Oracle Cloud EPM Insights

Oracle Cloud EPM is making it easier for finance to be more efficient and partner more effectively with the business by embedding advanced technologies in the context of their everyday activities. We call this innovation Intelligent Performance Management (IPM). IPM applies data science and machine learning to automate data analysis, enabling finance professionals to focus on strategic decision making and action.

Insights, a key capability under the IPM umbrella, , uses pattern detection to uncover and highlight trends and anomalies in data to streamline reporting and decision making. With the increased speed of business and pace of change in today's world, it is vital that you spend your time on taking actions and making the right decisions, rather than spending hours analyzing data. Finance needs to go beyond automating the mundane and use advanced technologies to automate the higher value areas – such as finding important patterns in your data. Insights allows finance to spend more time taking actions and significantly reduces the time they spend on reporting and analysis.

What is Insights?

Finance spends a significant amount of time on analyzing and reporting during their financial close, reporting, and planning and forecasting cycles. This can often add unnecessary time and delays to these processes. Humans are great at adding context or making decisions when presented with insights into data–but machines can help with pattern detection by rapidly analyzing data to detect trends and anomalies.

Insights allows prediction algorithms to analyze data within Oracle Cloud EPM to reveal hidden correlations, anomalies, and trends. These insights are then displayed in one dashboard which helps finance act faster by being able to manage, collaborate on, and resolve all the insights relevant to them in one place.

Finance has the ability to discover the root cause of each insight from the Insights dashboard and then take action on that insight from one place,. This could be in the form of adjusting a forecast, or collaborating with the business to help resolve the related issues.

Key business benefits

- **Quality:** *"Find the needle(s) in the haystack(s)…"* Automated pattern detection finds insights that may not have been previously known or easily attained

- **Speed & Efficiency:** Improve '*time-to-action'* by greatly reducing the need for ad hoc data analysis and report package review

  Collaboration: provide all stakeholders with common store of historical '*hot spots*' within the business.
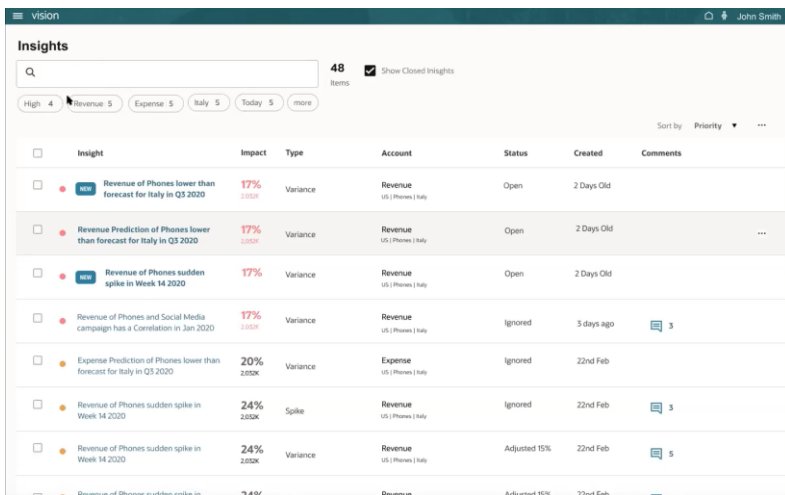
Figure 1. Insights dashboard displays information on generated insights

Why does data analysis take so much time?

Oracle Cloud EPM collects large amounts of data for processes such as planning and financial close. This data is made up of complex hierarchies across your many business dimensions. Add to that the complexity of trying to spot patterns like anomalies or outliers in reports or dashboards or doing ad hoc analysis on data. If we take the set of data below, even though visually represented, it is very difficult to spot any pattern or outliers.
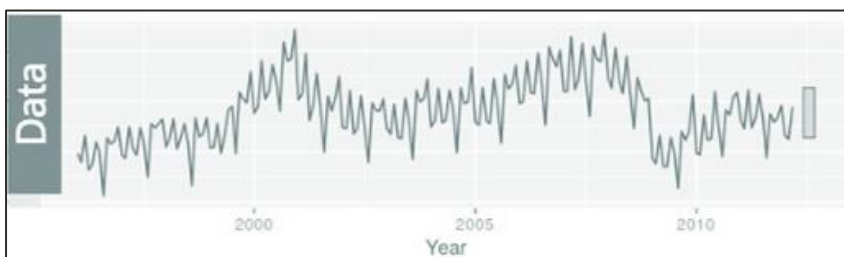
Figure 2 Example visualization sales of data over time

We have to take into account factors that affect the data such as seasonality and trends and remove them in order to get a clear picture of what is really happening in the data as illustrated below.
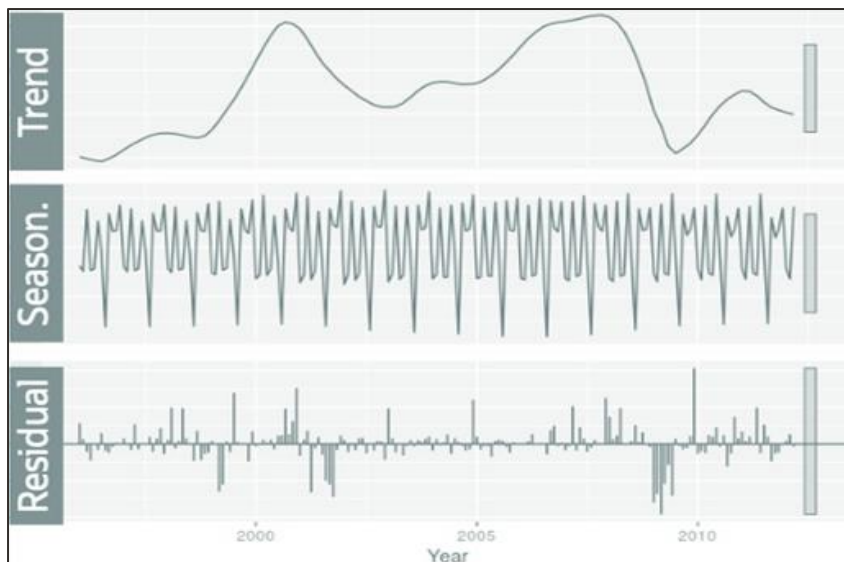
Figure 3. Example of normalized data when trend and seasonality is removed

Insights can analyze large amounts of data and perform all the complex pattern matching and anomaly detection to highlight problem areas quickly. Its complex pattern matching is able to display only the key anomalies that need to be investigated.

Key benefits of letting the machine do the analysis

Speed and efficiency

Insights can save finance teams an incredible amount of time analyzing and reporting on data. The Insights engine will scan the data and the Insights will be displayed on the dashboard where users can address them and act. This allows finance to manage by exception and take actions faster.

Quality insights

The algorithms in the Insights engine can analyze more data and find insights in the data that humans may not be aware exist or are looking for. This helps users become aware of undetected patterns in the data, explore the route cause analysis, and also take action directly from the dashboard.

Collaboration

The Insights engine collates all anomalies or areas of concern in your business in one central dashboard. This makes sure that proper review can take place, key patterns never get overlooked, and issues get resolved. It also tracks how the insights are trending over time. For example, are we seeing fewer forecast variances than last year, less bias, etc.

Type of Insights

Insights has a wizard driven interface which helps EPM users configure the target data, insight variables, and materiality. This allows flexibility to run different insight discovery on different slices of data with different tolerances. The three main types of insights are:

- Forecast Variance & Bias Insights measures the variance and/or bias between two historical scenarios, such as Forecasts and Actuals.
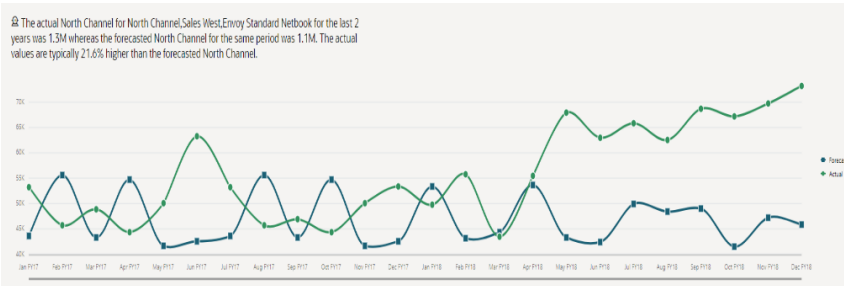
Figure 4 Illustration of Forecast variance and bias as displayed in Insights

- Prediction Insights measures the variance between two future scenarios, such as Forecasts and Predictions (machine generated). When comparing a scenario against the machine's prediction, a measure of risk can also be calculated (i.e. the risk of not meeting the target forecast).
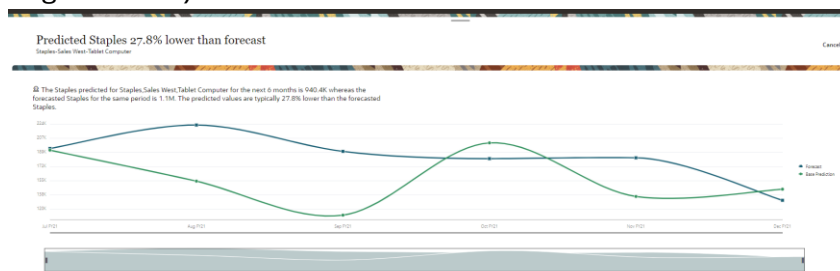

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Figure 5 Example of prediction insight trend graph

- Anomaly Insights detects anomalies in recent Actuals (e.g. current month or quarter). They may include changes in Actuals from the base level (e.g. sudden volatility), or missing Actual data.
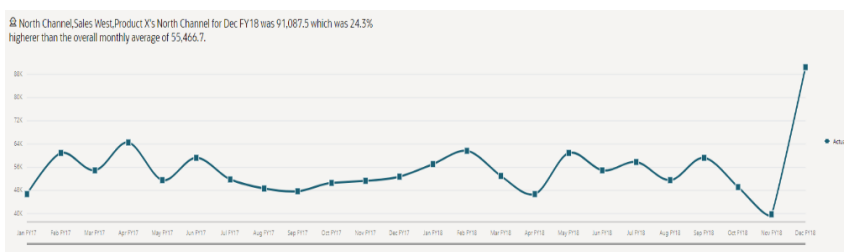
Figure 6 Example of anomaly insight chart

The Insights engine is being continuously expanded with more insights to cover more business process across Oracle's Cloud EPM suite.

Wizard driven configuration

Insights have been specifically designed to be configured by business users without the need for deep understanding of data science. The wizard driven configuration interface guides users to take a logical step by step approach to define slices of data to be analyzed, define the insight type, select specific algorithm and the materiality/tolerances.

Figure 7. Wizard driven configuration for Insights

Oracle Fusion Cloud EPM
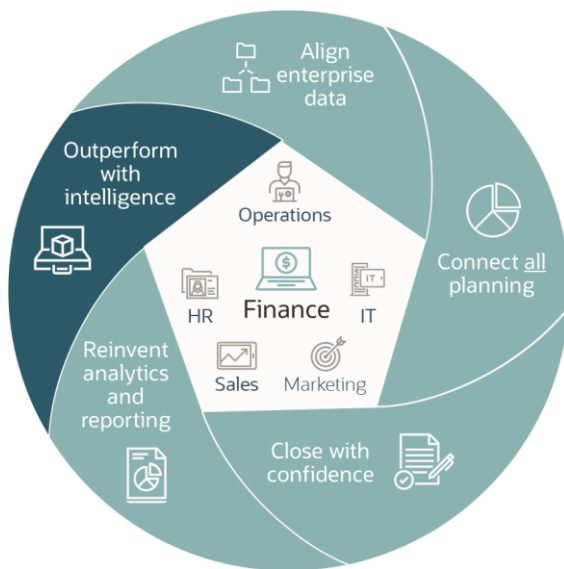
Insights is just one of the exciting features using data science and machine learning that Oracle is bringing to Cloud EPM to help finance partner more effectively with the business.   We have also made significant investments in intelligent process automation which includes chatbots, RPA and more capabilities to help finance become more efficient.

For more information on our innovations in Oracle Cloud EPM, please visit   Enterprise Performance Management Platform | Oracle

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