

Power BI

Consulting Services

Cognitive Convergence
<http://www.cognitiveconvergence.com>



ABOUT US

Cognitive Convergence is a recognized expert that provides:

- ✓ Cognitive Convergence is Subject Matter Expert in Office 365, Dynamics 365, SharePoint, Project Server, SAAS, Power Platform: Power Apps-Power BI-Power Automate-Power Virtual Agents.
- ✓ consulting services that help in designing, deploying, managing, enhancing or troubleshooting on-premises, cloud-based or hybrid Power BI environment.
- ✓ help to start fresh with Power BI to modernize current business analytics solution or revamp existing Power BI deployment by incorporating new data sources or adding new services.

Our Core Consultancy include following:

- User Friendly Reports
- Hybrid deployment support
- Business Insights
- APIs integration
- Self-service data preparation
- Powerful Analysis

Current Location: Lahore, Pakistan

Planned Front-end Office: California/Washington States- USA

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Power BI

“A set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insights and decision making.”

- ✓ Power BI have several consulting services that enhances the range of functionalities that Power BI provide.
- ✓ These services allow integrating a number resources with Power BI and generate a wide range of solution.

Microsoft Power BI provides nontechnical business users with tools for

- Aggregating
- Analyzing
- Visualizing
- Sharing data



Microsoft Power BI

“Power BI: any data, anywhere, any way”

REASONS TO USE POWER BI

Modeling view allows users to divide complex data models by subject area into separate diagrams, multi-select objects and set common properties

This feature allows developers to change the appearance of default visualization and reporting tools and import new tools into the platform.

Using Power Query, business analysts can ingest, transform, integrate and enrich big data into the Power BI web service.

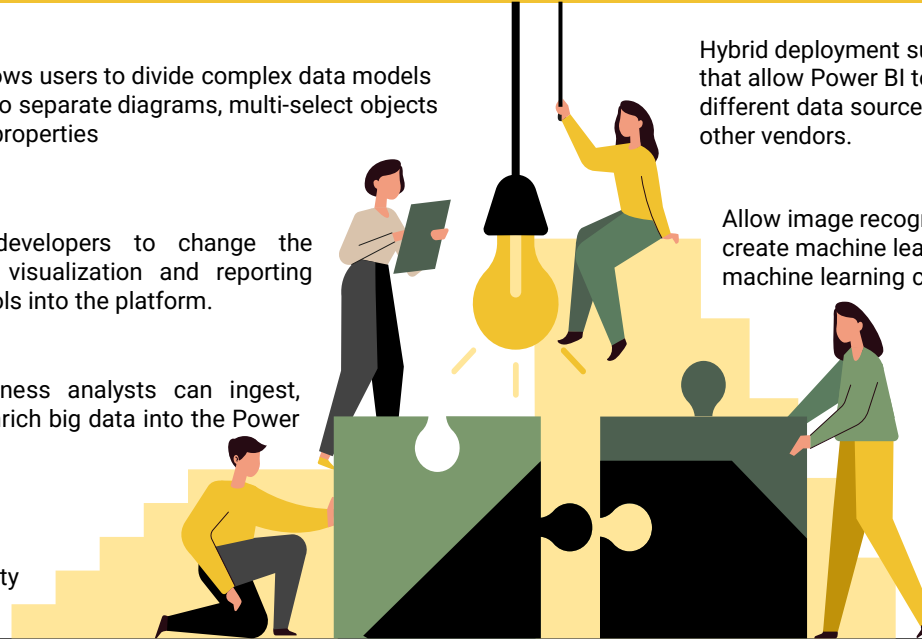
It brings together data governance and security

Hybrid deployment support provides built-in connectors that allow Power BI tools to connect with a number of different data sources from Microsoft, Salesforce and other vendors.

Allow image recognition and text analytics in Power BI, create machine learning models using automated machine learning capabilities

Power BI provides a strong backend data manipulation feature with access to simple visualizations.

Power BI uses cloud storage and includes simple implementation process.



Cognitive Convergence Consulting Services

Cognitive Convergence combines precision, extensive experience, expertise, and in-depth industry knowledge. Our strengths offer an unprecedented Power BI solution, as well as a smooth implementation of Power BI that allows you to create a road map that helps you optimize your data, processes and business goals. Power BI is one of the most famous BI solution which provide a large range of services it provides its own unique and some common functionalities and our consulting services combine with these Power BI functionalities and enhance the range of functionalities that power BI provide.

Cognitive Convergence consulting services provide your organization

- To amplify profits and sales, assist retailers with accomplishing a more profound comprehension of estimating, POS, channels, and clients.
- Improved management, accomplish consistency, and secure information while giving individuals admittance to experiences.
- Rejuvenate your applications with data. Effectively embed intuitive visuals and convey convincing reports on any gadget.
- Quickly go from data to understanding. Associate with many source and data effectively.



Reports and Dashboards

- Our team having good experience developing rich reports, insights and interactive dashboards.
- Our team can provide advance analytics to data and help with forecasting to make sure departments meet business metrics.
- Our team use DAX and M formula Language for better visualization of data.
- Our team is infused with machine learning capabilities, meaning to spot patterns in data and use those patterns to make informed predictions and run “what if” scenarios.
- Our team provide business intelligence that target data integration and data analysis and help you maintain complete transparency.
- With our Power BI consulting service, you can easily access, model and analyze your data anytime, anywhere.



CUSTOM CONNECTOR

Custom Connectors for Power BI are modules that extend Power BI's capabilities to connect to data sources not covered by what's shipped with the product. Data Connectors are

- Wrapper around REST API that allows Power BI.
- Can either be public or private, depending on public internet versus being visible only to your network.
- Microsoft offers on-premises data connectivity through an on-premises data gateway for private APIs.
- A connector can access data from both cloud and on-premise sources
- Deploy the built custom connector into different environments as per need

Reference Implementation

Our team uses its expertise to develop Custom Data Connectors for following SAAS companies as a reference implementation

AIRTABLE



SLACK



Our team provides data connector services that allow users to quickly build reusable models with general data.

Our Strategy benefits are

- Encapsulation
- Friendly view
- Authentication
- Filtered view
- Reusability of M code
- All connection with all tables

Custom Visual

Cognitive Convergence leverages their expertise to offer services to develop custom visuals that give an amazing and user friendly customized visualization. Cognitive Convergence use its expertise to develop breathtaking custom visuals in .pbviz file format. These Custom Power BI visuals are develop to meet visualization requirements beyond what is available today.

Our team create custom visuals for Power BI using Typescript and JavaScript and is able to

- ✓ Develop custom visuals for Power BI using the custom visuals SDK—an open-source, command-line tool.
- ✓ Typescript, a superset of JavaScript and cascading styles sheets (CSS) is use for development.
- ✓ Test, debug, and package custom visuals
- ✓ Get your custom visuals certified by Microsoft.
- ✓ Power BI visuals are packages that include code for rendering the data served to them.
- ✓ Share your creations with the world by publishing your custom visuals to App Source.

For Certification of visual our team undergo through following

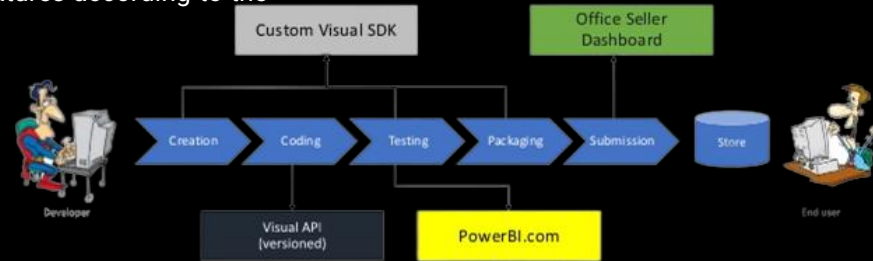
- ✓ Developer account approved by Microsoft.
- ✓ Submit solution to Microsoft App Source via Partner Center.
- ✓ After submission of solution it goes through a series of automated checks to ensure that it complies with the certification policies.
- ✓ The validation team reviews submission. This can take 3-5 working days, depending on the volume of submissions in the queue.



Custom Visual License Management

Cognitive Convergence provide License Management to Custom Visual. Using License key and token for Power BI custom user. So that user can enter a key in order to use visual. Key show authorization of client. If key is valid user can have access to Power BI custom visual.

- ✓ Enable licensing to Power BI Custom Visual that call Rest API to validate key and thus allow only authorized users to use custom visual.
- ✓ IAP Power BI visuals are free, downloadable Power BI visuals. Users pay nothing to download those Power BI visuals from the marketplace. IAP visuals offer optional in-app purchases for advanced features.
- ✓ Necessary capabilities are added to allow the user to input a license key that is provided offsite through a licensing/mechanism.
- ✓ has a way of validating this key and switching on the appropriate features according to the same model.
- ✓ If key entered by user is valid, user get access to use custom visual, else error message for entering key into visual appears.



PYTHON, D3.JS & Power Apps - Integration



Python

Python integration in Power BI is one of the greatest things that gives the user the ability to utilize amazing visual libraries and some of the machine learning packages.

We provide amazing python scripts and in Power BI

- To create dataset in Power BI Desktop.
- For modeling of data in Power BI Desktop.
- Create attractive visuals in Power BI.
- Perform data cleaning and advanced data shaping.



D3.js

D3.js makes use of the widely implemented SVG, HTML5, and CSS standards. Using these standards in Power BI for developing custom visual enhance the experience of storytelling.

We provide amazing d3.js standards in Power BI

- To provide 'lift and shift' of an existing D3.js visual and use it with Power BI.
- To access external services or resources



Power Apps

Power Apps application used in Power BI as visual. Organize a workflow using Power BI and Power Apps integration and include row-level security.

We provide amazing Power Apps visuals in Power BI that

- Respond to a greater demand for actionable data.
- Provide easily type in the parameters for a what-if analysis not just numbers but also text or other data.
- Inventory dashboard that provides on-demand ordering through an app.
- Executive status dashboard where you can assign tasks and send feedback on the fly

POWER BI MAPS

Cognitive Convergence use maps that provide a strong analytics service, supports a handful of interactive map visualizations to gain insights into the geographical data.

Bubble Maps

- Bubble maps are visuals that visualize a certain measure value on the map where size of the bubble is directly proportional to the measure value and the quantity of bubbles signification different locations in the dataset.
- Bubble maps are a class of visuals used to represent the distribution of a quantity on the map using the bubbles.

Filled Maps

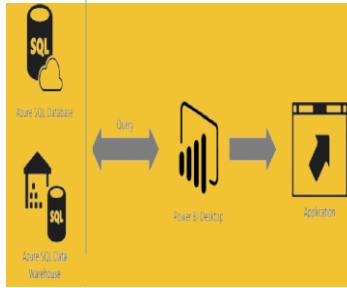
- A filled map uses shading or tinting or patterns to display how a value differs in proportion across a geography or region.
- Quickly display these relative differences with shading that ranges from light (less-frequent/lower) to dark (more-frequent/more).

Shape Maps

- Shape maps compare regions on a map using color.
- A shape map can't show precise geographical locations of data points on a map.
- A shape map can't show precise geographical locations of data points on a map.

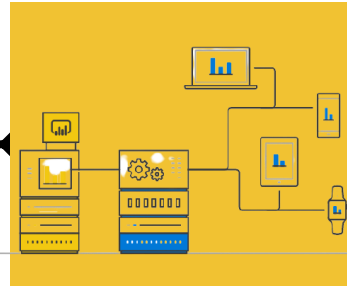
EMBED POWER BI IN APPS, WEBSITES, AND PORTALS

- ✓ Cognitive Convergence embed Power BI to add analytics and interactive reporting to applications, websites and portals.
- ✓ It allows to embed visual analytics in products, so users and customers can gain valuable insights, and can get to market fast.



APPS

- Easy and secure embed reports in internal web portals
- Integrate with portals using a low-code approach
- Provide Row-level data security(RLS).
- Supports URL filters and URL settings.



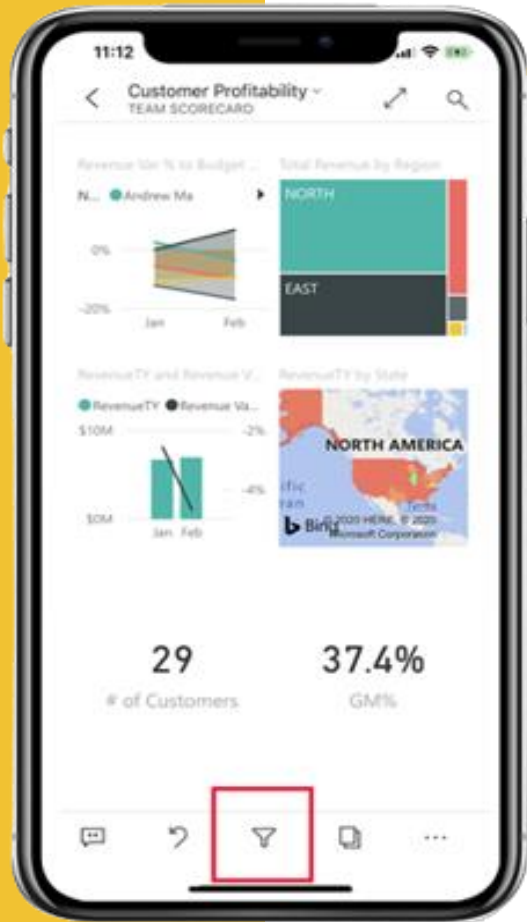
WEBSITES

- Require no additional licensing.
- Provisioned through the Azure Resource Manager APIs.
- Power BI Import API is used.
- Uses Application Authentication Tokens



PORTALS

- Embed reports in Microsoft SharePoint
- Embed Reports in Microsoft Teams
- Create secure internal Portals.
- Allows team to discuss the data within team channels



MOBILE STRATEGY-SERVICE

Power BI Mobile is Power BI's native mobile app and is available for Windows, iOS, and Android devices.

Cognitive Convergence team

- Create a portrait layout for improving the experience of viewing reports in the mobile apps.
- Optimize Desktop report for good experience of phone layout report app.
- create and share reports, submit natural language queries, and set up push notifications to get personal data alerts sent to their device.
- Provide secure access to real-time dashboards and reports.

Power BI Template App

Template Apps are integrated packages of pre-built Power BI dashboards and reports, configured to connect to specific data sources. Power BI template apps enable to build Power BI apps with little or no coding, and deploy them to any Power BI customer.

Cognitive Convergence provides

- Packaging dashboards and reports for products and solutions in one bundle.
- Enable customers to connect to app data and metadata and connect to third-party data sources.
- Provide complete control over who can access code and export data.
- Provide innovative and reusable solutions that skip the arduous development cycles of data preparations and modeling.
- Improve customer experience with insights.
- Provides a new breed of Analytic capabilities and consulting services.



M Query & DAX

Implementation

POWER QUERY M FORMULA LANGUAGE

M can be considered as a query formula language and it can be used in the Power BI Query Editor in order to prepare data before it can be loaded into the Power BI model.

Our team use M query language

- For the development of Custom Data Connectors.
- For advance cleaning and transformation of data.
- To manipulate, filter and analyze the data for better insights.
- For better analytics and consulting services and have fullest potential use of data set.

DATA ANALYSIS EXPRESSIONS (DAX)

DAX is an analytical data calculation language which can be used for in-depth data analysis during the Data View phase.

Our data analysts use DAX expressions to

- Provide better data modeling experience.
- Have valuable insights of data and rich reports
- Solve real business problems that affect bottom line reporting.
- Provides implicit and explicit measures.
- Use time intelligence relates to calculations over dates, months, quarters, or years.
- Provides advanced level data preparation and visual-based data discovery.

POWER BI INTEGRATION

Our team integrates Power BI with following in order to

QUICKBOOKS



- Visualization finance data.
- Uncover new insights into cash flow, profitability, and customers.
- Refresh data on a schedule or on demand
- Monitor the latest income and expenses on the go with the native Power BI app for mobile device.

Dynamics 365 Business Central



- To create effective visualizations and to create balance sheet in Power BI Desktop report using Business Central Data.
- Provides a flexible alternative to reports built in Business Central
- Enabling drill down and customize the visualization.
- Merge data from different companies in Business Central.

D365 Finance and Operations



- Personalize workspaces using D365 finance ad operations.
- Presents data in a visual format, such as charts and graphs, so the information can easily be understood at a glance.
- Enables you to view sales data trends over time, which can help your team predict customer buying behaviors and adjust your strategies for maximal impact.

REST API Based Development service

MICROSOFT POWERBI REST API

Using Power BI REST API, create apps that integrate with Power BI reports, dashboards, and tiles. With Power BI REST API, it is possible to perform management tasks on Power BI objects like reports, datasets, and workspaces. IT allows to embed reports, dashboards, and tiles for Power BI users and Non-Power BI users. Perform management tasks on Power BI objects. Extend an existing business workflow to push key data into a Power BI dashboard. Authenticate to Power BI.

JAVASCRIPT & PYTHON BASED REST API

JavaScript Based Development

JavaScript library for embedding Power BI into apps. When included directly, the library is exposed as a global named powerbi-client.

Python Based Development

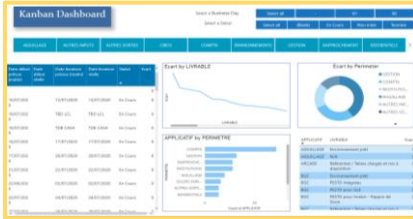
The addition of Python integration in Power BI gives the user the ability to utilize amazing visual libraries such as Seaborn. Beyond visualization, we utilize some of the machine learning packages.

.NET BASED DEVELOPMENT

MICROSOFT.POWERBI.API is a .NET Client library for Microsoft Power BI public REST endpoints providing access to Workspaces, Reports, Datasets and more. Power BI API provides service endpoints for embedding, user resources, and administration. The most important advantage of Power BI Embedded is that users don't need to have a Power BI service accounts and licenses to access Power BI reports via the application.

CLIENT DAIRIES

✓ Cognitive Convergence has done a number of projects which include



KANBAN DASHBOARD

Client: Deloitte

URL: <https://www2.deloitte.com/>

Deloitte.

- We created an automatic Kanban dashboard in Power BI desktop in order to ease to see the status of the task and for viewing.
- We were provided with Italian data and we created interactive visual after transformation and cleaning of data.
- Our report contains a number of visuals which displays delay in delivering order, relationship between delay and many more



BIMCOLLAB DASHBOARD

Client: BIMcollab

URL: <https://www.bimcollab.com/>



- We implemented BIMcollab in Power BI. We were provided with BIMcollab issues data of a project and we created interactive report using this data.
- Our report contains a number of visuals including Issues Status, Issues by Priority, Issues by Status, Issues by Type, Issues by Job and Priority, Issues by Company, Issues by Milestones and many more.



FINANCIAL MATRIX CUSTOM VISUAL

Client: Way Srl

URL: <https://waybi.it/>



- We developed custom visual for financial reporting with help of some SDK and typescripts in Power BI.
- It provides a number of including line formatting, conditional formatting, subtotals, and more.
- Fully integrated with the Power BI developer experience, the visual is configured via the standard fields and formatting pane.

Why you need Power BI expert

- ✓ Power BI should be used by the enterprises in order to achieve growth in the market. This not only enables the company to keep an eye on the changes in the market and this also helps the company to achieve their goals.
- ✓ Power BI experts helps you with their expertise knowledge and idea to get certain revenues for the company, can analyze the health of Business, helps to keep your business data updated. Also enables to analyze your company data yourself from anywhere by just using your mobile devices.

Domain expertise

They have proper in-depth knowledge about the domain so that what may affect the business if the software is not implemented. They try to give their users a proper and consistent user experience that helps the user to have a seamless experience while using the services of the company.

Core resources

The system integrator can provide services like variety of value adds. With this they can develop multiple visualization tools to develop a model that is robust and also recyclable at the same time this all depends on the experience they are having.

Flexibility and scalability

Expertise process to keep knowledge in various fields consists of a vast sequence and a collection of data from various other resources. This is available for the company in order to the ups and downs of the company scale as per the demand.





THANK YOU

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<http://www.cognitiveconvergence.com>

