

Team TTC

Our Team

All 4th year MIS Students.



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Component 1

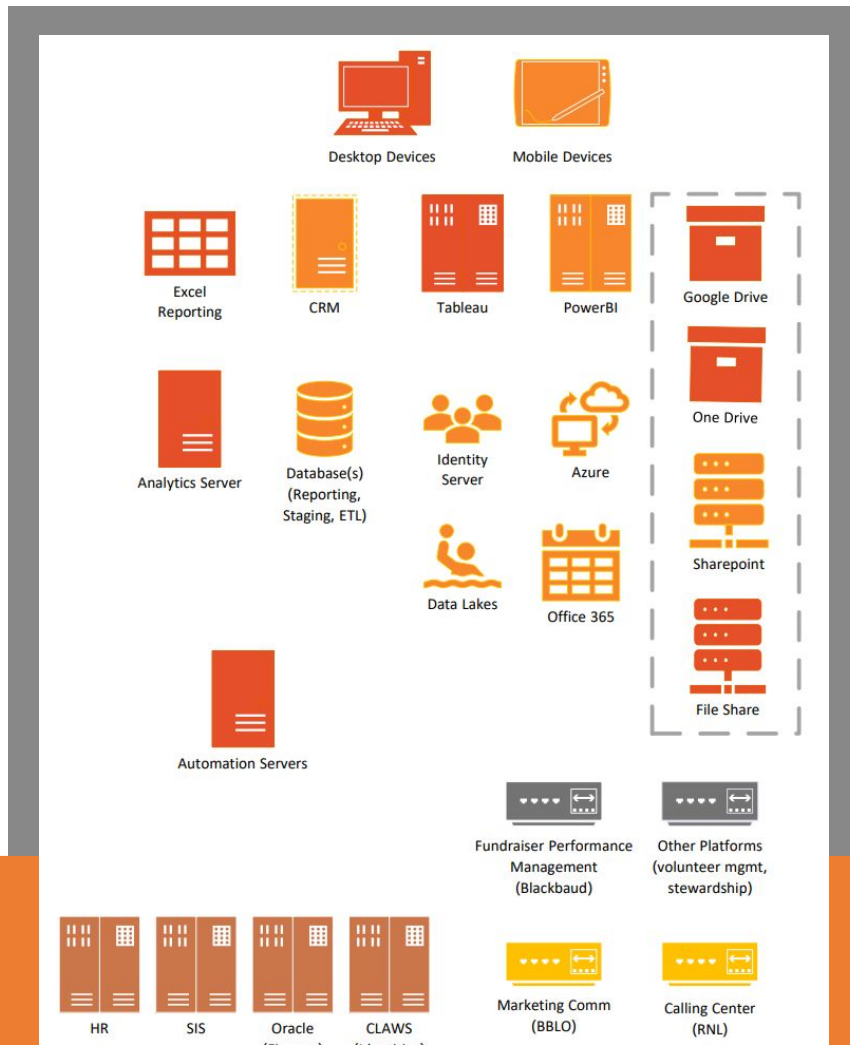
**Analytical ecosystem
with Python + Pandas
integration for data
transformation and
analysis.**

Component 4

**Report and Dashboard
deployment with
PowerBI and/or
Tableau.**

Project Components





The Future Ecosystem

We focused our research on the second level of the future ecosystem.



Power BI vs Tableau: Overall Satisfaction

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Power BI

V/S



Tableau

Very Satisfied	●	Dashboard Deployment	●	Not Satisfied
Very Satisfied	●	Custom Visuals & Extension	●	Netural
Very Satisfied	●	Collaboration & Sharing	●	Satisfied
Very Satisfied	●	Data Processing	●	Netural
Very Satisfied	●	Performance when Viewing Dashboards	●	Very Satisfied

Power BI



A unified, scalable platform for self service and enterprise business intelligence (BI). Connect to and visualize any data, and seamlessly infuse the visuals into the apps you use everyday.*



DASHBOARD DEVELOPMENT

Developing a dashboard is easy to do with the visualizations and clean UI it provides.

CUSTOM VISUALS AND EXTENSIONS

Easy to create calculated columns, measures, and parameters using DAX or Power Query editor.

COLLABORATION AND SHARING

Dashboards can be shared both internally and externally (mobile app layout option included).

DATA PROCESSING

Uses customized SQL statements to import data from various sources, minimizing importation and data manipulation times.

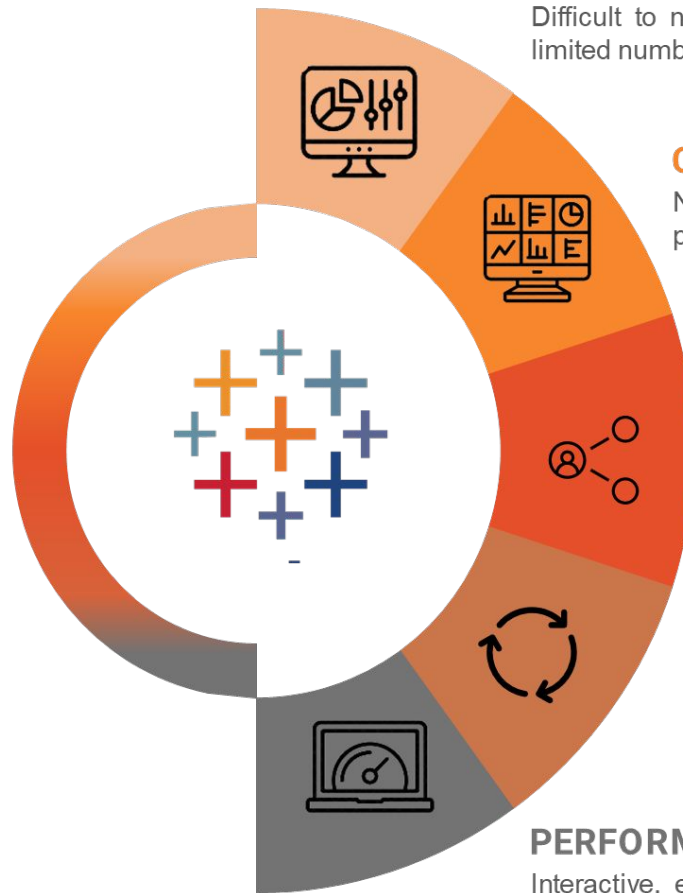
PERFORMANCE WHEN VIEWING DASHBOARDS

Quick load-time when filtering, viewable on desktop and mobile devices .

Tableau



A visual analytics platform which can be used to create reports, dashboards, and stories using different charts and graphs.*



DASHBOARD DEVELOPMENT

Difficult to navigate, especially for newer users. There is only a limited number of visualizations to choose from.

CUSTOM VISUALS AND EXTENSIONS

Necessary calculated columns, measures, and parameters can be created, but the UI is not great.

COLLABORATION AND SHARING

Users can publish their visuals into specific folders that can be shared with the necessary departments.

DATA PROCESSING

Users can join, unionize or create relationships between data sources but load-time is noticeably longer compared to Power BI.

PERFORMANCE WHEN VIEWING DASHBOARDS

Interactive, easy-to-use dashboard through built-in filters and the ability to reset back to default with a click of a button.

Python + Pandas Integration



Power BI

- Python scripts run directly in desktop app and can import datasets in a model
 - Reports can be shared via Power BI service
- The powerbiclient Python package allows reports to be implemented in Jupyter notebooks

Tableau

- Python integration is trickier
 - First establish a connection with a Tableau Server (API called TabPy) to use Python scripts
- Use Python scripts to apply only supported functions to data using a pandas dataframe.
- The jupyterab Python package allows Tableau data to be used in Jupyter notebooks



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Excel Alternative: Jupyter Notebooks

Benefit 1: Free

- Fully open-sourced product
- Users can use every functionality at no cost



Benefit 2: Powerful

- Able to handle significant amounts of data
- Offers a range of data processing & visualization options
- Automates tasks (i.e., sending emails, querying databases and web scraping)

Benefit 3 : Intuitive

- Allows Python to be loaded and accessed for you
- Ability to collaborate across a large community of users & tools



INTEGRATION WITH **SALESFORCE**

- Salesforce supports exports in Jupyter Notebooks, Tableau, and Power BI
 - Salesforce owns Tableau so integration is seamless
 - Users can view Power BI dashboards in Salesforce



INTEGRATION WITH **EVERTRUE**

- EverTrue allows manual data exports in CSV file format
 - From there, downloading data and importing it into any application is feasible

Overall Recommendations: Power BI and Jupyter Notebooks



User Friendly Graphical User
Interface (GUI)



More Versatile
Dashboard



Jupyter is a more robust and
purpose built application

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THANK YOU

QUESTIONS?