The December release of Pyramid includes over 50 new and upgraded features and numerous functional upgrades and fixes, designed to make Pyramid's Analytics OS the leading solution for Enterprise customers looking for analytics that go well beyond visualization.

**NATURAL LANGUAGE QUERIES**

New tools for asking analytic questions in plain English

Uptick: "NLQ" can greatly increase the adoption of analytics by making access to data analysis as simple as asking the 'brain' a question in plain, natural language and getting an analytic answer represented as a report visualization. Also, use NLQ functionality in your environment without sending your data to the public domain.

**CONVERSATIONS & COMMENTS**

Comments in analytic reports and dashboards through threaded conversations with colleagues.

Uptick: Conversations greatly expand the depth of analytics by creating social hubs around analyses. Sharable insights make it easier to discuss results and to create actionable lists for users on the platform. Data and report snapshots allow users to track changes over the lifecycle of a conversation thread.

**DATA-DRIVEN ALERTS**

Tools for data-driven alerts to automatically notify users about changes in data and numeric outcomes in reports.

Uptick: Alerting allows 'distant' users to keep in touch with data and analytic outcomes by automating the notification process.

**CUSTOM VISUALIZATIONS**

A custom visualization designer to draw your own data visualizations to best represent the way an organization and its users 'see' data.

Uptick: The ability to build a custom visual and deploy it instantly across the organization in a secure and governed fashion makes this feature the ultimate solution to highly specific visual requirements.

**CUSTOM MAPS**

Capabilities to upload and access custom shape maps greatly enhances the possibilities for geospatial analytics beyond the standardized maps of the world.

Uptick: Many organizations need to see geospatial analytics within the context of their unique regional groupings and domains. Custom mapping extends the flexible mapping solution to bespoke, customer defined maps.

**PHONE APPS**

iOS and Android phone apps to run analytics on-the-go, complete with interactivity.

Uptick: The phone app is designed to run the real-time Discover reports and Present dashboards with real-time querying and full data interactivity. Complete with its own two-factor authentication framework, it offers a secure and powerful way to access analytics through your mobile device.

**PHONE DASHBOARD DESIGNER**

Designer interface for building dashboards specifically for mobile phones.

Uptick: Being able to custom build dashboards to fit device form factors greatly improves their appearance and usability.

**NEW VISUALIZATIONS**

New data visualizations that take full advantage of context calculations.

Uptick: Beyond the Sunburst and Stream charts, three new advanced visualizations were added to take full advantage of the new context calculation engine: Candlestick, Waterfall and Boxplots. Each represents a stellar example of the power and flexibility of Pyramid's visualization and calculation capabilities.

**CONTEXT CALCULATIONS**

Context calculations extend the power and flexibility of analytic business logic to report-aware calculations that will automatically recalibrate based on the context of the report.

Uptick: Numerous tools solve calculation challenges in the database and the data 'model'. However, there are some classic analytic problems that can only be solved when the 'context' of the report is included in the equation. Pyramid's context calculations resolve this problem-set with elegance, simplicity and ingenuity.

**MOTION AXIS**

Motion or Play axis drop zone to animate your visualizations with data changes.

Uptick: The motion axis greatly improves the user's ability to see changes in data over time in different visualizations and charts.

**NEW DATASOURCES**

Support for Vertica, SAS dataset files, Facebook, Twitter and ODBC connections.

Uptick: Expanding the data connector footprint makes it easier for organizations to connect their data sources into Pyramid and accelerate their use of the platform. ODBC capabilities now offer more options for connecting idiosyncratic data sources to Pyramid.

**TIME INTELLIGENCE WIZARDS**

The new Time Intelligence wizard in Discover greatly simplifies the process of building time-based calculations.

Uptick: The Discover-based Time Intelligence wizard makes creating the often-messy time-based calculations a 1 minute, point-and-click process. Completing the time intelligence capabilities in Model and NLQ, the new wizard will greatly accelerate the deployment of advanced time-based analytics.

**DATA FLOW VARIABLES**

New variables feature to facilitate smarter flows and incremental data processing.

Uptick: Variables in the data flow of Model allow users to 'set' or 'get' values in the flow or from external databases. These can subsequently used to calibrate data ingestion and create incremental data processing.

**PROGRAMMABLE SECURITY**

New capabilities to formulaically set member-level security on any database.

Uptick: Member level security is mostly unavailable on many data stacks. The new programmable security option delivers this feature in a highly scalable, accessible mode that can make any data engine enterprise-worthy for analytics.

**SAML AUTHENTICATION**

Support for SAML as an authentication provider.

Uptick: The addition of SAML (Security Assertion Markup Language) further enhances the security authentication options available in Pyramid and support the enterprise deployment options required in an Analytics OS.

**Top to Bottom: Sunburst, Stream, Candlestick, Waterfall and Boxplot Visualizations**
## Client

### Main Application

<table>
<thead>
<tr>
<th>Feature</th>
<th>CATEGORY</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Bulletin Board for Alerts and Conversations</td>
<td>Adoption</td>
<td>Easy access to new conversations and user defined alerts.</td>
</tr>
<tr>
<td>A new interactive tutorial for Publications</td>
<td>Adoption</td>
<td>Immersive, quick tutorials to ramp up first time users on how the application works.</td>
</tr>
<tr>
<td>Annotations and Conversations with report and data snapshotting **</td>
<td>Analytics</td>
<td>Instant communication and discussion with other users on analytic results and reports.</td>
</tr>
<tr>
<td>Alerts and data-driven notifications **</td>
<td>Analytics</td>
<td>Timely notification of significant data movements as defined by the user.</td>
</tr>
<tr>
<td>Native Apps for iPhone and Android **</td>
<td>Adoption &amp; Mobility</td>
<td>Access your analytics on the go with native mobile applications.</td>
</tr>
</tbody>
</table>

### Model

#### Data Flow

<table>
<thead>
<tr>
<th>Feature</th>
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</thead>
<tbody>
<tr>
<td>New data sources: Vertica, Facebook, Twitter, SAS Datasets &amp; Fixed-width text files.</td>
<td>Data Acquisition</td>
<td>Increased data access options. New options for accessing more data, means bringing more of the organization’s data footprint into a single platform.</td>
</tr>
<tr>
<td>Support for ODBC connections *</td>
<td>Data Acquisition</td>
<td>Better control and easier transfer of data from user defined analytic scripts in R and Python.</td>
</tr>
<tr>
<td>Improved data-frame support for scripting tools in R and Python</td>
<td>Data Acquisition</td>
<td>Better insight into data distribution and properties during the data preparation process.</td>
</tr>
<tr>
<td>Column Statistics and auto-suggestion feature *</td>
<td>Data Acquisition</td>
<td>Easier creation of PQL calculations during data preparation with access to function syntax and meta data attributes.</td>
</tr>
<tr>
<td>PQL Script Editor interface for custom column calculations</td>
<td>Data Acquisition</td>
<td>New feature to set and get ‘variable’ values. These can be used for multiple activities - most notably for incremental data loading and for manipulating R and Python scripts.</td>
</tr>
<tr>
<td>Data Flow Variables &amp; Incremental Data loading</td>
<td>Data Acquisition</td>
<td>Simple access to commonly used public domain data.</td>
</tr>
<tr>
<td>5 new Python scripts for stock and demographic data in the Marketplace</td>
<td>Data Acquisition</td>
<td></td>
</tr>
</tbody>
</table>

#### Data Modeling

- ‘Security’ table and column type **

#### Discover

#### Analytics & Functionality

<table>
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<tr>
<th>Feature</th>
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<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Intelligence wizard for building time-based calculations and lists **</td>
<td>Analytics</td>
<td>Reduced complexity and increased speed in creating time-oriented calculations.</td>
</tr>
<tr>
<td>Natural Language Querying for building queries with plain English text **</td>
<td>Adoption</td>
<td>Reduces the learning curve by generating analytic results using natural language.</td>
</tr>
<tr>
<td>Updated filter/slicer options to disable filters/slicers and control auto-run per filter/slice</td>
<td>Analytics</td>
<td>Greater flexibility in the usage of model elements simplifies the way visualizations and analytics work for deeper insights without complexity.</td>
</tr>
<tr>
<td>Textbox slicer and parameter option</td>
<td>Analytics</td>
<td>New display options for data Slicers</td>
</tr>
</tbody>
</table>
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- Updated data-source start and explorer page, with recent and favorite options
  Adoption Faster access to commonly used data models.
- Improved custom calculation and lists panel with ‘flattened’ interface option
  Adoption Easier navigation and access to user defined calculations.
- New ‘Context’ calculations and aggregation options
  Analytics One click access for commonly required calculations directly within Discover. Increases speed and accuracy of analytics.
- Alerts, Annotations and Conversations **
  Adoption Instant notification of data changes with ability to comment and converse on analytic results
- Header and Footer options for printing
  Adoption Better control of layout and appearance of printed output.
- Export/Print to PNG graphic files
  Adoption More flexibility in output options for reuse of analytic results.

Visualizations

- Sunburst, Waterfall, Candlestick, Boxplot and Stream visuals
  Visualizations Further visualization options increase the scope for clear communication of analytic results.
- Motion Axis for data driven animations
  Visualizations Enhances the impact of understanding how data changes across attributes or time.
- Geospatial Lasso for selecting geolocations within a given radius
  Visualizations New ways of representing setting the colors in visuals, including logic driven ‘custom’ colors, discrete colors and advanced color settings for KPIs and gauges.
- Custom Map Shapes for customized geospatial choropleth map visuals
  Visualizations Improved ways for blending multiple measures in the same chart to greatly improve flexibility in the portrayal of multi-measure charts.
- Grid improvements including ‘Flat’ and ‘Accounting’ grid styles, new ‘data bar’ grid indicator type.
  Visualizations Improved options for detailed formatting of grid-based visuals. In grid data bars aid comprehension of comparative values.
- ‘Mini map’ large grid navigator widget
  Visualizations Better navigation of large grids.
- Improved visual customizations with series-level data labels, line styling and chart ordering
  Visualizations Better control of chart formatting delivers precisely the required visualization.
- Tooltip hide/show option
  Visualizations Further user interface control enhances the ability to aid the user by removing unwanted visual elements.

Present

- Phone layout editor **
  Visualization Easier to design Presentations for consumption on limited screen size mobile devices.
- New ‘Data Card’ visualization for miniaturized visuals
  Visualization Showing summary data from analytic objects with the ability to zoom to detail enables more information to be displayed simultaneously.
- Annotations and Conversations **
  Adoption Communication and discussion of analytic results allows the synthesis of quantitative and qualitative information.
- Click actions extended to text and graphics
  Adoption Click actions can now be set on all items in a presentation, including text and graphics.
**Formulate**

- **Custom Visuals Designer**
  - Provides unlimited scope for visualization of analytic data results.
- **3 new Custom Visual examples in the Marketplace**
  - Provide a guide to how to create your own custom visualizations as well as being immediately available for use.
- **New PQL functions covering new string, user security and aggregate operations**
  - More flexible string manipulation, support more dynamic security options and better control aggregation processing.

**Content Management & Governance**

- **Upgraded performance for key content-based operations**
  - Faster, more responsive UI improves the user experience.
- **Data models included in data lineage tools**
  - Better search makes it easier to find relevant content quicker. Search is also key the running the different content wizards across multiple content items.

**Administrative & Backend**

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>CATEGORY</th>
<th>BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative Tools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Custom Map Shapes configuration pages</td>
<td>Analytics</td>
<td>Customized mapping options offers end-users map visualizations for non-standardized regions and locations.</td>
</tr>
<tr>
<td>Programmatic security options for member level security on data sources</td>
<td>Data Management</td>
<td>Smarter tools for setting up highly scalable member-level security on non-SSAS data sources that includes a programmatic interface.</td>
</tr>
<tr>
<td>New Alerts Manager</td>
<td>Management</td>
<td>Control and manage system wide and user defined alerts.</td>
</tr>
<tr>
<td>Updated ‘User Profile’ options for new features. Includes new application simplification option.</td>
<td>Management &amp; Adoption</td>
<td>Better control and finer granularity in defining user functionality leads to better business user engagement and usage.</td>
</tr>
<tr>
<td>In-memory server statistics</td>
<td>Management</td>
<td>Better information on resource, usage and performance aids platform management and administrative control.</td>
</tr>
<tr>
<td>New client security options</td>
<td>Security</td>
<td>New optional switches to harden the security envelope of the browser client.</td>
</tr>
</tbody>
</table>

**Server Functionality**

- **SAML authentication provider**
  - Greater support for authentication providers offers better and easier enterprise integration options.
- **Updated REST API framework - version 2.0**
  - Improved APIs to extend and simplify the original APIs in the product (*1.0*).

**Documentation**

- **Upgraded Online help**
  - New help topics to explain the new features in this release.
- **New tutorial video snippets in help**
  - New tutorial topics to explain the features in the product.

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* Preview features and/or upgrades: Although these features or upgrades are in preview, they are upgradable in the future and fully supported.

* Item available in the Standard or Enterprise Editions.

** Item available in the Enterprise Edition only.

## The new Natural Language Querying Engine requires at least an extra 4-6GB of memory per deployed Pyramid runtime server machine.