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**What is Google Data Studio**

* Google Data Studio provides easy access to all the data sources for the business to make better decisions. Regardless of whether you’re a business user or a data analyst, and no matter where the data stored, simply access it with a pre-built Data Studio connector.
* Data Studio handles the authentication, access rights, and structuring of the data. Once a data source is connected, the underlying dimensions and metrics are readily available for use in calculations, transformations, and visualizations.
* Google Data Studio also lets you share your reports with others, either by exporting them as PDFs or publishing them on the web. Google Data Studio is free to use, and it's available on both desktop and mobile devices.
* Have interim support which can find about at [Data Studio Support](https://alm-confluence.systems.uk.hsbc/confluence/display/GCP/Data+Studio+Support).  Ple it is appropriate for your project and business

**Advantages**

* On the editing side, the tool offer a **highly interactive drag & drop interface**, where user can freely resize and align charts. This gives more freedom to the designer type, but can irritate the ones who only want quick, nice charts that are auto-arranged.
* Filtering data in GDS is fragmented. There are different types of filter in GDS: Date range, Filter control, Data control, chart-specific filters. A filter is linked to a data source and takes control of a certain fields/dimensions of that data source.When the filter value is changed, this change floats up to the data source, generating new queries that get sent to underlying data set. The results are stored as query cache, and then the charts are updated accordingly.
* **Multiple data connectors** that support many integrations
* Caching : Every component in a Data Studio report gets its data from the cache when possible. When a component in your report requests data, the cache remembers the response returned by the underlying platform. If a person viewing the report requests the exact same data (for example, the same dimensions and metrics with the same filter conditions and date range) as a previously received query, then the new request is served by the cache.
* Automatically updated data sources update every time the report is opened or the time window is changed (when data source is database)

**Limitations**

* Support may not be readily available for any issue faced with Data studio .
* Uploading csv to google studio was identified as a security risk by internal HSBC Security teams.
* At the moment there is no dynamic drill-down functionality for GDS in both standard view and Explorer view.
* Combining Data capability is provided but is limited . This makes it **difficult for users to manipulate and join data** (which usually takes 80% of the time)Datasets have to be built outside Data Studio and then brought in for visualization.
* Designed to **complement and works well with Google Cloud stack**. Recommended mostly if you're already using (or decide to be) Google and GCP services.
* There is no direct way to automatically upload csv files to Data Studio.