Morningstar Direct^{SM} Cloud Editions Release Notes December 18, 2018

Overview

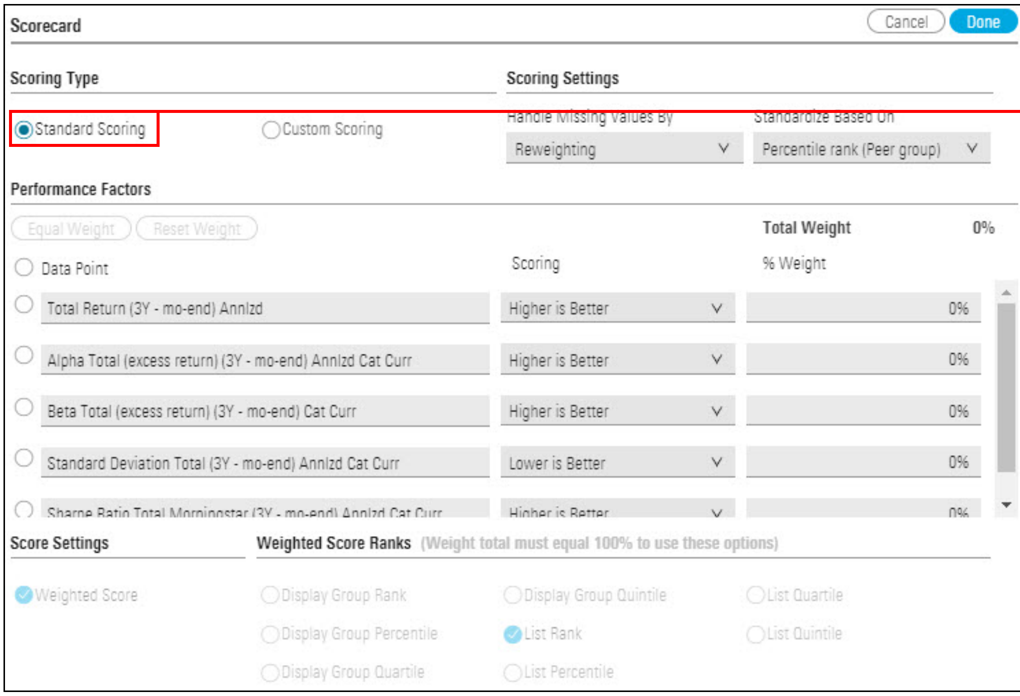
This document describes the new features and enhancements in the Morningstar Direct^{SM} Cloud Editions, as follows:

What 's new when creating a Scorecard?

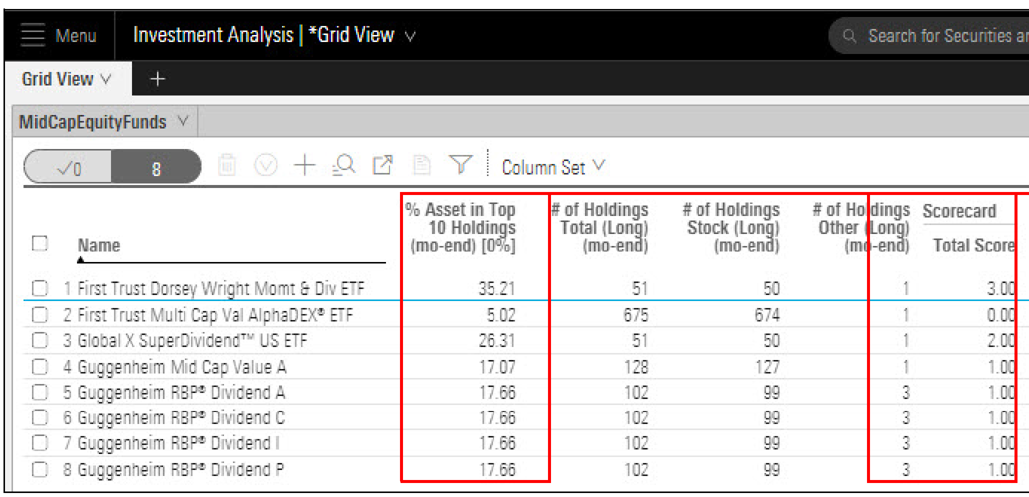
In Peer Analytics, enhanced messaging helps you understand your options when setting up a Scorecard. The Scorecard is available in all Investment Analysis workbooks.

If…	Then…
The Grid has no numeric data points	In the Peer Analytics panel, the Create Scorecard button is not displayed and the message "Scorecard only works for numeric columns" is shown. If you leave the Peer Analytics panel open and the Scorecard toggle on, and add numeric data points to the Grid, the Peer Analytics panel refreshes and displays the Create Scorecard button. When creating a Scorecard, the Scoring Type defaults to Standard Scorecard.
The Grid has numeric data points, but none are rankable	When creating a Scorecard, the Scoring Type defaults to Custom Scorecard, which you can set up using the numeric data points in the Grid. The data points % Asset in Top 10 Holdings and # of Holdings are examples of numeric, non-rankable data points. If you select Standard Scorecard, this message is displayed: "Only numeric data points that can be ranked are eligible for Standard Scoring. You may choose the Custom Scoring option above to create a Scorecard for your existing data points."
The Grid has numeric, rankable data points	When creating a Scorecard, the Scoring Type defaults to Standard Scorecard.

This message is displayed if the Grid has no numeric data points.



This option is selected when the Grid has numeric, rankable data points.



In the custom Scorecard column, the values are based on the % Asset in Top 10 Holdings.

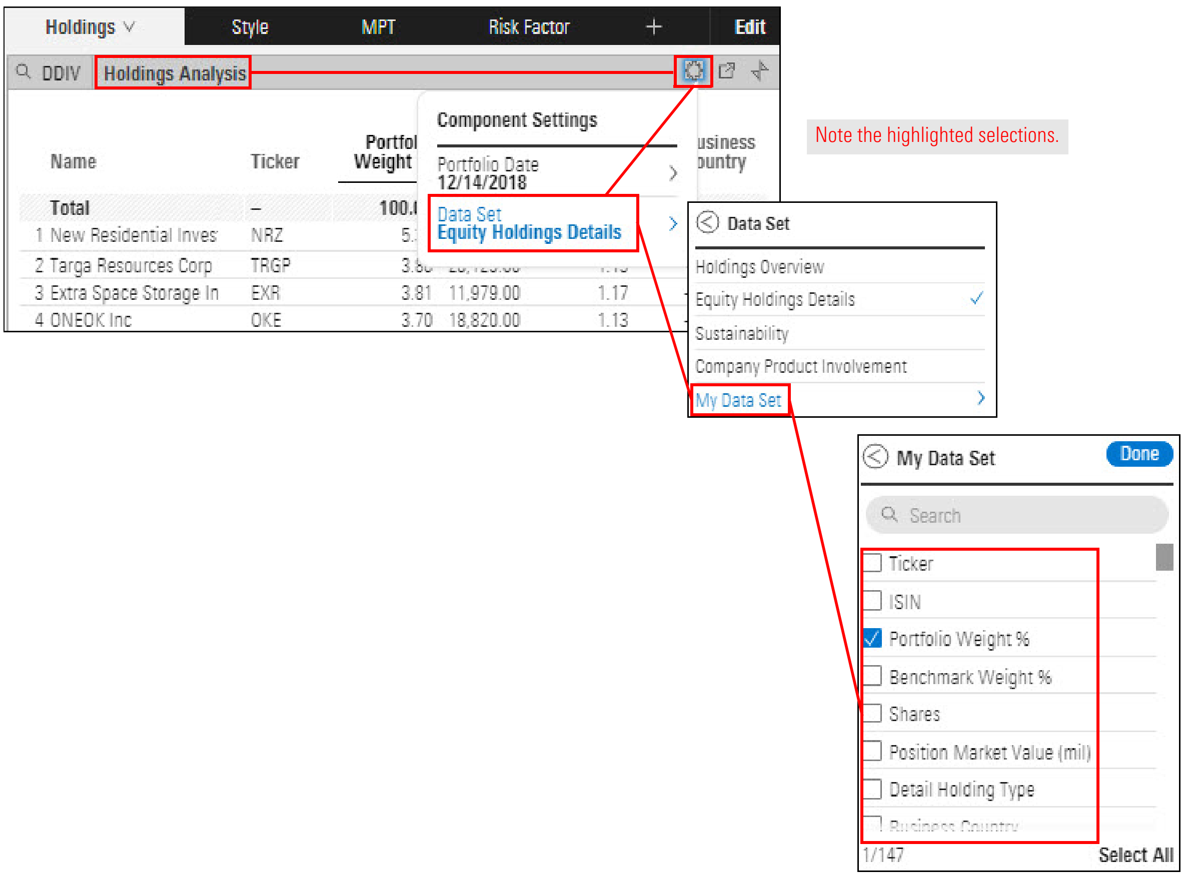
How can I save the order of sorted and dynamically ranked columns when exporting data?

In the Grid, when you sort on scorecard and dynamic ranking data points and then export the data, the sort orders are preserved in the .xls or .csv file.

What new data points are available in the Holdings Analysis component?

In the Investment Analysis workbooks (Equity Fund, Fixed Income Fund, Markets - Equity Research, and Multi-Asset Fund), the Holdings Analysis component can now display the following data points via the My Data Set option:

- Detail Holding Type
- EPS Growth % 3 Yr (FY 1)
- Free Cash Flow (mil) TTM
- ISIN
- Moat Source - Efficient Scale
- Moat Source - Intangible Assets
- Moat Source - Network Effect
- Moat Source - Switch Cost
- Moat Source - Cost Advantage
- Morningstar Fair Value per Share
- Net Income (mil) TTM
- P/E Ratio Forward
- Revenue Growth % 3 Yr



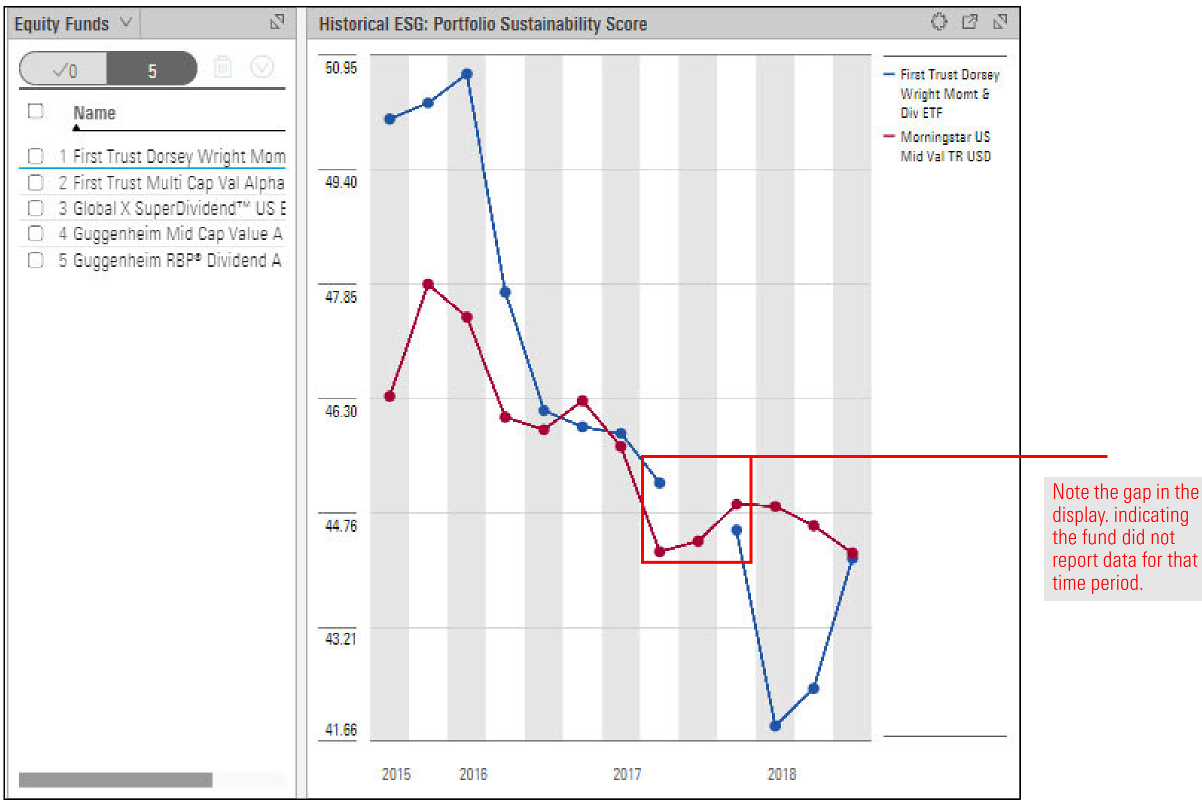
How can I view a fund's historical ESG scores in a component?

Investment Analysis workbooks now include the new Historical ESG component, which can display a fund's Portfolio ESG score on a monthly, quarterly, or annual basis. This data can help you understand trends and changes in companies who address risks and opportunities with environmental, social, and governance factors. This component is not part of a pre-built worksheet.

The Historical ESG component applies to the following:

- equity funds
- corporate bond funds, and
- fund of funds with 67% of assets invested in stocks and corporate bonds with company ESG scores.

Historical ESG data goes back to September 2015, which is also the default Start Date for the component.



To learn more about the Historical ESG component, please read Leveraging Morningstar Sustainability Data.

What has changed in revenue exposure components?

Regional revenue exposure data now aligns with the 10 standard Morningstar regions. This data is found in the following components in an Equity Funds workbook:

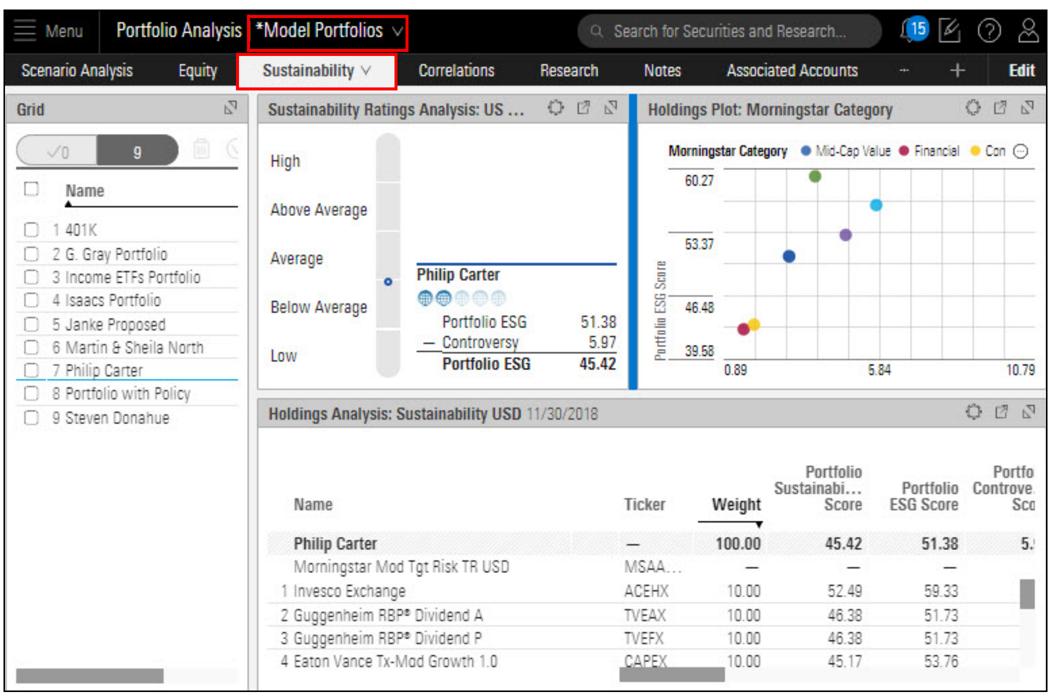
- Global Revenue Map, and
- Revenue Exposure.

☞ Note: Both components are found in the Allocation section of the Component Library. A fund must have at least 20% of its assets in equities in order for the components to populate.

What's new in Portfolio Analysis workbooks?

The Model Portfolios, Client Accounts, and Custom Benchmarks workbooks now include a Sustainability worksheet. Its default components support ESG analysis as described in the following table:

Component	ESG Analysis
Sustainability Ratings Analysis	Displays the following ESG data points in Table view: ▸ ESG Rating ▸ ESG Score, and ▸ ESG-Percent of AUM Covered %.
Holdings Plot	Displays the following ESG data points on a scatterplot: ▸ Portfolio Sustainability Score ▸ Portfolio ESG Score, and ▸ Portfolio Controversy Score.
Holdings Analysis	Displays numerous ESG data points, including the following: ▸ Portfolio ESG Score ▸ Percent of AUM Covered ESG, and ▸ Company Normalized ESG Score.



Note the highlighted selections.

To learn more about displaying holdings' ESG data, please read Creating Model Portfolios, Custom Benchmarks, and Investment Policies.

How can I add portfolio fees to the Total Portfolio Attribution component?

To help you see how portfolio-level fees affect net return, you can now include and edit portfolio fees in the Total Portfolio Attribution component settings. When you add a fee to the component, rows for fees and net return are added to the table.

The Total Portfolio Attribution component is available only in Model Portfolios workbooks.

Total Portfolio Attribution: USD 06/01/2018 - 11/30/2018

	Gross Return%			Net Return%		
▼ Name	Portfolio	Bench...	+/-	Portfolio	Benchmark	+/-
Total	0.43	−0.74	1.18	−0.11	−0.74	0.63
▼ Fee	—	—	—	−0.33	0.00	—
1 Annual Fee	—	—	—	−0.25	0.00	—
2 Special Assessment	—	—	—	−0.08	0.00	—
Net Return	—	—	—	−0.44	−0.74	—
▼ Alternative	−2.58	—	—	−4.04	—	—
3 Permal MMF (LUX) Nat...	−2.58	0.00	−2.58	−4.04	0.00	−4.04
Commodities	—	−9.70	—	—	−9.70	—
▼ Convertibles	−3.01	—	—	−3.76	—	—
4 1290 Convertible Secur...	−3.01	−1.84	−1.17	−3.76	−1.84	−1.92

Note the highlighted selections.

To learn how to add portfolio fees, please read Creating Model Portfolios, Custom Benchmarks, and Investment Policies.

How can I view a fund's Morningstar Historical Sustainability Score in a Morningstar Report?

In a Morningstar Report, you can now view the fund's Morningstar Historical Sustainability Score. The Morningstar Historical Sustainability Score is a weighted average of the trailing 12 months of Morningstar Portfolio Sustainability Scores.

The Morningstar Historical Sustainability Score is a weighted average of the trailing 12 months of Morningstar Portfolio Sustainability Scores. However, the monthly scores are not equally weighted; more recent portfolios are weighted more heavily than older portfolios. This enables the Historical Sustainability Score to reflect portfolio managers' more recent decisions.

The most recent month's score is multiplied by 12, the score of the month before that by 11, two months ago 10, all the way to 12 months ago, which is multiplied by 1. An example of these calculations is shown in the following table:

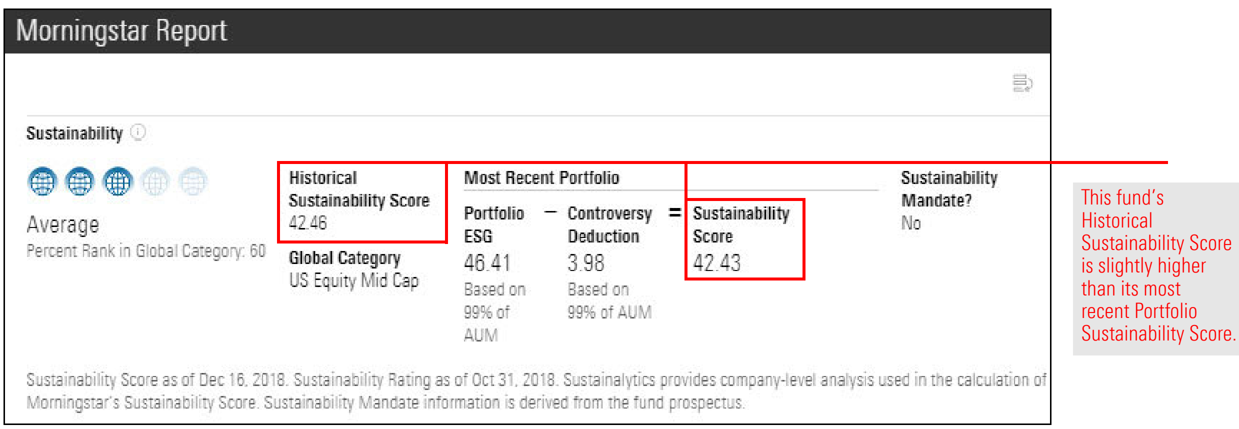
Portfolio Date	Portfolio Sustainability Score	Weight	Weighted Sum
7/31/2018	48.84	12	586.08
6/30/2018	48.01	11	528.11
5/31/2018	48.66	10	486.60
4/30/2018	48.07	9	432.63
3/31/2018	47.65	8	381.20
2/28/2018	47.86	7	335.02

Portfolio Date	Portfolio Sustainability Score	Weight	Weighted Sum
1/31/2018	48.77	6	292.62
12/31/2017	48.29	5	241.45
11/30/2017	47.83	4	191.32
10/31/2017	47.20	3	141.60
9/30/2017	47.42	2	94.84
8/31/2017	47.62	1	47.62
Totals		78	3759.09

Using the figures in the table, the Historical Score is computed by dividing the Tottal Weighted Sum by the Total Weight, as follows:

$$\frac{3759.08}{78} = 48.19$$

To learn how to find a fund's Morningstar Historical Sustainability Score in the Morningstar Report, please read Leveraging Morningstar Sustainability Data.



In the Morningstar Excel Add-In, what historical data points are new in the UK and US CEF Peer Groups?

The new historical data points in the UK and US CEF Peer Groups are shown in the following table:

- NAV Weighted DRI
- NAV Unweighted DRI
- Price Weighted DRI
- Price Unweighted DRI
- Weighted Daily Discount
- Unweighted Daily Discount
- NAV Weighted Daily Income Only Yield
- NAV Unweighted Daily Income Only Yield
- NAV Weighted Daily Income & Capital Gain Yield
- NAV Unweighted Daily Income & Capital Gain Yield
- NAV Weighted Daily Total Distribution Yield
- NAV Unweighted Daily Total Distribution Yield
- Price Weighted Daily Income Only Yield
- Price Unweighted Daily Income Only Yield
- Price Weighted Daily Income & Capital Gain Yield
- Price Unweighted Daily Income & Capital Gain Yield
- Price Weighted Daily Total Distribution Yield
- Price Unweighted Daily Total Distribution Yield
- Ex-Par NAV Weighted DRI
- Ex-Par NAV Unweighted DRI
- Ex-Par Weighted Daily Discount
- Ex-Par Unweighted Daily Discount
- Cum-Fair NAV Weighted DRI
- Cum-Fair Weighted Daily Discount
- Cum-Fair Unweighted Daily Discount

In the Morningstar Excel Add-In, how can I identify which funds disclose their intention to include or exclude ESG impacts in their investment process?

New data points are available to reveal a fund's intention to incorporate specific areas of ESG impact or exclude certain industries in their investment strategy. The data points are listed in the following table:

☞ Note: Funds can disclose multiple attributes at once.

Data Point Group	Data Point Name	Data Point Short Name
Fund Product Involvement	Portfolio Category Average Product Involvement Percentage	Portfolio_Category_Average_Product_Involvement_Percentage
	Portfolio Product Involvement Percentage	Portfolio_Product_Involvement_Percentage
ESG Carbon	Benchmark Carbon Risk Score	Benchmark_Carbon_Risk_Score
	Carbon - Portfolio Coverage	Carbon_Portfolio_Coverage
	Carbon Risk Breakdown	Carbon_Risk_Breakdown
	Carbon Risk Classification	Carbon_Risk_Classification
	Carbon Risk Score	Carbon_Risk_Score
	Carbon Risk Score All Funds Rank	Carbon_Risk_Score_All_Funds_Rank
	Carbon Risk Score Category Average	Carbon_Risk_Score_Category_Average
	Carbon Risk Score Components	Carbon_Risk_Score_Components
	Carbon Risk Score Components Category Average	Carbon_Risk_Score_Components_Category_Average
	Carbon Risk Score Components Percent Rank in Category	Carbon_Risk_Score_Components_Percent_Rank_in_Category
	Carbon Risk Score Percent Rank in Category	Carbon_Risk_Score_Percent_Rank_in_Category
	Portfolio Carbon Involvement	Portfolio_Carbon_Involvement
	Portfolio Carbon Involvement Category Average	Portfolio_Carbon_Involvement_Category_Average
	Portfolio Fossil Fuel Involvement	Portfolio_Fossil_Fuel_Involvement
	Portfolio Fossil Fuel Involvement Category Average	Portfolio_Fossil_Fuel_Involvement_Category_Average
	Low Carbon Designation	Low_Carbon_Designation

Please complete the T3/Inside Information Annual Software Survey

Let your voice be heard by taking an industry software survey administered by T3 and Inside Information.