

Dashboard Objective:

The primary objective behind the creation of this dashboards is to foster data-driven decisionmaking, facilitate a deeper understanding of market trends, and enhance the efficiency of accessing and analyzing data.

Featuring interactive capabilities such as slicers, tooltips offering additional insights, and card visuals displaying key metrics, these dashboards provide users with a dynamic and user-friendly experience. Notably, the dashboards offer various dimensions—vertical, regional, and competitor views—to explore Dodge historical, forecast, and Basis of Design or Spec data.

As a supplemental tool at the firm level, the Basis of Design Detail dashboard provides valuable insights, allowing the user to target specific engineering firms who are not specifying Greenheck at an ideal level.

Data Refresh:

Dataset	Refresh Frequency
SAP: Order Intake	Daily
CRM: Pricing Worksheet (PW)	Daily
CRM: Discount Request (DR)	Daily
Dodge: Historical	Monthly (~one month lag)
	Typically, we receive this data at the end of the
	following month (i.e. April 2024 data was received at
	the end of May 2024)
Dodge: Forecast	Quarterly (~one quarter lag)
	Typically, we receive the updated forecast soon after
	the quarter ends, but the historical data driving the
	forecast is only through the previous quarter (i.e.
	CY2024Q2 received early July, but historical data
	driving the forecast was through March 2024)
Dodge: Specification Rate	Quarterly (first day of month after quarter end)
	 Quarter Update Dates (April 1, July 1, Oct 1,
	Jan 1)
Dodge: Large Project	Weekly (Sundays)

Features:

Slicers:

• Slicers are placed in the areas where they impact the data when changed or at the top if they are global in nature. Due to the extreme flexibility among different data sets, this could cause confusion, and we recommend looking for the information tool tips or in this documentation to understand what slicers





control what data sets if you are unsure. You can always check what filters are applied to a chart by hovering over the three lines icon in the upper right-hand corner of any chart.

Reset Filters:

• In the upper right-hand corner, there is a reset filters icon . This allows you to reset all slicers and filters chosen.

Bookmarks:

• In the upper right-hand corner of the dashboards is a "Personal Bookmarks" feature data and a personal bookmark here, which allows you to choose slicers and sort features you may want to make as a default view or just save a view you want to use often without having to make the selections each time.

Sort Feature:

• Many graphs will allow you to customize how it is sorted. The three dots in the upper right-hand corner of the graph (more options) is where you will find this feature.

Data Sources:

Order Intake

- Purpose: show historical intake information and trends
- Charting considerations:
 - Currently, we are only showing complete fiscal years, once a new fiscal year is completed, that year will be added. Additional enhancements could include a toggle for YTD run rate comparisons for the current year.

Pricing Worksheets

- Purpose: shows overall activity level and trend, used as a more short to mid-term outlook (3 months) from the last printed pricing worksheet to receiving a discount request or an order
- Rolling two years of data
- Data context:
 - For a given project, reps often generate multiple pricing worksheets with multiple products over several months. We receive data for each pricing worksheet request ID or instance when a rep generates a pricing worksheet.
 - The line chart illustrates the value of the last printed pricing worksheet.
 - \circ $\;$ The dataset encompasses all pricing worksheets generated in the past two years.
 - \circ $\,$ $\,$ The pricing worksheet values are all placed on the date of the last print.
 - Utilizing the BU slicer ensures that the dataset is filtered to include only relevant pricing categories within those pricing worksheets, while maintaining the project's last printed date. The values being displayed will only represent the business unit or pricing categories being filtered on. Important to note that if a pricing category was not included in the last print, the value for those lines would be zero.





- Charting considerations:
 - Charts should not show the previous two months until the current month is complete to avoid overstating the value of pricing worksheets that will likely be printed in the coming months.

Discount Requests

- Purpose: show short to mid-term outlook (3 months) from a discount request to receiving an order
- Filters: cancelled and replacement discount are filtered out of dataset, new and other are filtered out of chart
- Charting considerations:
 - The charts display discount requests based on the month they were initially received. However, there is a delay between the time a discount request is received and processed by the discounting team, and when an order might be placed as a result. This delay can lead to a downward trend in the capture rate lines seen in the chart for recent months. Over time, we expect these trends to flatten out as the discounting team works through the requests and orders catch up with the received requests.

Dodge: Historical Market Data

- Purpose: show market actuals provided by Dodge
- Filters: only nonresidential and apartments in dataset, large jobs over \$1B filtered out
- Notes:
 - HVAC% is not applied
 - NO lag is applied to the data for assumed HVAC timing
 - Expect volatility in the historical figures as we receive updated files from Dodge monthly, these swings can be more drastic as you approach the lowest level of granularity, rep office ID.
 - o Lowest level of granularity is rep office ID

Dodge: Forecast Market Data

- Purpose: show market forecasts provided by Dodge
- Filters: only nonresidential and apartments in dataset
- Notes:
 - HVAC% is not applied
 - NO lag is applied to the data for assumed HVAC timing
 - Expect volatility in the forecast figures as we receive updated files from Dodge quarterly, these swings can be more drastic as you approach the lowest level of granularity, rep office ID.
 - Dodge Forecast construction type/vertical is not as granular as Greenheck verticals reported on intake
 - o Lowest level of granularity is rep office ID
 - Best aligned mapping of Greenheck internal verticals to Dodge verticals:

Vertical (OI/internal)

Dodge Forecast Vertical





	Amusement, Social and Recreational Bldgs or Other Nonbuilding or
Amusement	Schools, Libraries, and Labs (nonmfg)
Apartments/Condos	Apartments
CommercialMisc (Old)	
Data Centers	Office and Bank Buildings
Edu:Coll/Univ/Voc	Schools, Libraries, and Labs (nonmfg)
Education: K-12	Schools, Libraries, and Labs (nonmfg)
Hospital/Clinic	Hospitals and Other Health Treatment or Manufacturing Plants, Warehouses, Labs
Hotel/Motel/Dorms	Hotels and Motels or Dormitories
Manufacturing Plant	Manufacturing Plants, Warehouses, Labs
Not assigned	
NursingHomes/AsstLiv	Hospitals and Other Health Treatment
Office	Office and Bank Buildings
Parking Garage	Parking Garages and Automotive Services
Public Safety	Government Service Buildings or Other Nonbuilding
Religious:Church/FH	Religious Buildings
Rep Stock	
Residential	
Restaurant	Stores and Restaurants
	Stores and Restaurants or Parking Garages and Automotive Services or
Retl:Shop/Store/Auto	Government Service Buildings
Term: Air/Bus/Rail	Miscellaneous Nonresidential Buildings
Utility: Power/WWTP	Miscellaneous Nonresidential Buildings or Other Nonbuilding or Power Plants/Gas/Communications or Sewerage and Waste Disposal Systems or Streets and Highways or Water Supply Systems
	Warehouses (excl. manufacturer owned) or Manufacturing Plants
Warehouse	Warehouses, Labs

Dodge: Specification Rate

- Purpose: monitor how Greenheck is being specified in the market over time, actionable insights drive down to engineering firm level to show those firms not specifying Greenheck in BOD Detail view
- Filters: only Electrical Engineer, Engineer (no specialty), and Mechanical Engineer firm types in calculations as a default, Canada filtered out
- Data context:
 - BOD rate is calculated by proximity search of our key words/models and competitors in the equipment schedules and drawings. Please note we are calling this BOD, but there are





cases where an equipment schedule could list multiple manufacturers as equivalent alternatives.

- Spec rate is calculated by proximity search of our key words/models and competitors in the specification documents.
- When BOD rates are greater than 100%, it means that multiple manufacturers are listed in the same equipment schedule, which could mean they are listed for different products within the same category or it they are listed as an equivalent alternative.
- When Spec rates are greater than 100%, it means that multiple manufacturers are listed as alternates on the specs
- If the BOD or Spec rates are less than 100%, it means that we do not collect data for all the competitors
- As the user approaches the lowest level of granularity, office number, there are likely less projects in the rep's area
- When looking at BOD/Spec Rate by Rep, note that this is BOD/Spec Rate for the engineering firms within a rep's area based on the engineering firm's location, not the project location
- Each engineering firm's data is for that location only, including total project value
- BOD/Spec Rates today:
 - Fans (BOD)
 - o DOAS (BOD)
 - o ATU (BOD)
 - o GRD (BOD)
 - HVLS (BOD)
 - Dampers (Specs)
 - Louvers (Specs)
 - ATU (Specs)
 - o GRD (Specs)
 - Fan Energy Index (FEI)
- Measures:
 - Average Total Project Value: an average of the firm's total project value from 3 years and YTD (updated value ran quarterly)
 - Project Count w/ Plans and Specs: count of projects that have plans and specs (new values ran quarterly)
- Notes:
 - Dodge Forecast building type/vertical is not as granular as Greenheck's reported verticals for intake
 - The naming of firms is not clean, use search functionality on 'Firm" slicer to find duplicate firm names (Dodge continues their effort to clean up the data so this is not an issue moving forward)
 - HVAC% is not applied
 - Lowest level of granularity is rep office ID

Dodge: Large Project

• Purpose: tool to get lead information on large projects not already aware of and have the ability to influence basis of design decisions





- Refreshed on Sundays weekly
- Filters: Canada filtered out
- Dodge report filters applied: Only projects over \$50M and updated in the last 90 days
- Data context:
 - o Dodge goes after project specific data to add to their database
 - Dodge provides us with many fields of project information like project name, project value, vertical, action stage, status, low bidder, etc.
 - Hover in the table to see additional important project information available like owner, contractor, engineer, bid date, and target start date
 - o If the user has a Dodge login, they can use the project link for more information
- Notes:
 - Dodge Large Projects building type/vertical is not as granular as Greenheck's reported verticals for intake
 - HVAC% is not applied
 - Lowest level of granularity is rep office ID



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