MS Power BI Paginated Reports v SAP Crystal Reports

For decades users have been designing page-based reports using SAP Crystal Reports. As we see the trend and shift towards the Microsoft BI stack such as MS Power BI, is there a Microsoft tool in the box in that has similar functionality?

Yes, there is … Microsoft Power BI Report Builder

What is Power BI Report Builder?

MS Power BI Report Builder is Microsoft's tool for building paginated or 'pixel-perfect' reports that extend over multiple printed pages. If you are wanting output on paper or PDF, with neat formatting and properly aligned text, repeatable templates, invoices or account statements, then Report Builder would be the tool of choice.

Where MS Power BI works best is displayed on a screen, with end-user interactivity an expected function, Report Builder is intended for bulk output of structured operational reports, repeated schedules and templates.

It is an older tool, having been present in one form or another in SSRS and Microsoft's reporting toolset for many years.

Where Can I Download It From?

Power BI report builder is free to download and install from Microsoft.

Head to the Microsoft store or Microsoft website and download it and install it.

Do I Need Any Licenses?

The Power BI Report builder for the desktop tool is free to download and install, however when you want to publish and share the reports you build and schedule these, then these may get published to the Power BI service, which will require a licence also.

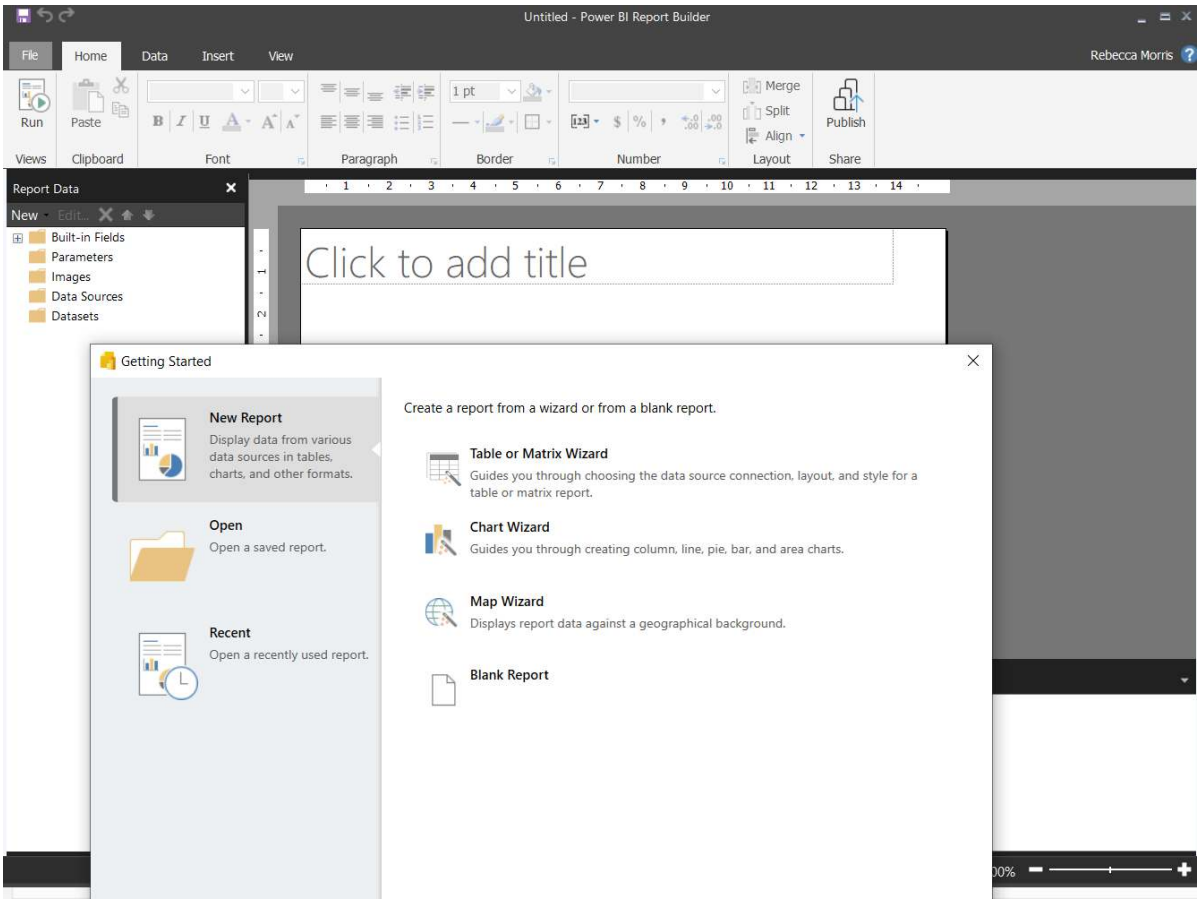
The licenses for Power BI that are required are:

Power BI Premium Per User (PPU) License

Please chat to DSCallards if you require licenses for Microsoft Power BI.

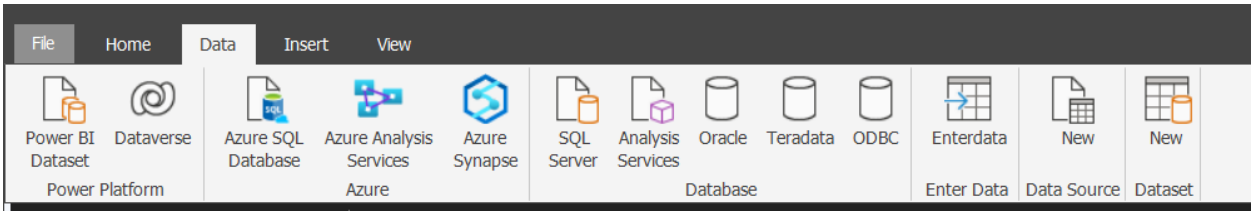
What Does It Look Like?

On opening you know you're in a slightly different tool than Power BI desktop as it will look like this and uses a slightly different icon to open



What Data Sources Does It Support?

The tool supports many Microsoft and non-Microsoft based data sources, as you can see from the data toolbar within the tool itself.



Further details of what is supported can be found here: https://docs.microsoft.com/en-us/power-bi/paginated-reports/paginated-reports-data-sources

This will require a Power BI gateway – an on premise data gateway and not a personal mode one to be setup in order to utilise the data sources you connect to if you decide you want to publish and share the reports via the Power BI Service: https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-onprem

If using ODBC connections, ensure that you have a 64-bit ODBC driver available to install and configure on the desktop and where you setup the Power BI gateway.

You will the need to follow the steps to setup a Power BI gateway: https://docs.microsoft.com/en-us/power-bi/paginated-reports/paginated-reports-odbc-support

Our recommended approach is to consider re-using or creating a Power BI dataset.

A dataset is a central view of the data required for reporting against, all your data is brought together in one place and defined by someone who knows the business and the data, making it easier to understand and build queries on. Rather than a user connecting directly to the database itself which could be complicated and understanding the relationships and links could prove very technical for someone without database experience.

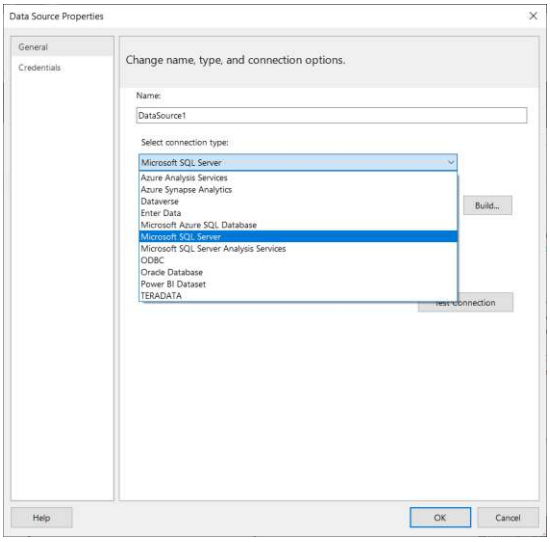
Therefore, designing a dataset for users to utilise in paginated reports or Power BI desktop we feel is the best approach.

Talk to DSCallards further if this is something you wish to explore further, we offer training and consulting in how you can achieve this.

Are The Features of MS Power BI Report Builder Paginated Report The Same as SAP Crystal Reports?

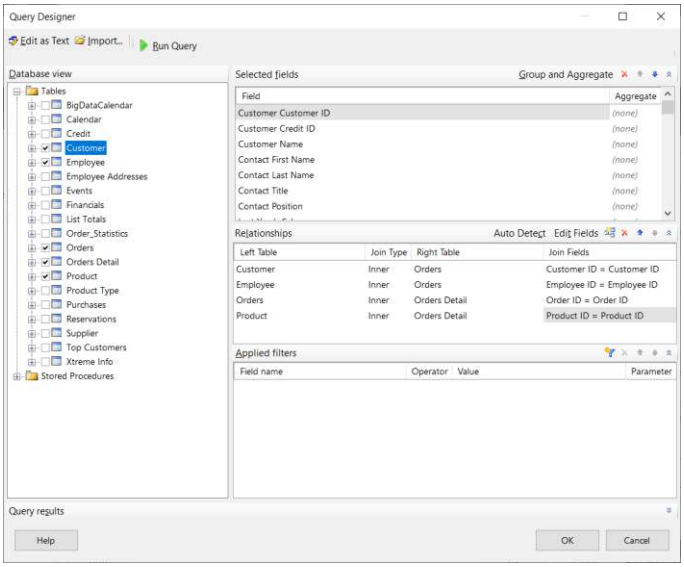
In short yes, here is a list of common features both tools use and the differences in these

Connect to data sources directly and via ODBC

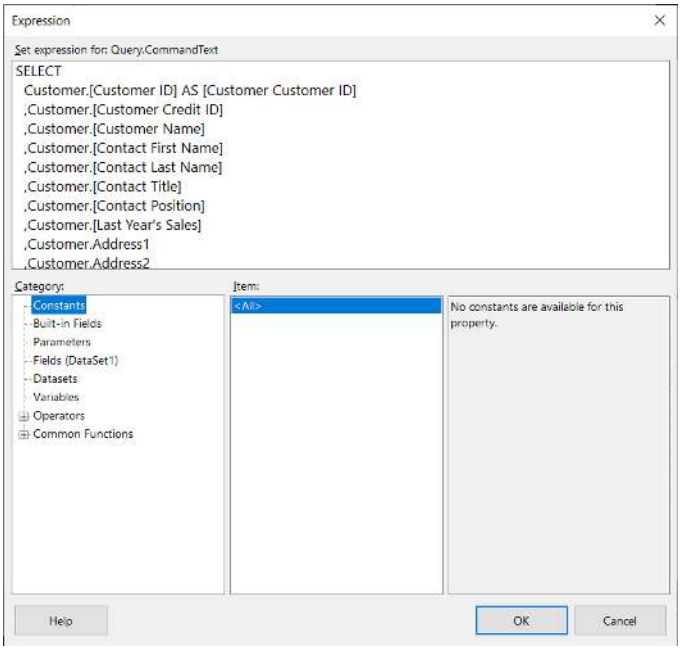


Adding tables and defining relationships, as well as custom SQL query, and using stored procedures

Example of query designer when defining tables and relationships

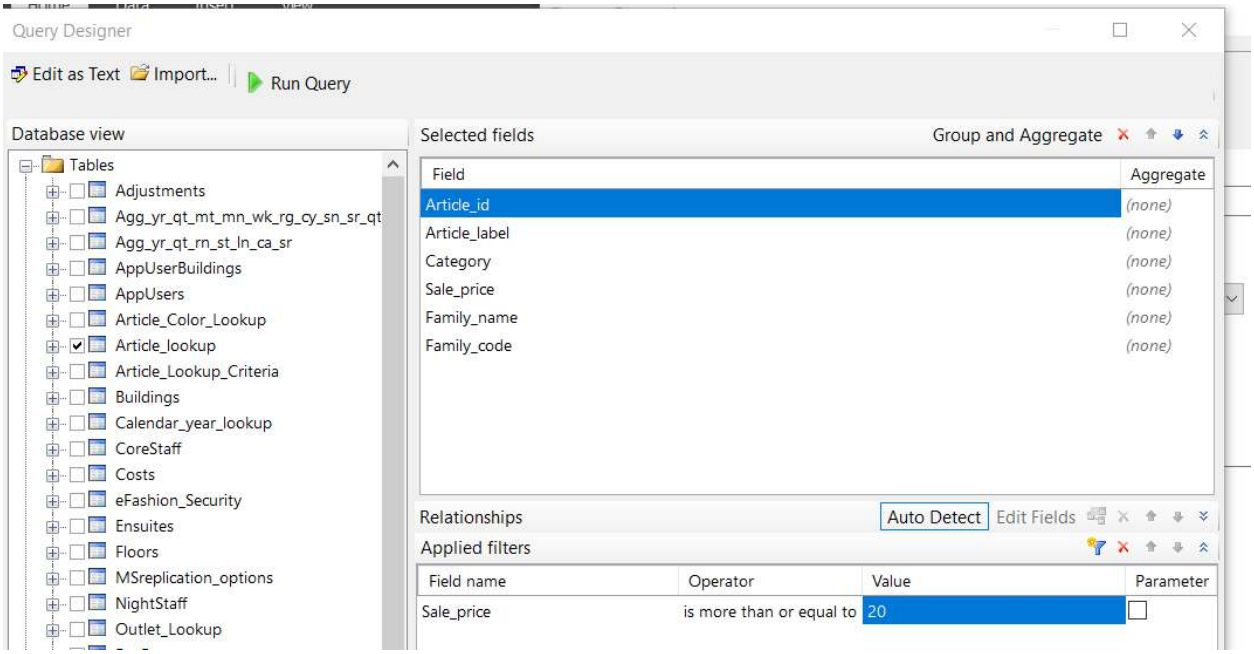


If building your own custom sql query example shows the query panel where this is entered in whereby you use the SQL syntax from your database vendor. This would be similar to a command in SAP Crystal Reports.



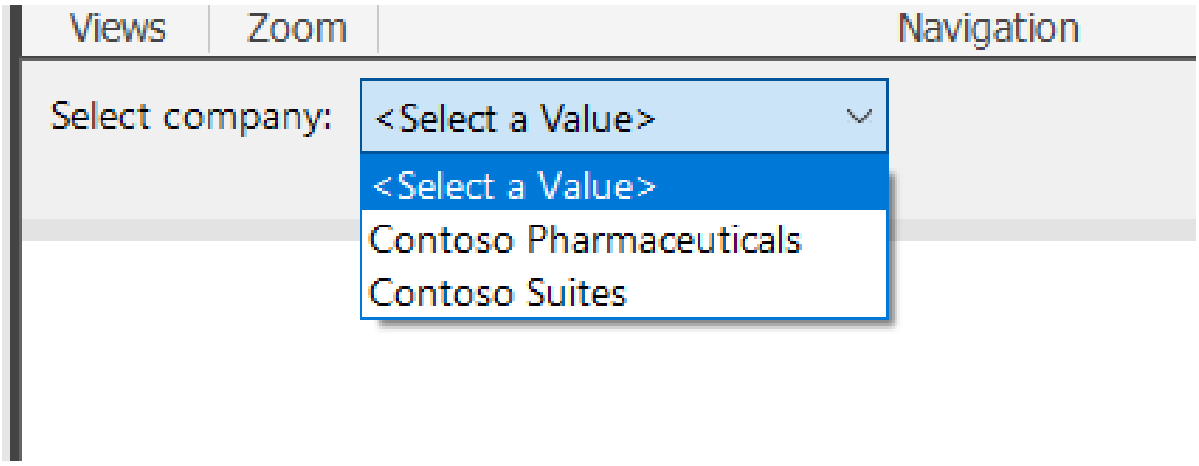
Filtering

This can be done when designing the queries to filter out values from a table



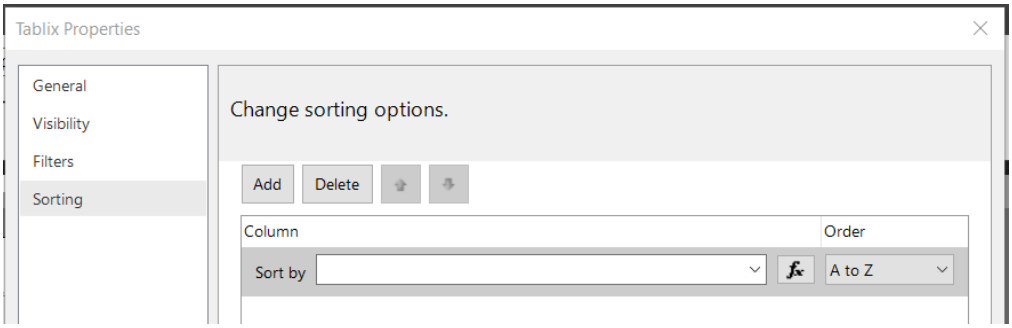
Parameters

Static, Dynamic and cascading parameters are supported

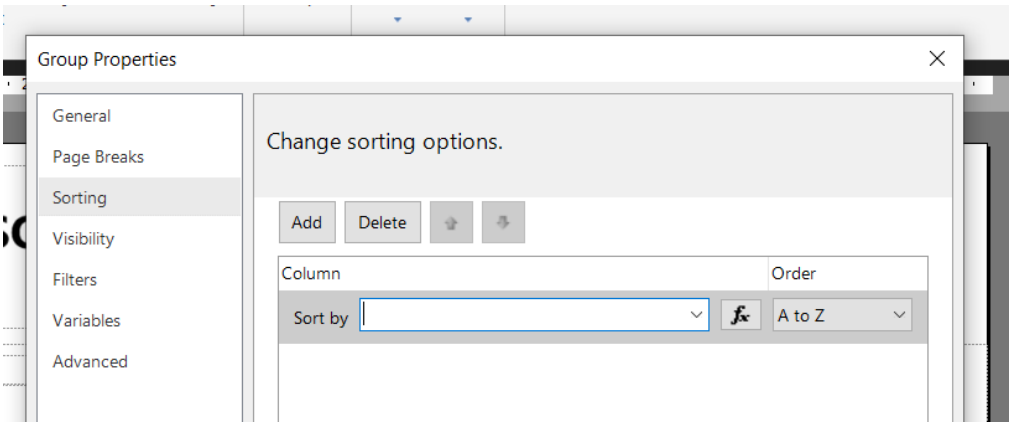


Sorting data

By list data

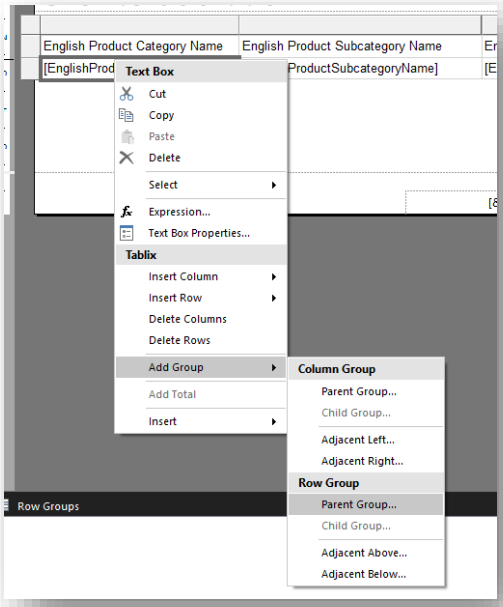


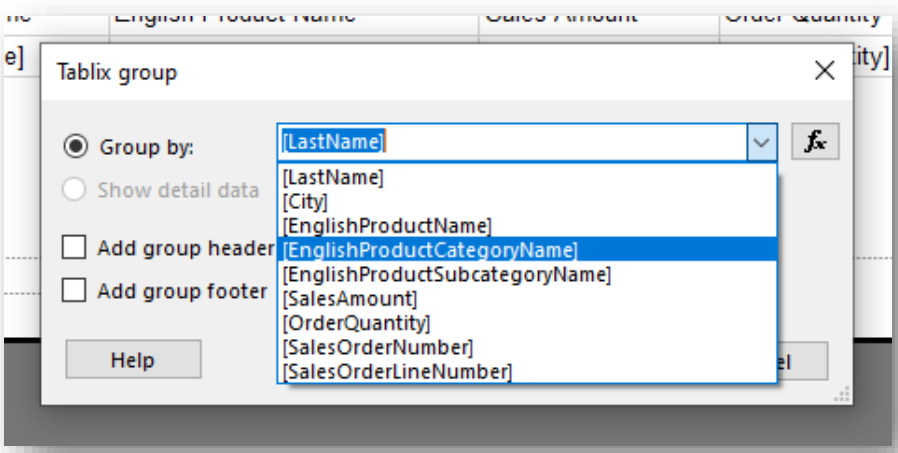
By group



Grouping data

Groups can be inserted on the Tablix like below.

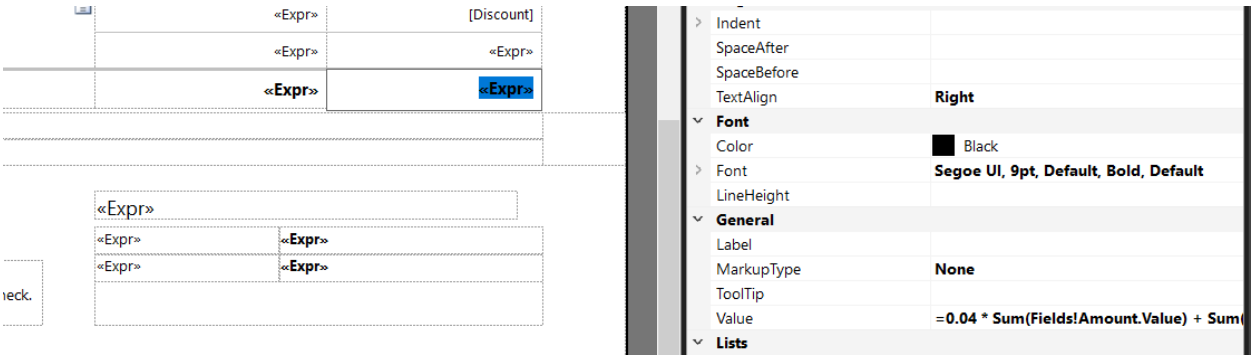




Adding Summaries

There are added using a formula and the function Sum as an expression to various areas on the report.

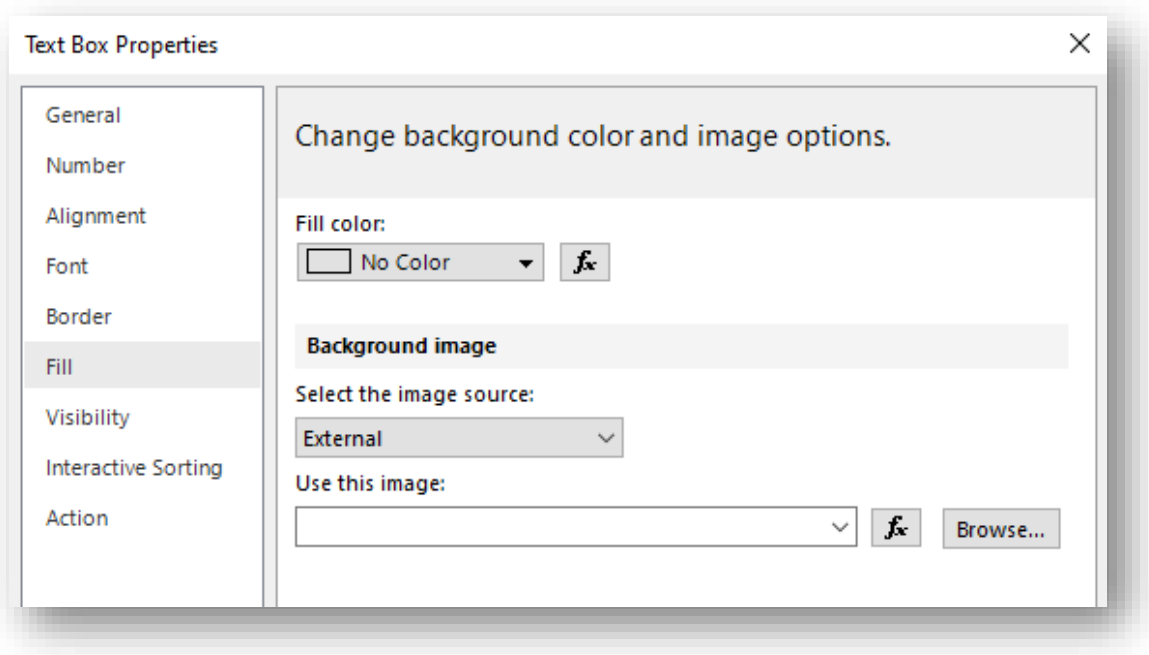
Example below



When running the report this will show at the bottom

90 52" White	33	Each	2890	0	95,370.00
ceiver	56	Each	450	0	25,200.00
			SALES SUBTOTAL AMOUNT		4.00
			SALES TAX		12,350.52
			USD TOTAL		**321,113.52**

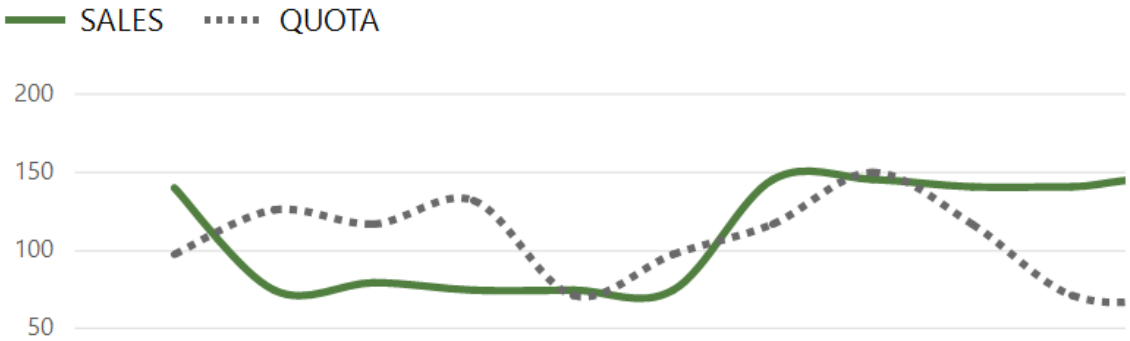
Conditional Formatting



English Product Category Name	English Product Subcategory Name	English Product Name	Sum Sales Amount	Sum Order Quantity
Accessories	Helmets	Sport-100 Helmet, Red	78027.7000	2230
Accessories	Helmets	Sport-100 Helmet, Blue	74353.7500	2125
Accessories	Helmets	Sport-100 Helmet, Black	72954.1500	2085
Accessories	Tires and Tubes	HL Mountain Tire	48860.0000	1396
Accessories	Fenders	Fender Set - Mountain	46619.5800	2121
Accessories	Hydration Packs	Hydration Pack - 70 oz.	40307.6700	733
Accessories	Bike Stands	All-Purpose Bike Stand	39591.0000	249
Accessories	Bike Racks	Hitch Rack - 4-	39360.0000	328

Charts

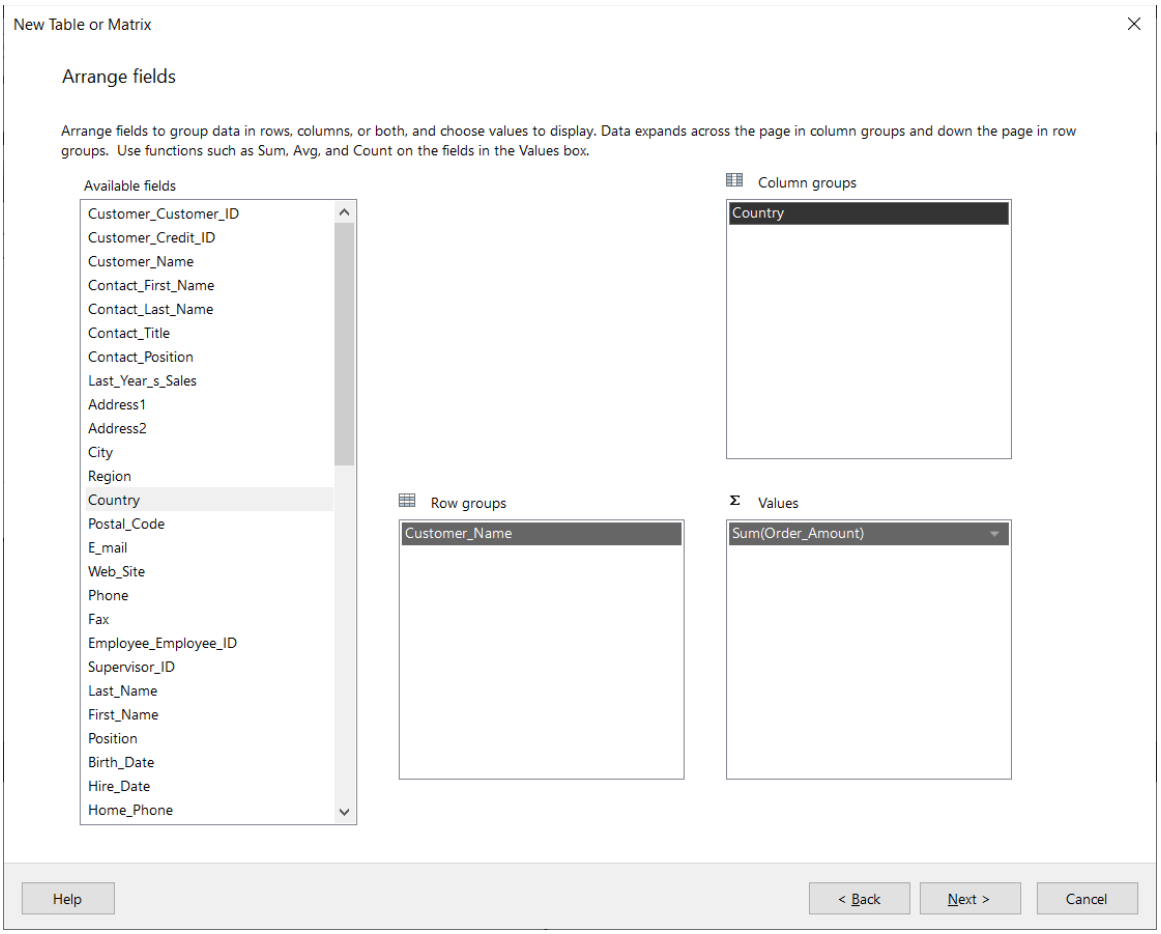
ORDERS	SALES	QUOTA	VARIANCE
174,366	$1.305 M	$1.265 M	$0.040 M



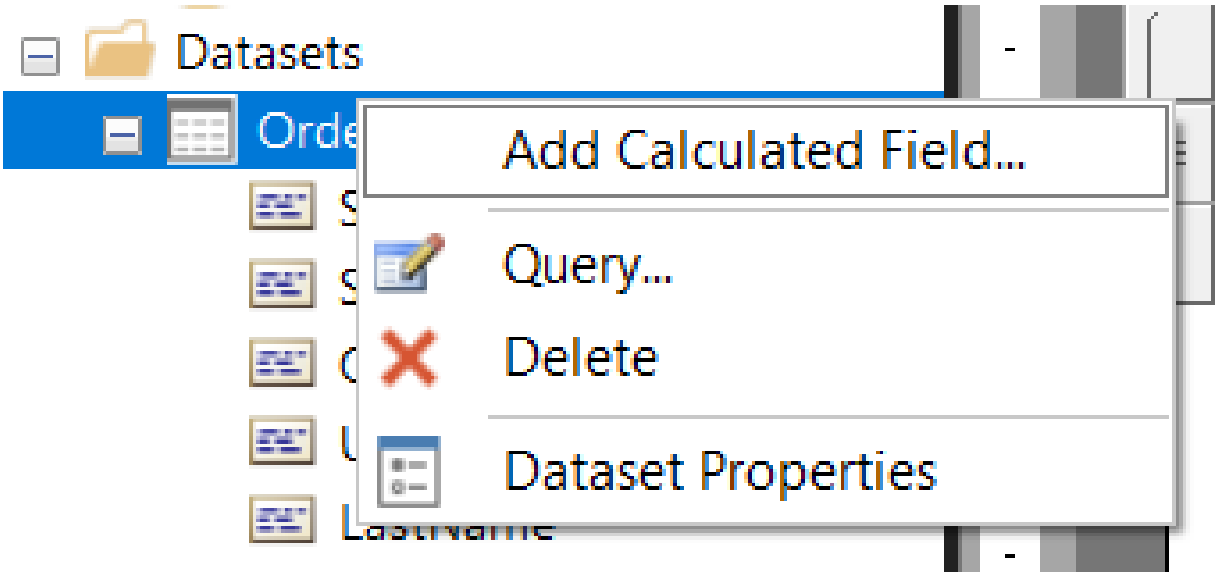
You can also embed charts inside the tables of data much more easily than crystal reports could

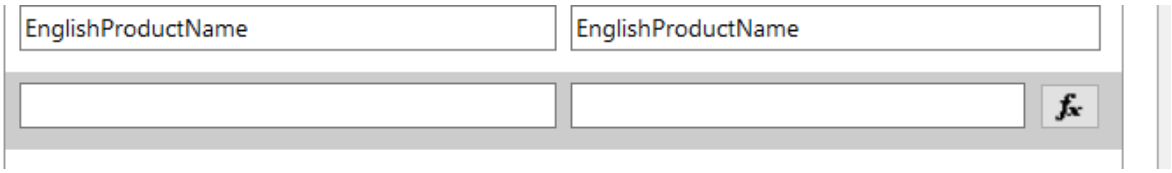
Salesperson	Sales	Trend	% of Country Total	Overall %	Quota	Variance
AUSTRALIA	$14,218,109			4.06%	$12,950,000	9.79%
Lynn Tsoflias	$14,218,109		100.00%	4.06%	$12,950,000	9.79%
CANADA	$40,582,602			11.60%	$39,000,000	4.06%
José Saraiva	$26,045,407		64.18%	7.44%	$25,500,000	2.14%
Garrett Vargas	$14,537,195		35.82%	4.15%	$13,500,000	7.68%
FRANCE	$31,216,163			8.92%	$31,500,000	-0.90%
Ranjit Varkey Chudukatil	$31,216,163		100.00%	8.92%	$31,500,000	-0.90%
GERMANY	$17,906,402			5.12%	$21,750,000	-17.67%
Rachel Valdez	$17,906,402		100.00%	5.12%	$21,750,000	-17.67%
UNITED KINGDOM	$41,168,712			11.77%	$40,000,000	2.92%
Jae Pak	$41,168,712		100.00%	11.77%	$40,000,000	2.92%
UNITED STATES	$204,798,386			58.53%	$195,050,000	5.00%
Linda Mitchell	$42,513,686		20.76%	12.15%	$39,000,000	9.01%
Michael Blythe	$37,631,782		18.38%	10.76%	$23,000,000	63.62%

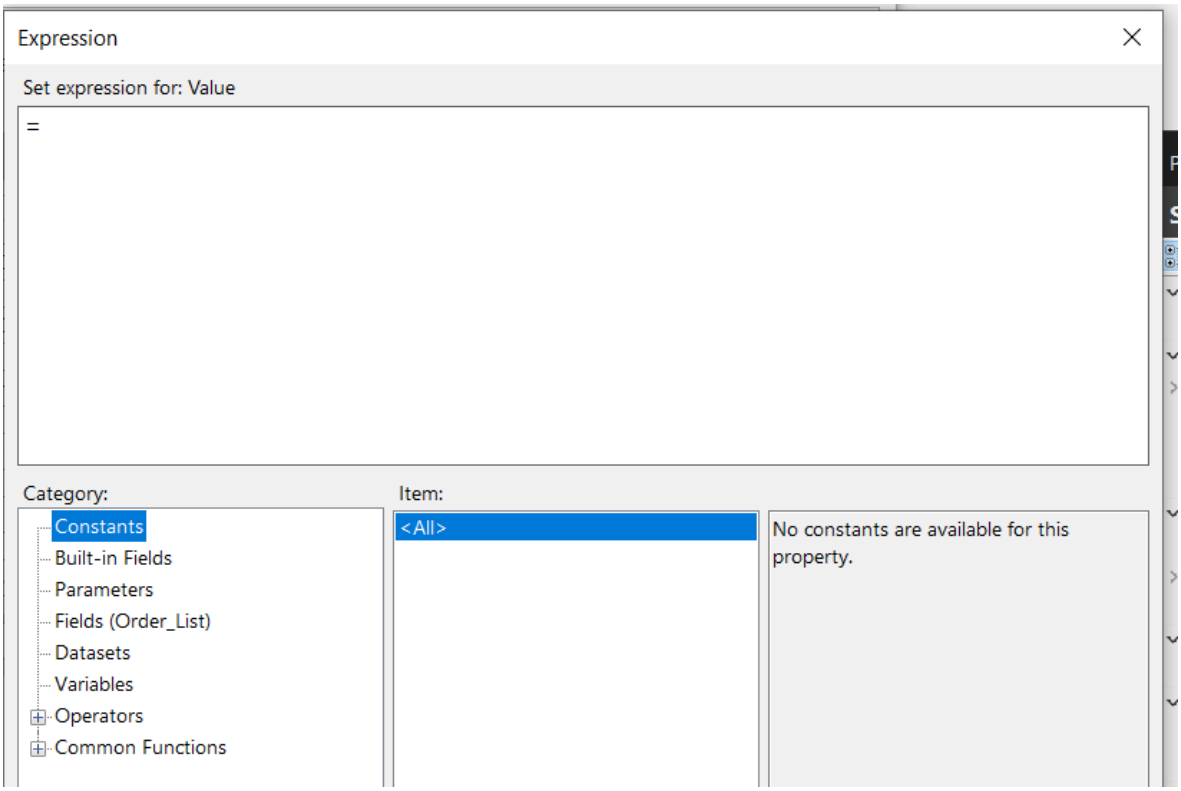
Cross tabs – called Matrix in MS Power Report Builder

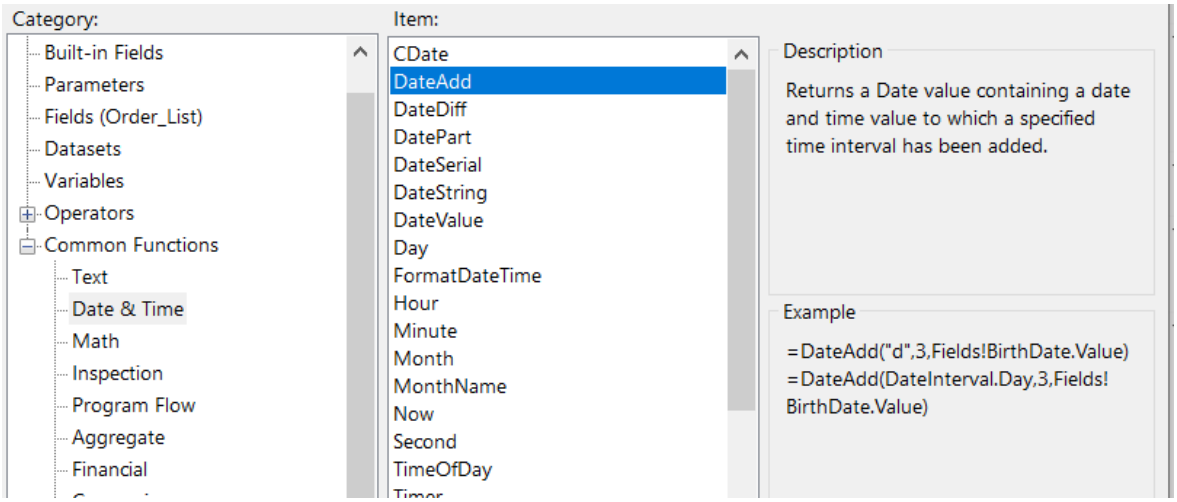


Create formulas – using almost identical functions as crystal reports, however some might be slightly different in syntax and flow of control structures





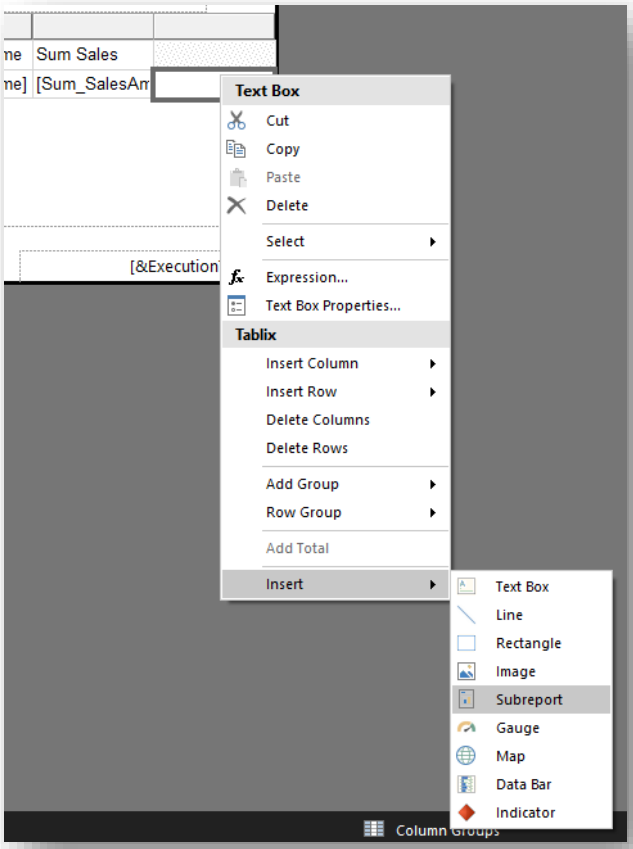


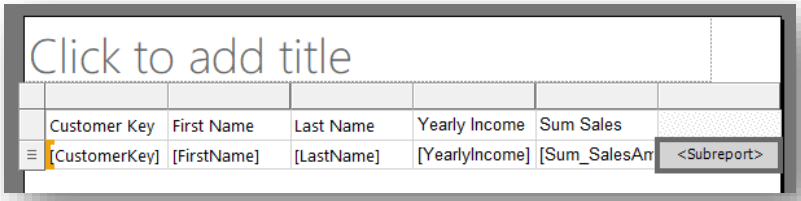


Control Paging with Sections

There is no section expert for this but the Tablix of information can be controlled in how it shows its headers in every page and what it does with the page breaks in the properties of the Tablix

Sub-reports

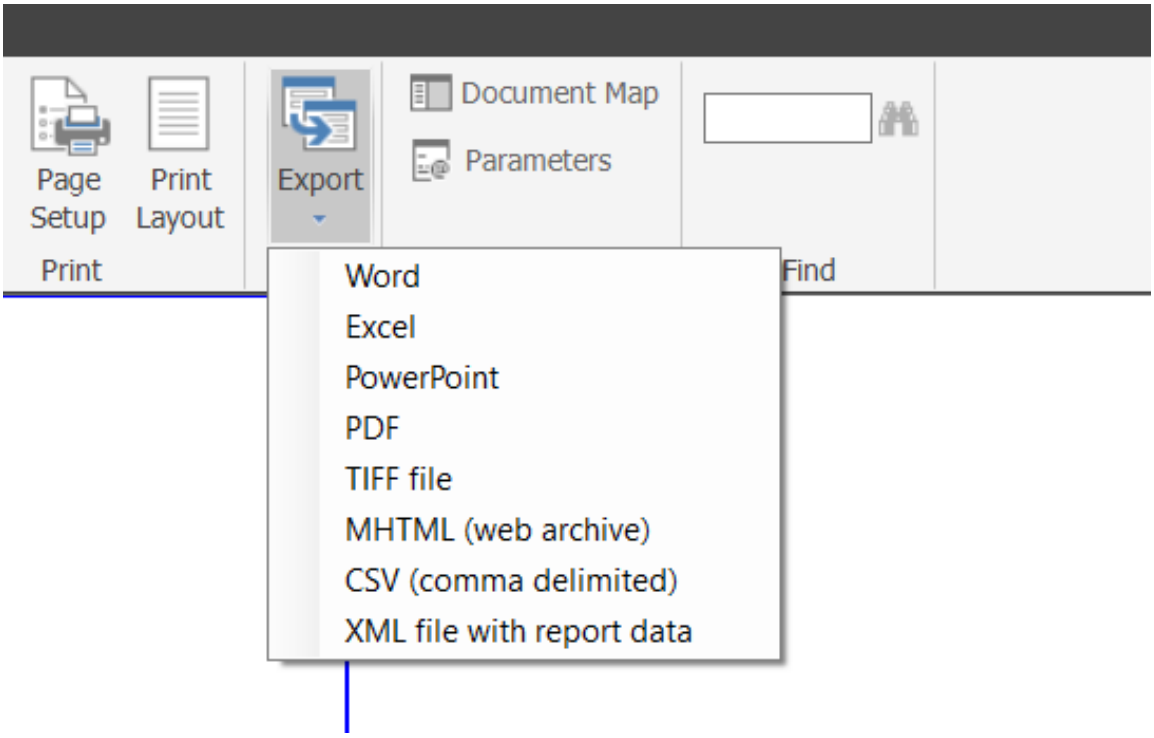




Running totals – there is no wizard for this like Crystal Reports this is done via a formula

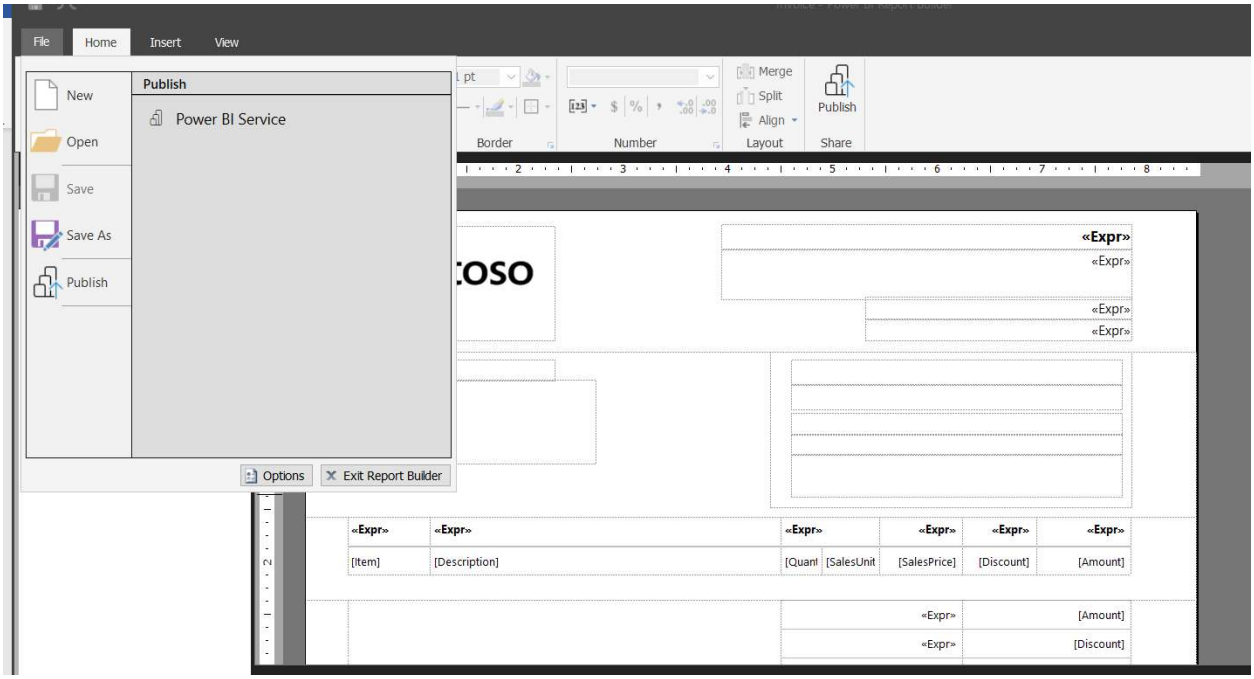
Using a function called RunningValue

Exporting to various formats – excel, pdf, word, xml, csv etc…



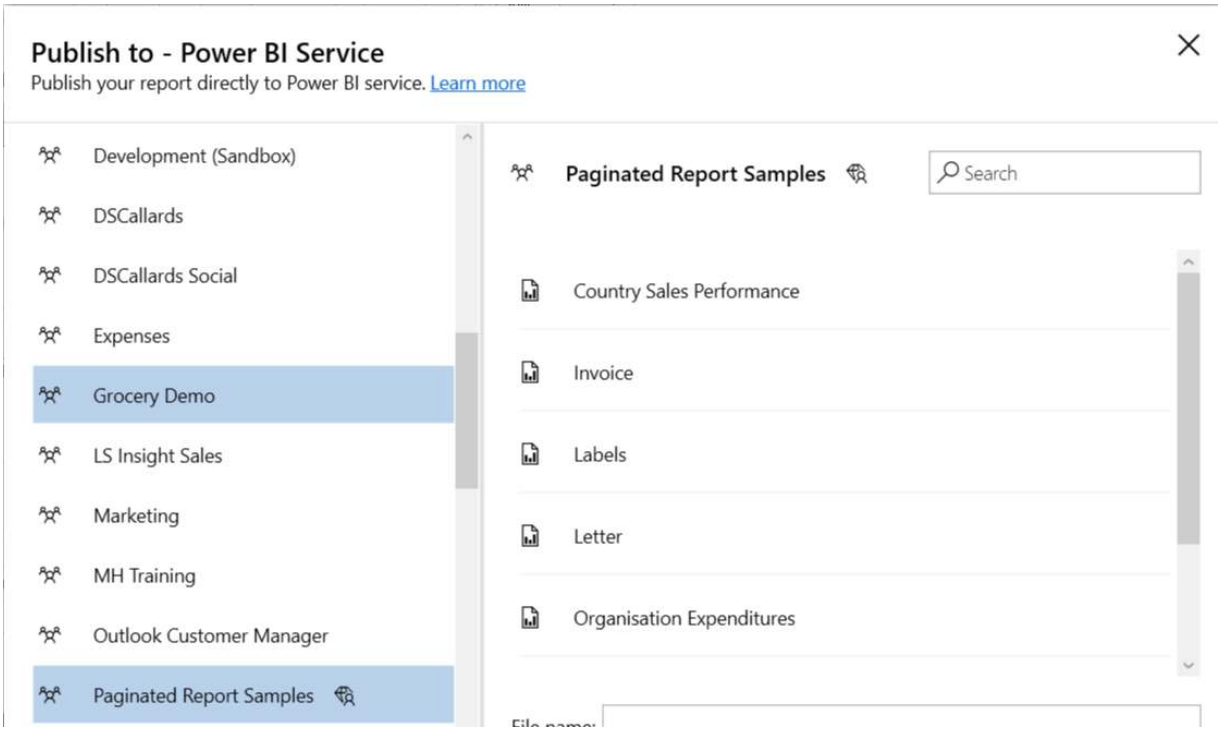
How Do You Publish a Paginated Report to the Power BI Service?

In a similar way to how you published SAP Crystal Reports to the SAP BI Repository however you're now publishing the MS Paginated report you designed on your desktop app to the Power BI Service which is either cloud based or on premise MS Power BI Report server.



This will prompt you to login if you haven't done so already with a user that has been setup in Azure Active Directory which has been assigned a Power BI licence

This will prompt you for a workspace location to save it to. This example saves it a workspace called Paginated Report Samples



How Do You View a Paginated Report in the Power BI Service?

You will need a login setup for you within Azure Active Directory if you have Power BI licenses, these will be assigned to your user, this may be done by an administrator of Azure.

Go to this URL in supported browsers: https://app.powerbi.com/ and login.

Supported browsers are:

Microsoft Edge Chromium

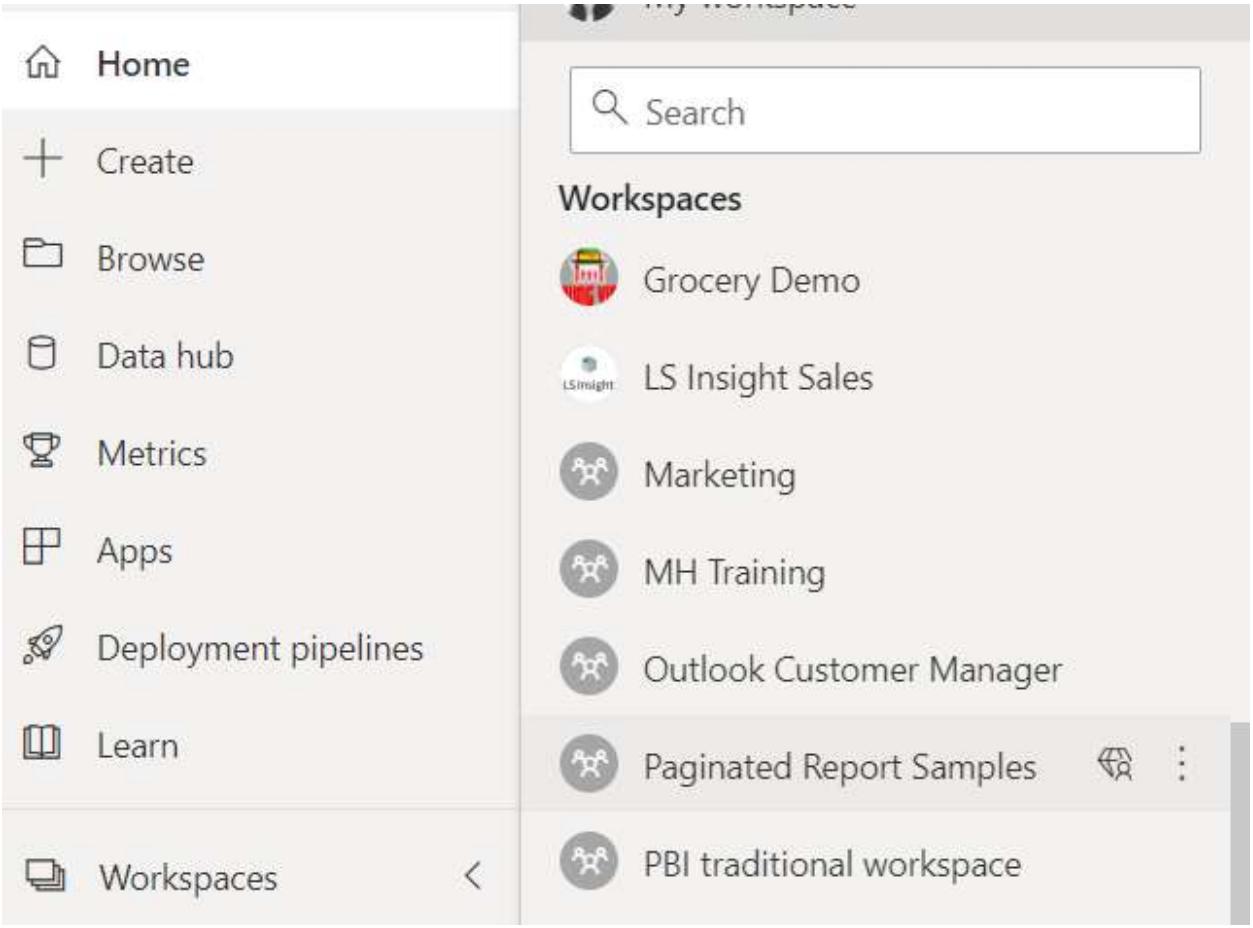
Chrome desktop latest version

Safari Mac latest version

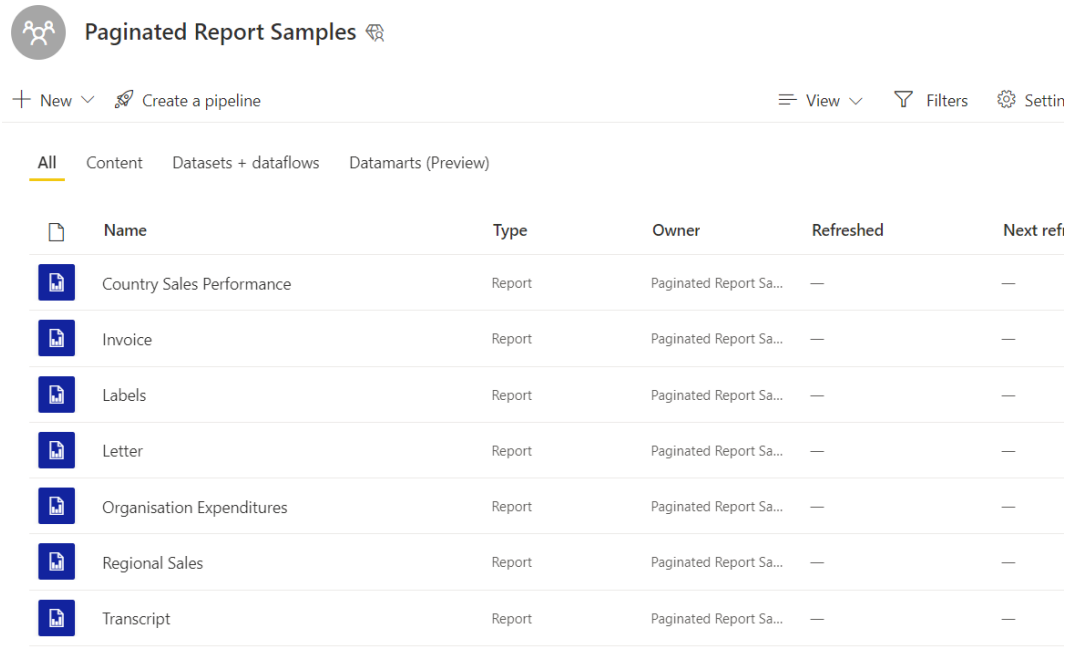
Firefox desktop latest version

** Power BI service doesn't run in any browsers in Apple iOS10 or previous versions

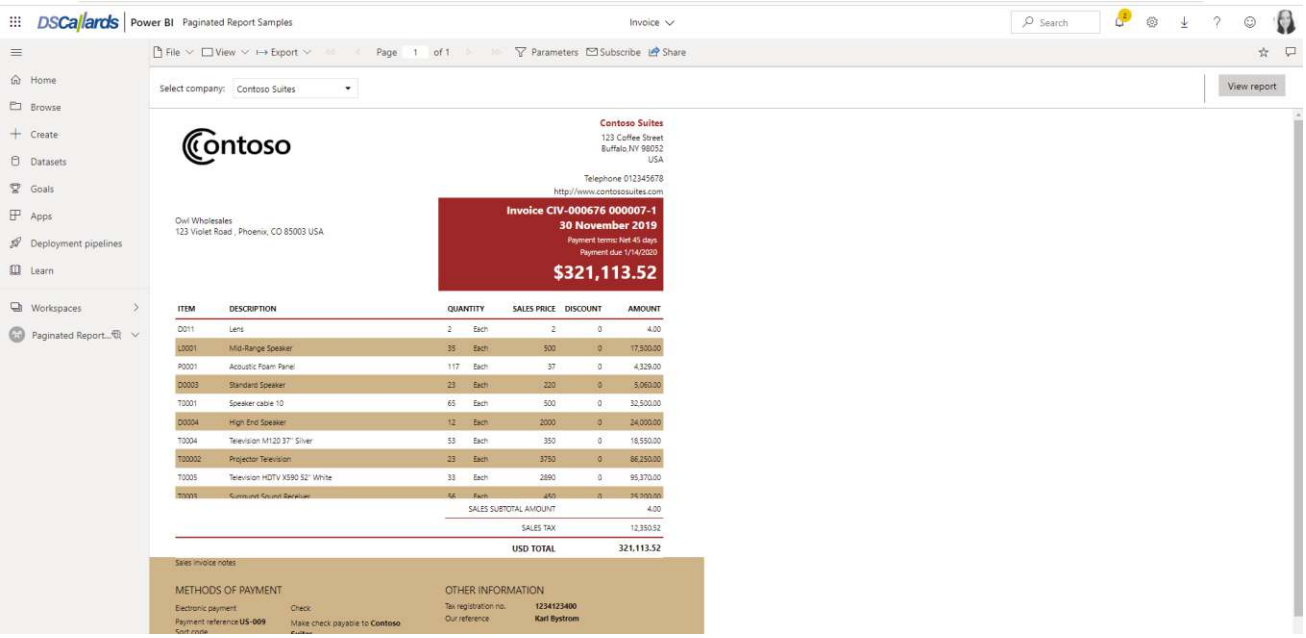
Navigate to a workspace using the menu on the left you have access to



Select one of the Report types to view the report in the browser



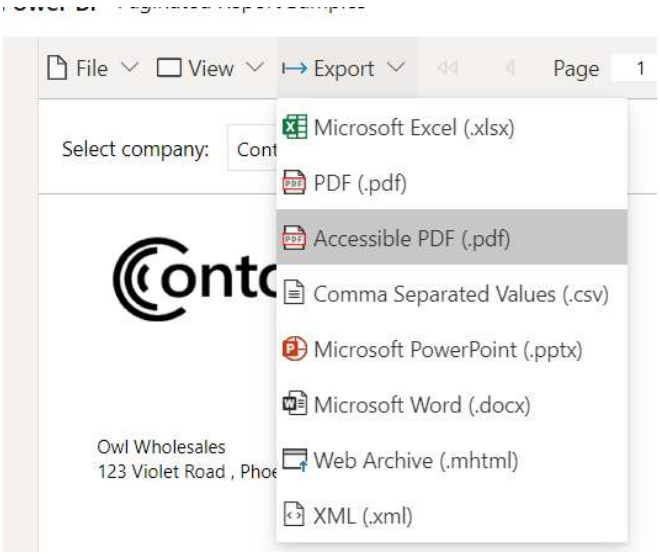
Here is an example of an Invoice type report, this report uses a parameter at the top of the screen to select the company and run the report based on the selection.



Can I Export the Reports From the Browser When Viewing?

Yes you can.

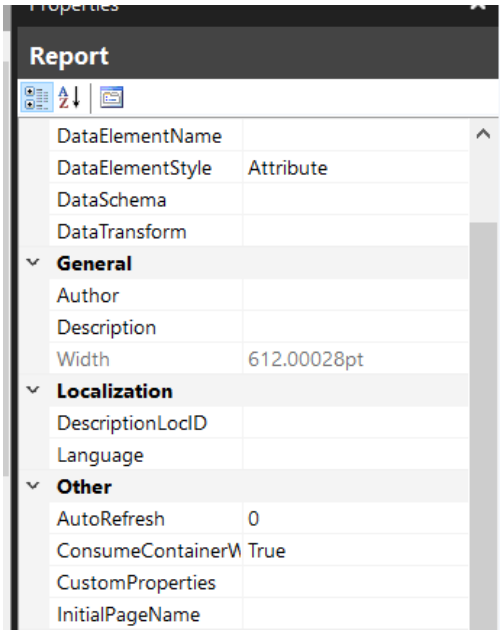
Below are all the export options available to choose from, this will download them locally to your desktop once you choose you option



Can the Report Be Refreshed?

Yes, each time you open the report to view it in the workspace it is refreshed.

There is also a setting within the MS Power BI Report Builder desktop version before you publish this to set the auto refresh property intervals, these are done in minutes.



Do DSCallards Offer a Course On How To Use This Power BI Report Builder?

Yes it is a 2 day course, please get in touch with our sales team to discuss your requirements and be sent the agenda https://www.dscallards.com/contact/

Can I Schedule a Paginated Report?

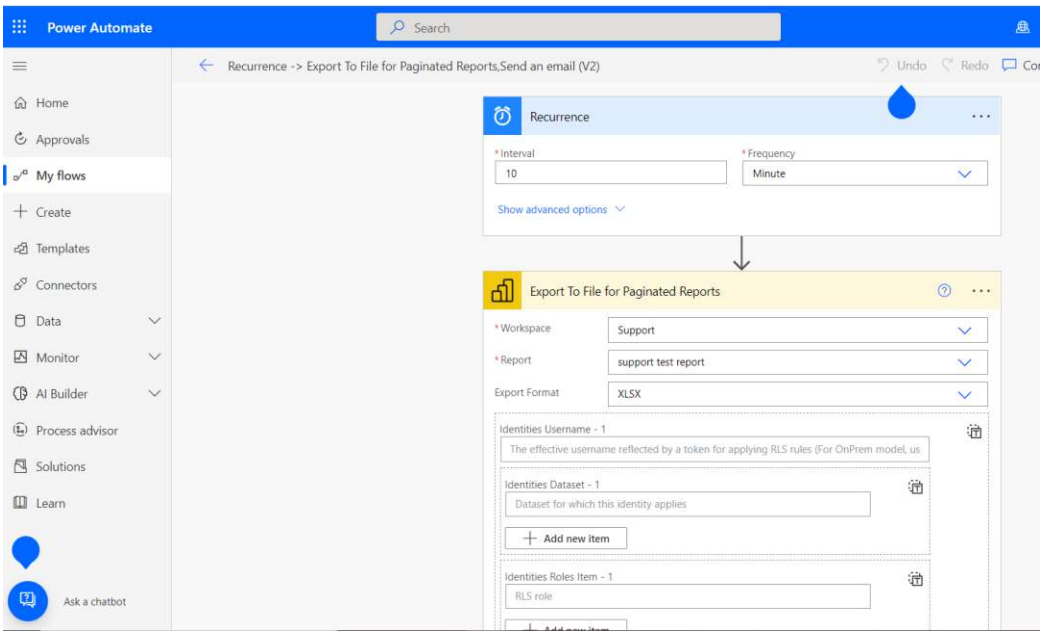
Yes – this is using one of Microsoft Power Platform tools called Power Automate.

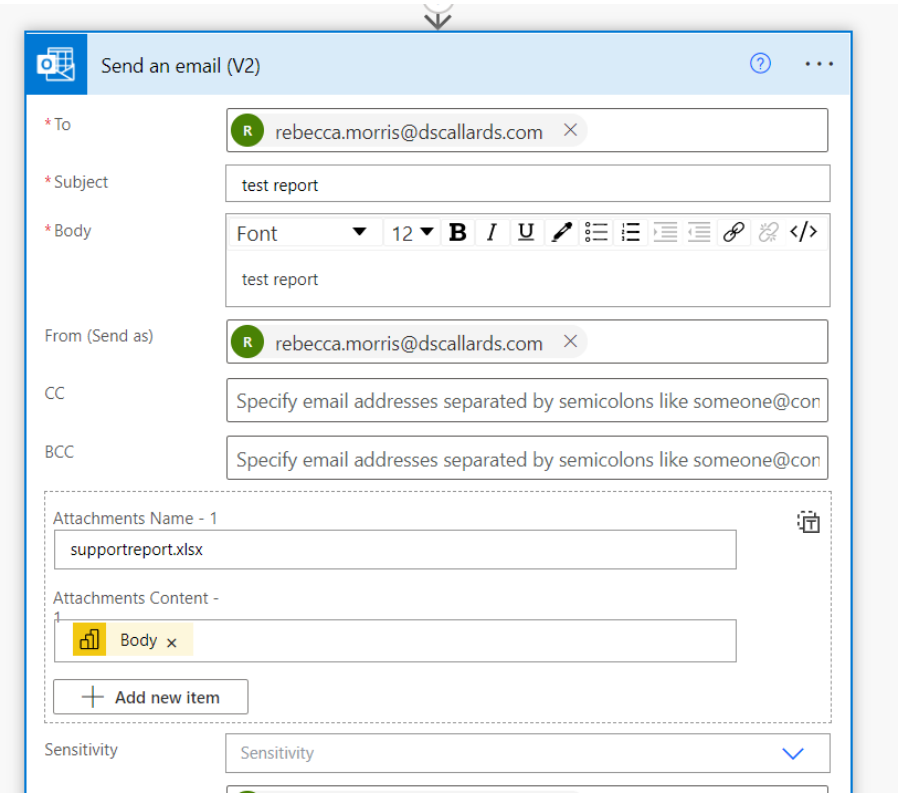
To use Power Automate you will need to be licensed to use this. If you have an Office365 license already, you do get version of this with limited usage. But one of those connectors is Power BI where you can schedule the paginated reports you have published.

Alternatively, you can purchase licenses separately to use this also, contact DSCallards for more information.

To access Power Automate you can do so by going here: https://make.powerautomate.com/

Below is an example of a flow created to schedule a report every 10 minutes to excel format and email and attach this





For further information, please visit www.dscallards.com or call us today on 0808 164 2625.

Rebecca Morris
Senior BI Consultant