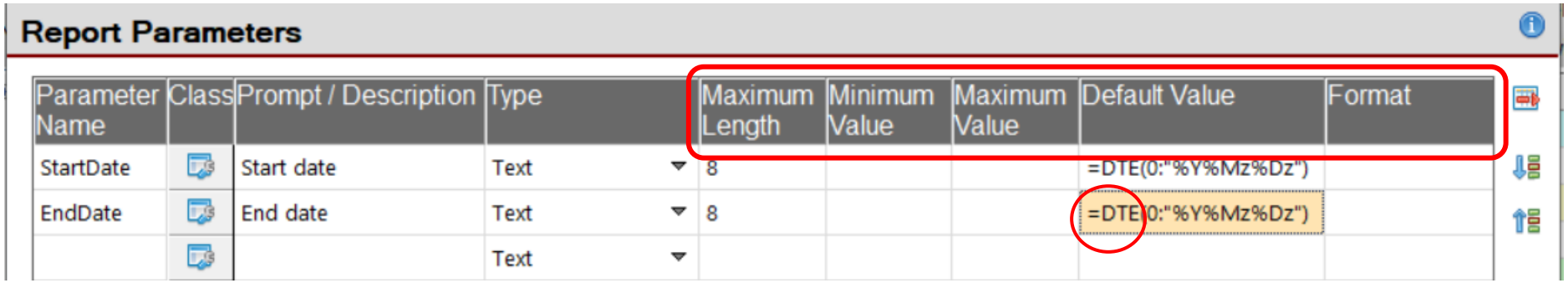
  E.g.

  - Generate data for a particular department to be specified by the user requesting the report.
  - Display transactions between a certain start and end date to be specified at run time.

- Can be displayed in the report, used in formulas, or used to set up selection criteria.

Parameter Expression Support

- Enhanced to allow expressions for Maximum Length, Minimum and Maximum Values, Default Value and Format
  - Expression values preceded by '=', e.g. =DTE(0:"%Y%Mz%Dz")



Parameters Using Dynamic Data Classes

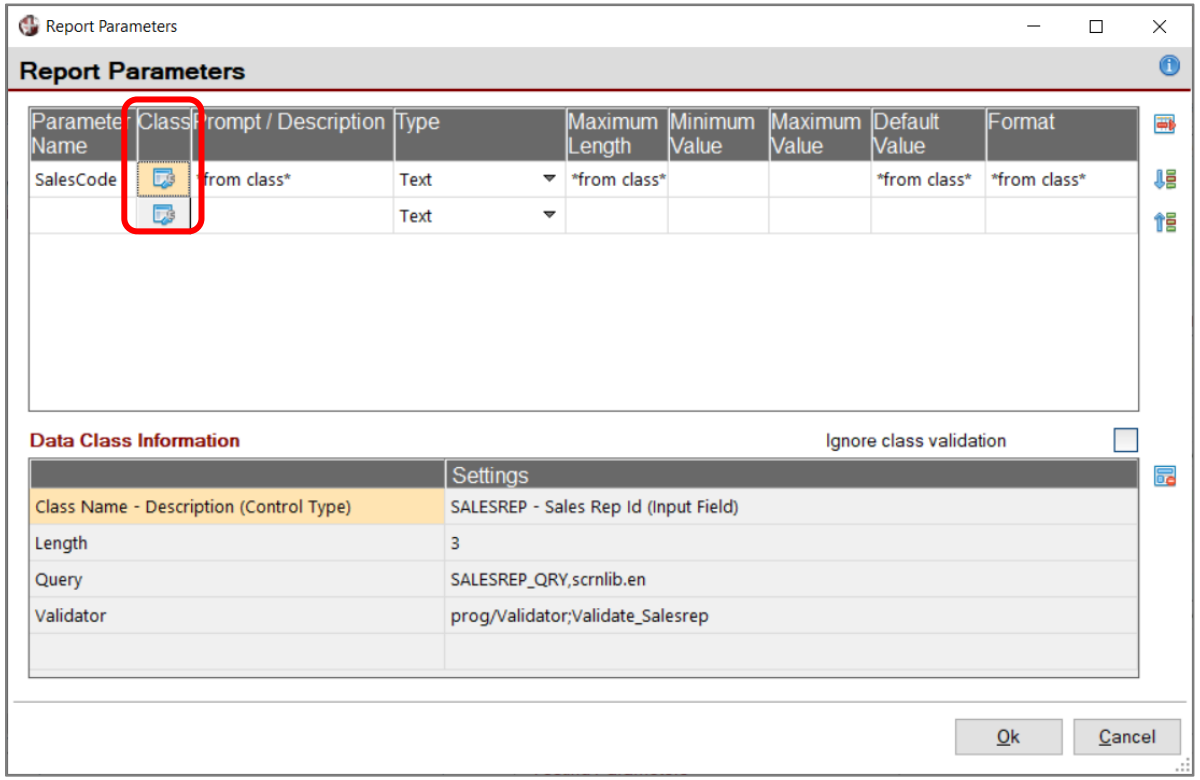
- Data class definition have descriptions, input lengths, default values, formats and validation rules assigned to them, as well as drop box definitions, checkbox input and queries
- By assigning a *Data Class* to a parameter definition, these settings can be used to format input in the default parameter interface at run-time

PARAMETER SPECIFICATIONS

Parameters Using Dynamic Data Classes

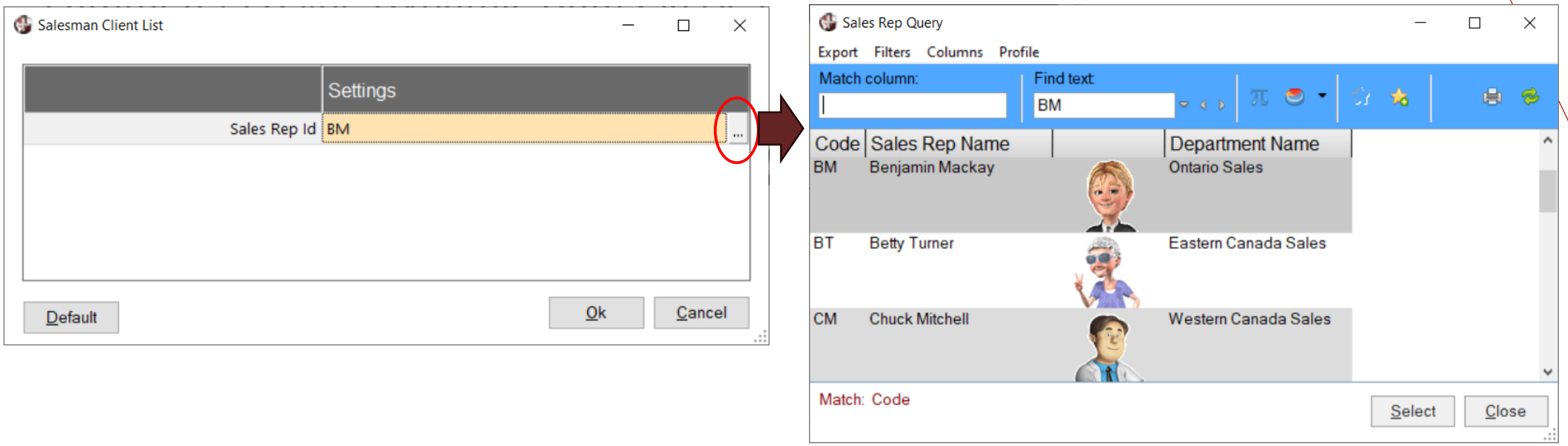
Class selection

Class info



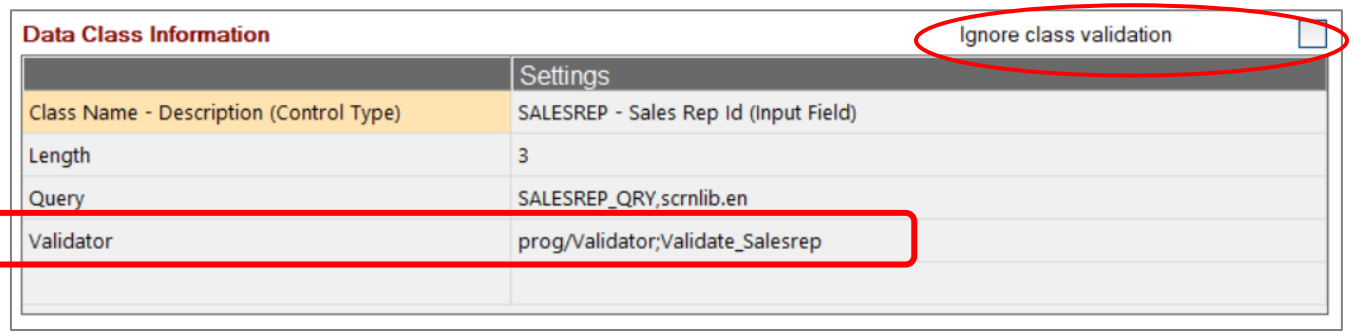
PARAMETER SPECIFICATIONS

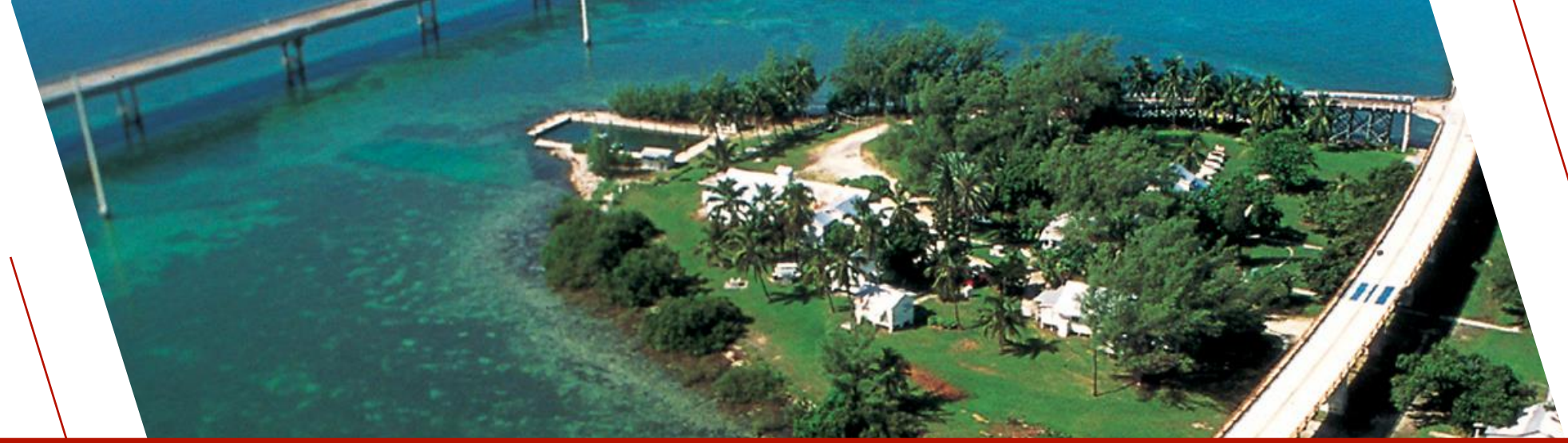
Parameters Using Dynamic Data Classes



Parameters – Ignore Class Validation

- Some Data Classes have validation rules assigned
  - Validation rules require an exact match
  - Sometimes you don't want an exact match, such as when setting up ranges
- *Ignore class validation* option
  - Allows you to use the class for input formatting but not for validation





REPORT DESIGNER ENHANCEMENTS

REPORT DESIGNER ENHANCEMENTS

2020

- Text Alignment Made Easier

Before

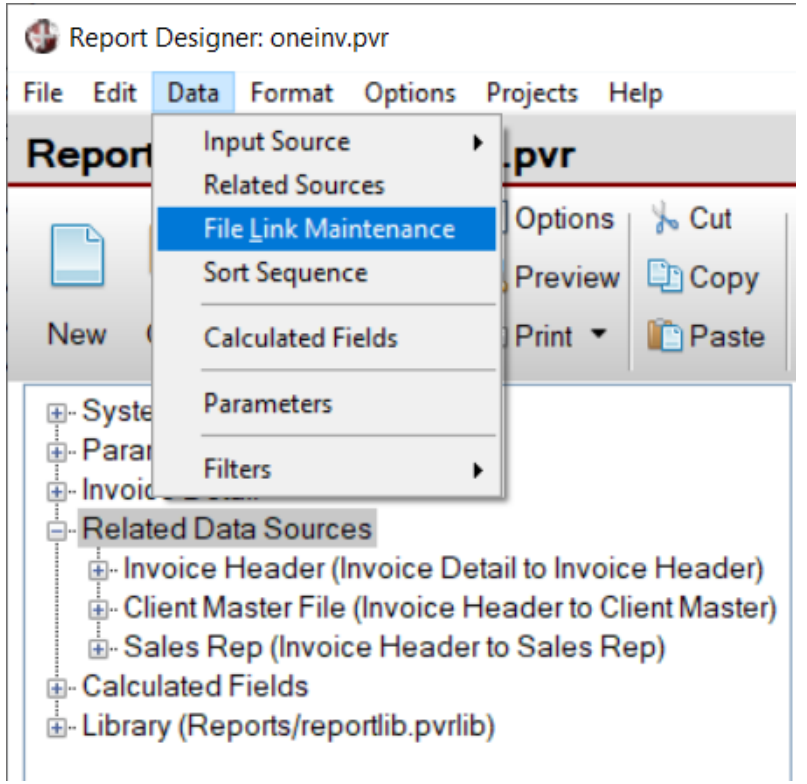
Now

- More choices
- Shows alignment of current cell

Links to File Link Maintenance

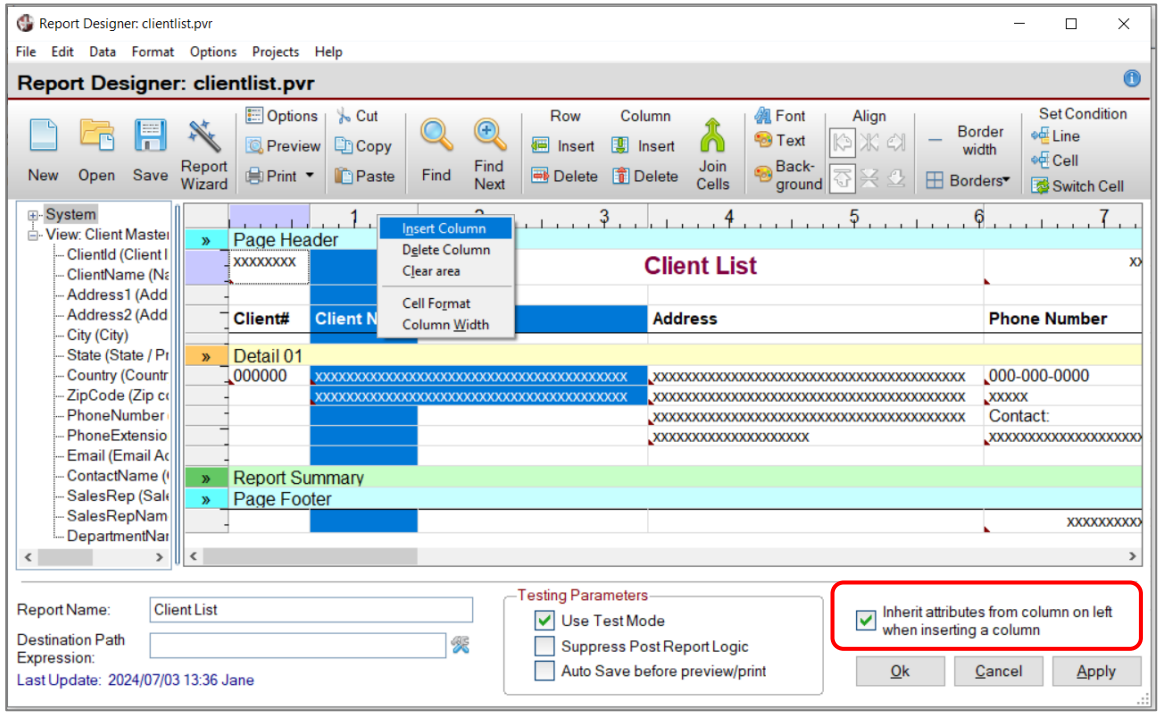
- File Link Maintenance utility lets you define and maintain cross-reference linkages that exist between data files

- Link to *File Link Maintenance* added to *Data* menu
- Don't have to exit the Report Designer to set up file links



Inherit Cell Attributes from Left when Inserting Column

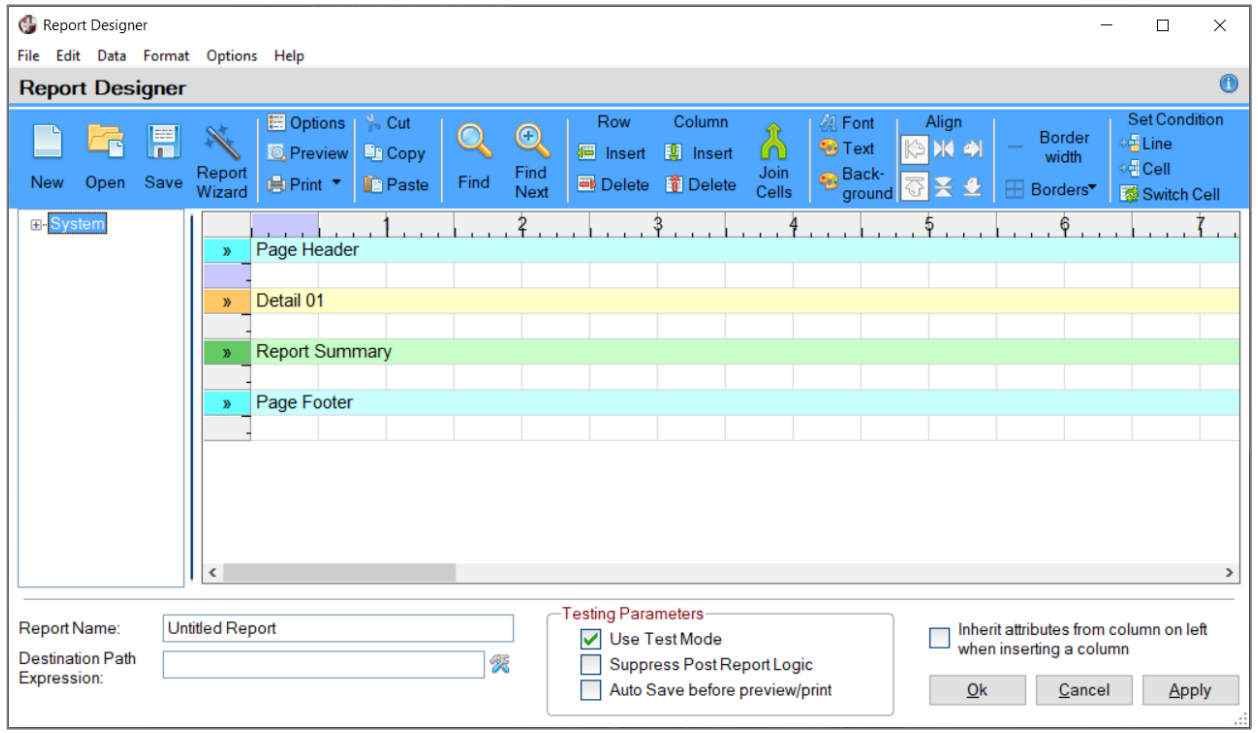
- Option to inherit attributes (font, alignment, word-wrap, colors and borders) from the current cell when inserting a column (like Excel)



REPORT DESIGNER ENHANCEMENTS

Theme Colors

- The Report Designer can be a user-facing feature, so will use the application theme colors, if set.



NEW REPORT OPTIONS

Line Advancement

- Control how line advancement occurs
  - Normal Line Advancement
  - Controlled Line Advancement

10/07/2024 **Sales YTD by Department** 1

Dept	Department Name	RepCode	Sales Rep	Sales YTD	Dept. Total
EAST	Eastern Canada Sales	AN	Anastasia Nelson	$75,583.54	
		BT	Betty Turner	$72,536.49	$148,120.03
LRGE	Large Account Sales	OB	Olivia Blackwood	$40,183.01	$40,183.01
ONT	Ontario Sales	BM	Benjamin Mackay	$97,223.07	
		DK	Donna Kerr	$98,494.33	
		HK	Hank Kane	$120,618.39	$316,335.79
QUE	Quebec Sales	GT	Gordon Taylor	$85,778.96	
		RL	Roberta Lee	$49,032.08	$134,811.04
WEST	Western Canada Sales	CM	Chuck Mitchell	$175,886.34	
		PG	Paul Gonsalvez	$167,909.02	$343,795.36
Company Total					$983,245.23

10/07/2024 **Sales YTD by Department** 1

EAST *Eastern Canada Sales*

RepCode	Sales Rep	Sales YTD
AN	Ana	$75,583.54
BT	Bett	$72,536.49
Departmental Total		$148,120.03

LRGE *Large Account Sales*

RepCode	Sales Rep	Sales YTD
OB	Olivi	$40,183.01
Departmental Total		$40,183.01

ONT *Ontario Sales*

RepCode	Sales Rep	Sales YTD
BM	Benj	$97,223.07
DK	Don	$98,494.33
HK	Han	$120,618.39
Departmental Total		$316,335.79

QUE *Quebec Sales*

RepCode	Sales Rep	Sales YTD
GT	Gor	$85,778.96
RL	Rob	$49,032.08
Departmental Total		$134,811.04

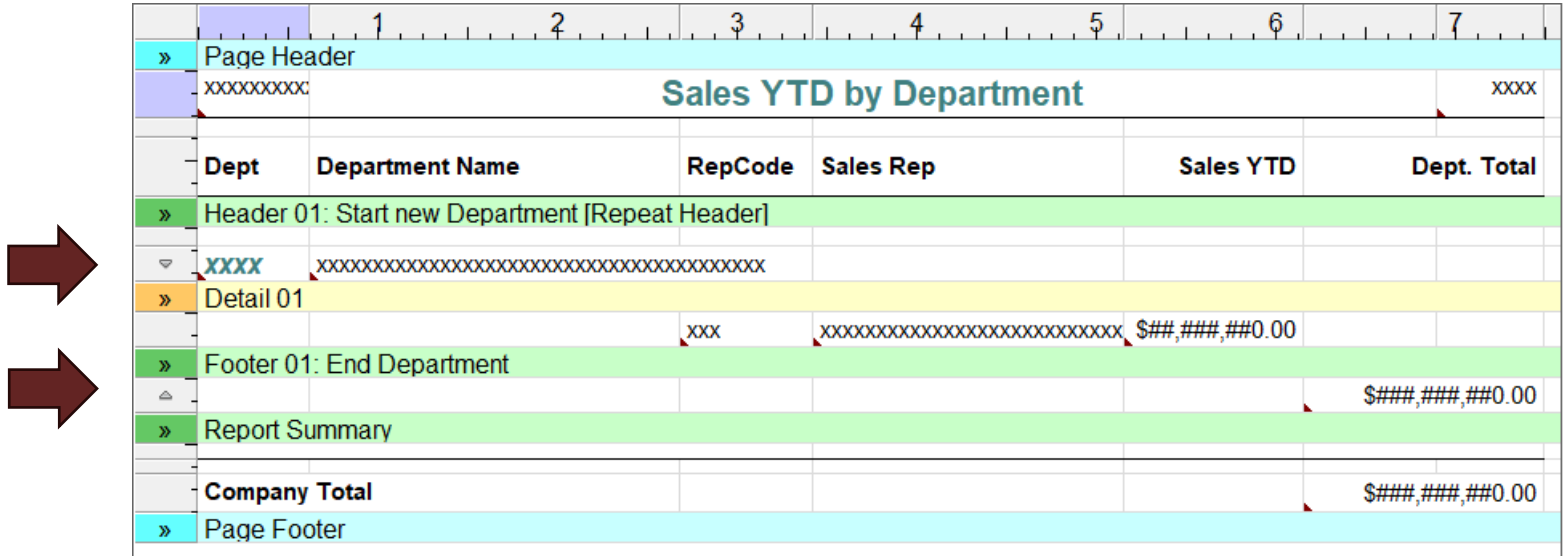
WEST *Western Canada Sales*

RepCode	Sales Rep	Sales YTD
CM	Chu	$175,886.34
PG	Paul	$167,909.02
Departmental Total		$343,795.36
Company Total		$983,245.23

REPORT WRITER OPTIONS

Line Advancement Options

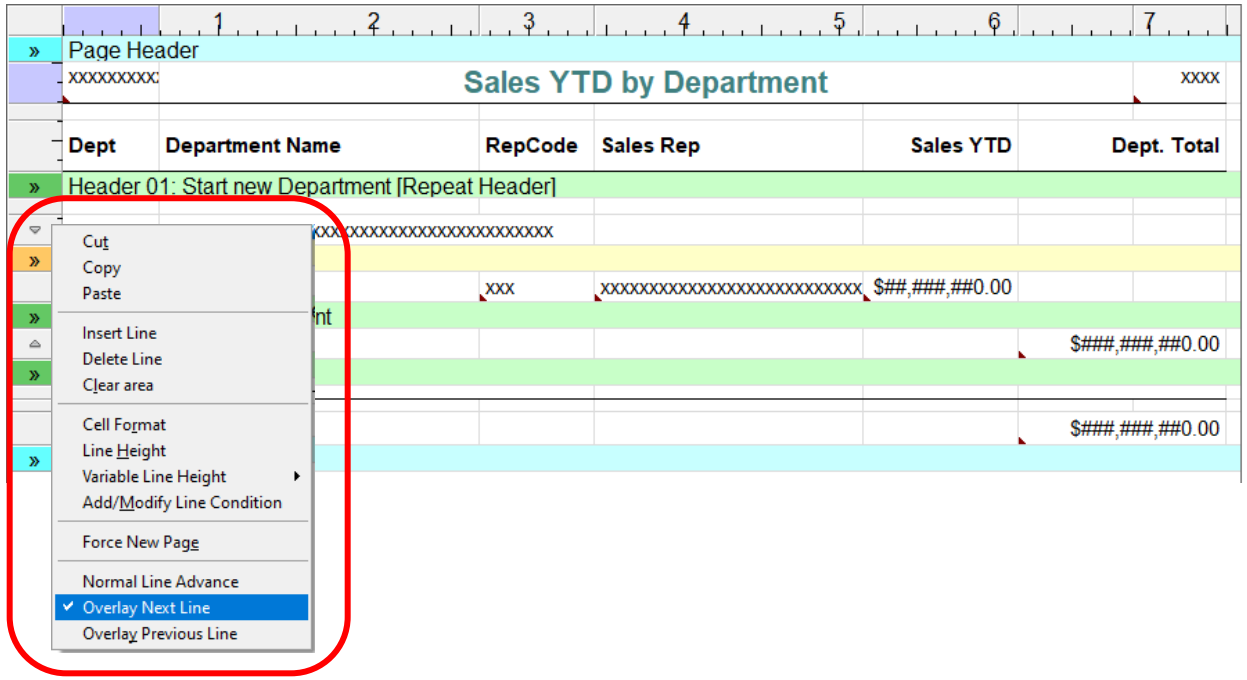
- Normal – Regular line advancement
- Overlay Next Line – Write line, do *not* advance vertical positioning, write next line
- Overlay Previous Line – Write line, advance vertical positioning; subtract vertical positioning and write next line

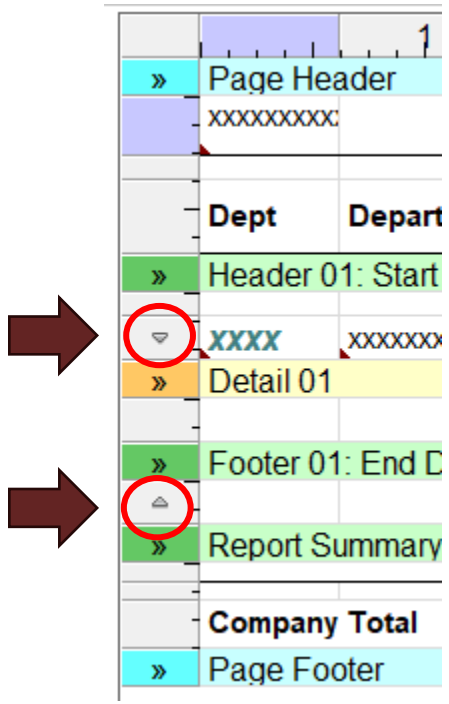


REPORT WRITER OPTIONS

Setting Line Advancement Options

- Set from popup menu by right-clicking on row header column

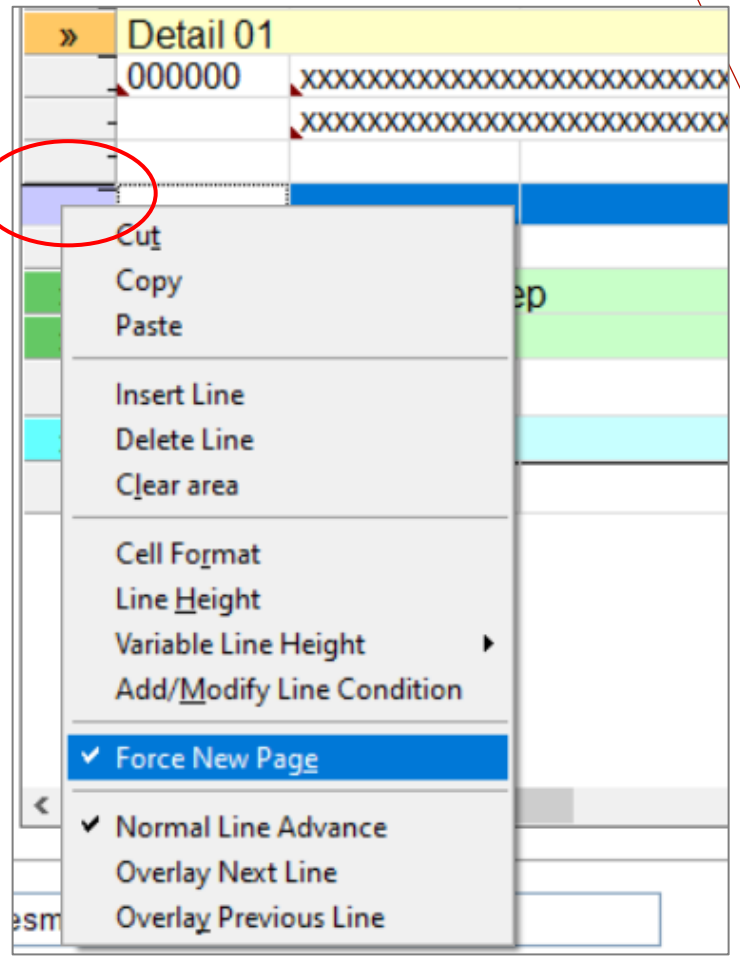




- Ticks indicate Next/Previous selections

Force New Page

- Insert form feeds at specific points in the report layout
  - Could always specify new pages for report and group headers and footers
  - Now you can force a new page within a Detail line group
- Set from row header column popup
  - Marked by line indicating new page

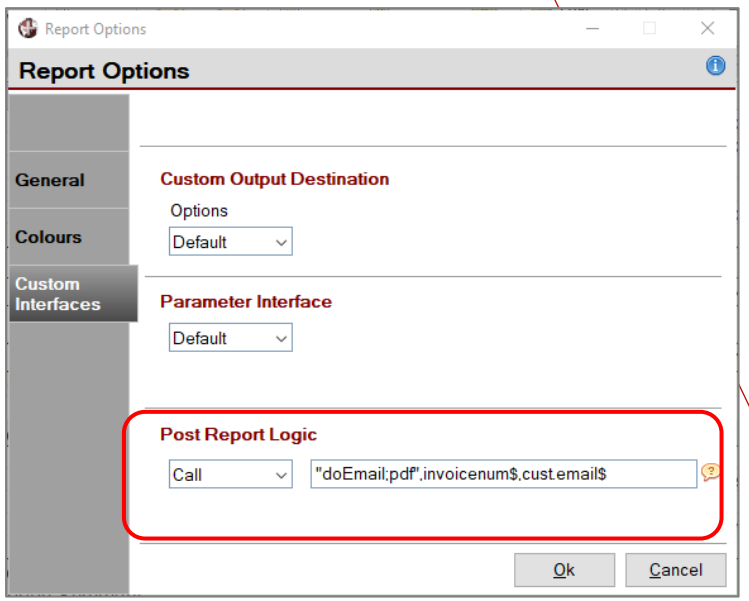


REPORT WRITER OPTIONS

2022

Post-Report Logic

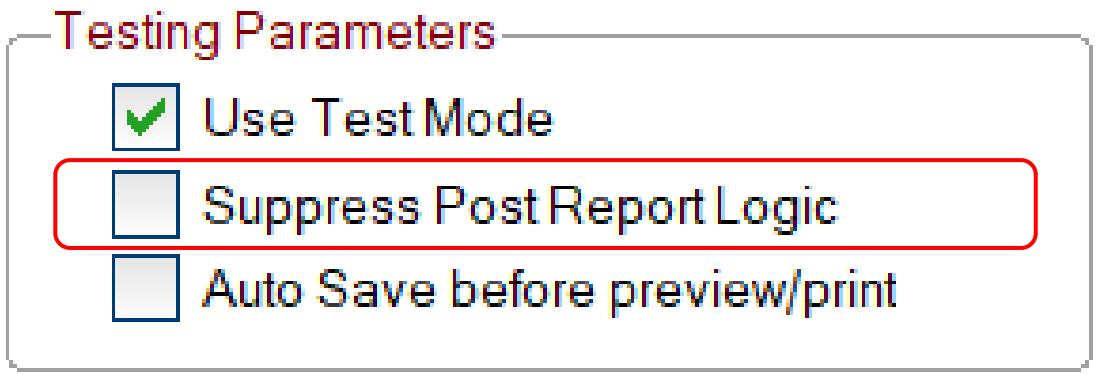
- Specify logic to execute when a report is complete
  - E.g. mail PDF files to a client's email account



- Options:
  - Call – Program to call and optional arguments
  - Execute – PxPlus statement to execute
  - Method – Method in user-defined Logic Object Interface + arguments

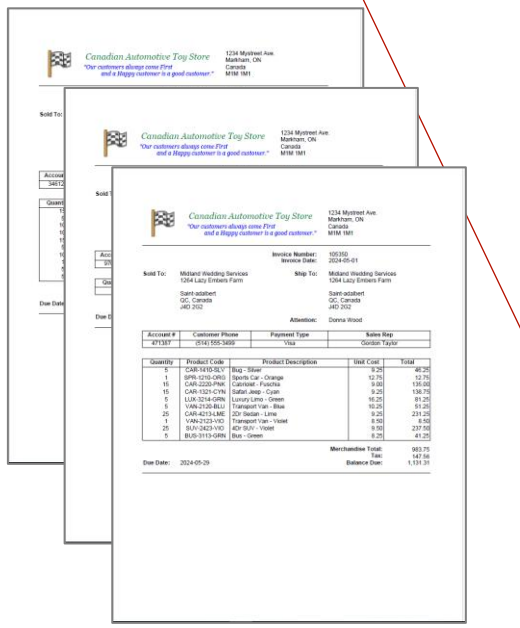
Suppress Post Report Logic

- Testing Parameter on the Report Designer
  - Suppresses the execution of *Post-Report Logic* while testing



Multiple Report Generation

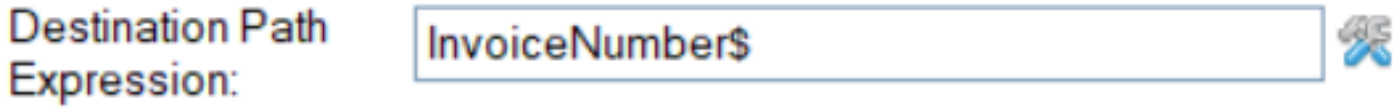
- E.g. Printing invoices, customer statements, etc.
- Previously…
  - Generate multiple reports to a printer
  - Generate multiple concatenated reports to a single file
  - Write program code to execute single reports multiple times
    - Only this last option lends itself to doing *Post-Report Logic*



REPORT WRITER OPTIONS

Multiple Report Generation

- Now…
  - One call generates multiple reports to separate physical files
    - Post-Report logic executed for each report
  - You need only:
    - Supply a *Destination Path Expression* to evaluate for a unique name for each file, e.g. _DateYYYYMMDD$+ClientID$[+".pdf"]

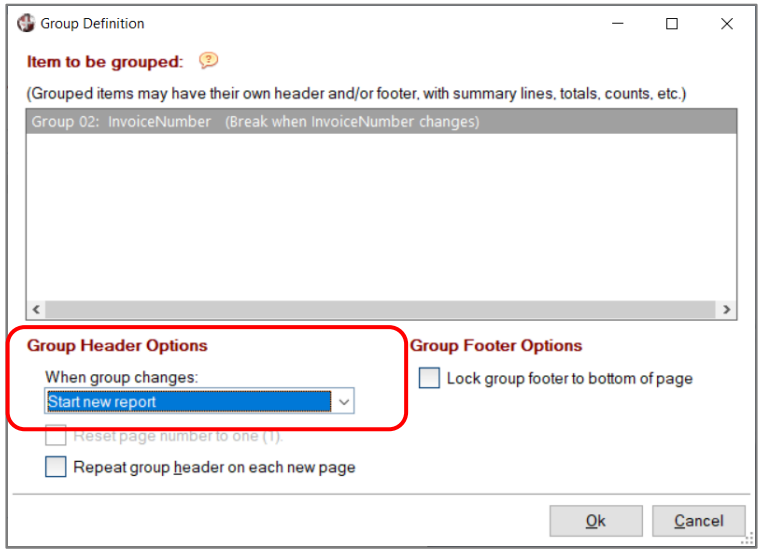


    - Set a *Group Header* option to generate multiple individual reports

REPORT WRITER OPTIONS

Multiple Report Generation

- Dependent on report grouping
  - E.g. When the Invoice number or Client code changes
  - Group Header Option - When group changes:
    - *Continue with in-line placement*
    - *Start new page* – Starts a new page for each new group
    - *Start new report* – Creates a separate individual report for the group, including report summary, header and footer sections

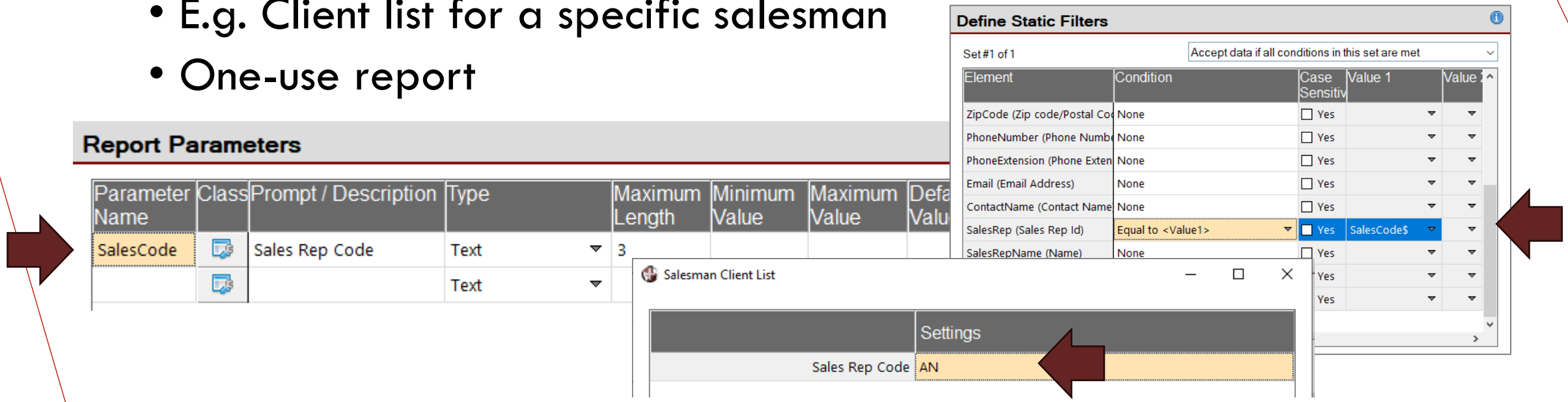


DYNAMIC RUN-TIME FILTERS

DYNAMIC RUN-TIME FILTERS

Static Filters

- Previously…
  - Set specific filters and parameters within the report definition
  - Filter values entered as parameters at run-time
  - E.g. Client list for a specific salesman
  - One-use report



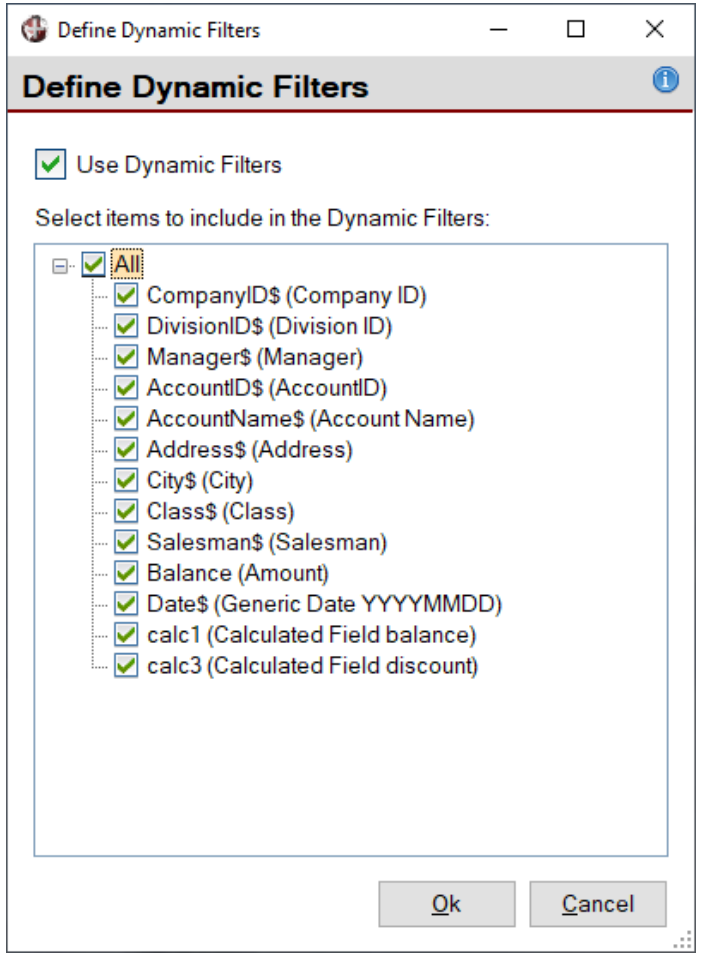
Dynamic Filters Defined by User at Run-Time

- Now…
  - The user can define their own filters at run-time
  - Results in *flexible multi-use* reports
    - E.g. Client list for a salesman, contact person, region, etc.
    - Can include/exclude records based on multiple conditions

DYNAMIC RUN-TIME FILTERS

Setting up Dynamic Filters for a Report

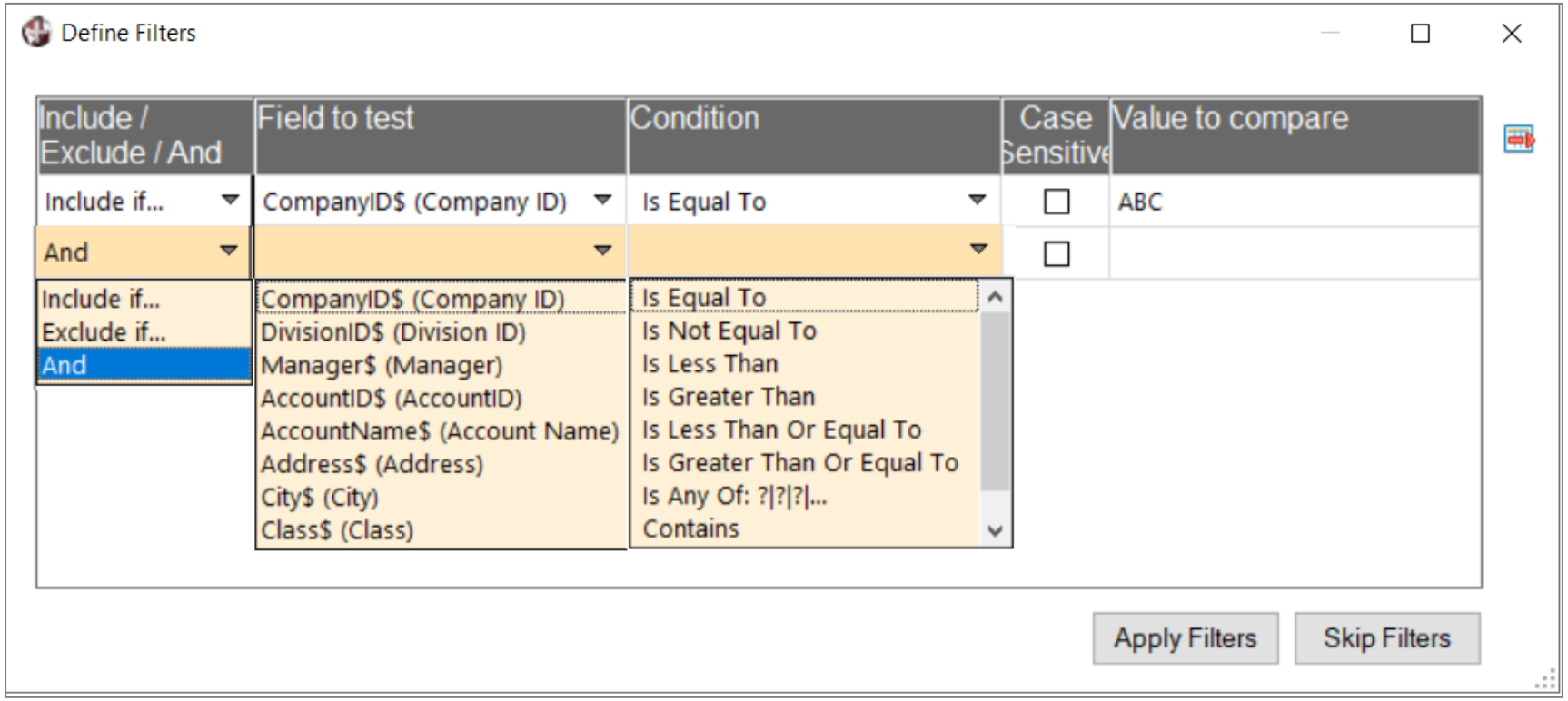
- *Data > Filters > Dynamic Filters*
  - *Define Dynamic Filters*
    - *Use Dynamic Filters* option
    - Select the items to include



DYNAMIC RUN-TIME FILTERS

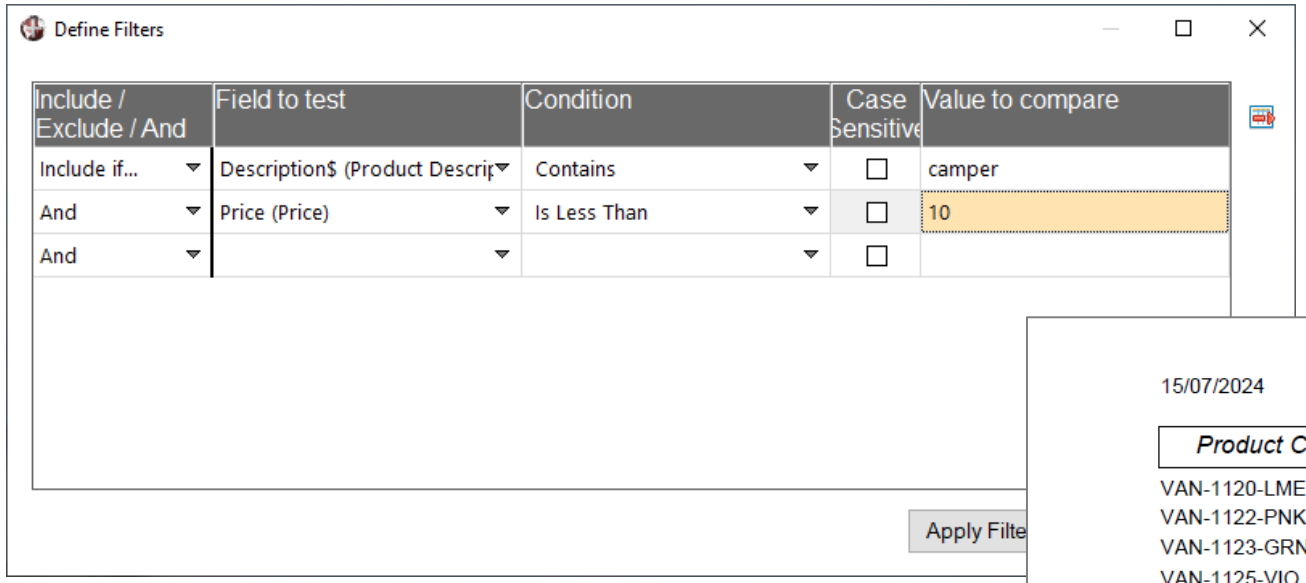
Filters Defined by User at Run-Time

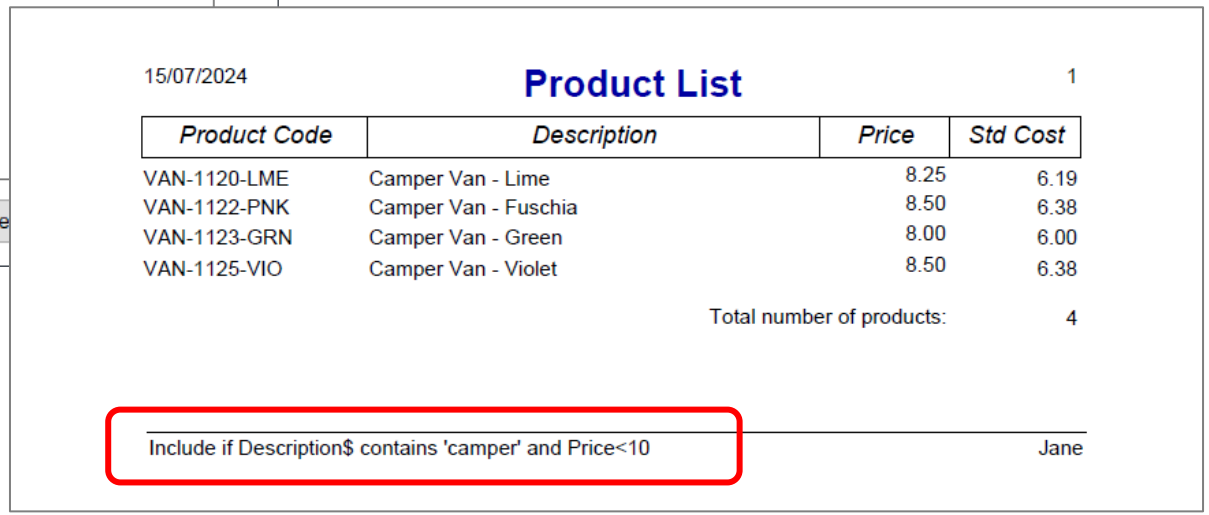
- At run-time…



DYNAMIC RUN-TIME FILTERS

Filters Defined by User at Run-Time





System *Dynamic Filter* variable available to include in your report

OBJECT-ORIENTED PROGRAMMING

All of the features and options described in this presentation are supported in the Report Writer Object-Oriented interface.

```
! Change the output destination to HTML file
!
    rpt=new("*rpt/pvxreport");
    if rpt=0 \
        then end
!
    serial "myrpt.htm ",err=*next
    open purge (hfn,err=WrapUp)"myrpt.htm";
    prt=lfo
!
    if rpt'open("MyRptDef.pvr")=0 \
        then goto WrapUp ! open and init the report definition
    rpt'OutputHTML(prt) ! set the output channel
    if rpt'ParamCount()>0 \
        then rpt'AcceptParameters() ! get parameter values from user
    rpt'RunReport() ! generate the report
    rpt'close() ! close the report object
    close (prt)
!
    system_help "myrpt.htm"
!
WrapUp: \
    drop object rpt
    end
```