Self-Service Analytics and its implementation

Kelvin Dong
Nelson Marlborough Institute of Technology
an-dong@live.nmit.ac.nz

Todd Cochrane
Nelson Marlborough Institute of Technology
Todd.Cochrane@nmit.ac.nz

Kimberley Tuapawa
Nelson Marlborough Institute of Technology
Kimberley.Tuapawa@nmit.ac.nz

ABSTRACT

The focus of this project is the application of Self-Service Analytics (SSA). In the light of that, it will define SSA, its current difficulties, and success factors for the implementation process. In addition, two real-world data models designed and tested with large sample data sets assisted in the investigation of SSA through BI tools. More importantly, the demonstration of insightful analysis using the most three widespread BI tools that are: Alteryx, Tableau, and Power BI tools was undertaken. Finally, yet importantly, R statistical language was employed to facilitate the comprehensive comparison between the power of SSA with BI tools and programming environment undertaking.
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Keywords: Self-Service Analytics, Data analysis, Tools

1. INTRODUCTION

Self-Service Analytic (SSA) is a data-centric approach to analysis that enables the participation of business users to facilitate decision support with a concrete supplement of insightful analysis at the speed of business needs. It complements platforms that empower at all levels to access, clean, blend data from internal and external sources to perform advances dashboard and ad hoc reports. In addition, SSA puts a premium on data governance that stimulates the appropriate users to get exposure to the right data (Eckerson & Devlin, 2016). Self-Service Analytics genuinely enables business users to explore the wealth of data employed for meetings or business decisions.

2. SSA USER PERSPECTIVES, BENEFICIAL ATTRIBUTES

In general, it brings two perspectives for users:

- Backward-looking: That facilitates reflective analysis of what happened or that may identify serious issues according to historical data stored in the enterprise's data warehouse, that stimulates predetermined alert levels for management board meetings.

- Forward-looking: In conjunction with data analysis, decision support can be derived from data prediction, what-if scenarios exploration and feasible solution for enterprises.

In addition, users can reap the substantial benefits from attributes of SSA as follows:

- Easy to use: covering the adequate spectrum of data analysis on a single platform by simply dropping and dragging visual functions without programming knowledge or coding required.

- Fast: delivering ever-faster data insights at the speed that business needs without the entire dependency of IT department' availability

- Flexible: producing sophisticated analytics regardless of data size or sources with a single platform that allows users to blend and visualize data independent of format

- Scalable: sharing insights across departments, teams, geographies, and with management board in a technique that respects existing data governance policies

(Alteryx , 2018).

3. WHY IS SSA HARD TO DO?

According to Eckerson and Devlin (2016) there are several factors making SSA inaccessible to the actual implementation, as follows.

- Accuracy in gathering data from many sources: when a large number of people from different departments use their own data to produce an abundance of reports and dashboards with conflicting results.

- Trustworthiness in implementation: it is worth mentioning that users tend to retreat their own data bunker and do not treat other' data with reliability, which leads to fruitless collaboration and data silos in organizations.

- Adequate provision for targeted users: in most of the organizations, resulting environment could not handle the increasing number of users with the diverse needs. They will leave incomplete results and eventually ask IT department to fix, manage and enhance the environment.

- One size does not fit all: another difficulty that makes self-service analytics hard to keep its promise is that it could not universally deploy for all of the users in its platform with the flexibility to tailor specific individual requirements.

- Harmony in the organization: in organizational dynamics, the top-down approach comes in demand of greater standardization centralization to present a single face in front of customers, while bottom-up perception from department managers prefers increasing autonomy to accommodate local needs effectively.

- BI Technology Tools: in fact, watching for employees who employ tools in ways they weren't designed for are a clue for dissatisfaction. To optimize the fruitfulness of Self-Service Analytics, one of the greatest challenges is how to ensure users to get appropriate BI tools that can facilitate their requirements of data analysis. It is highly demanding on the nature of company' business, size, turnover and budget to develop this platform.

- Long-term commitment: business users need to receive heavy doses of comprehensive training continuously that requires for SSA implementation process in the long-term. In fact, it demands enormous financial investment that not every enterprise can afford to expand this new frontier.

(Eckerson & Devlin, 2016)

4. SUMMARY AND CONCLUSION

The project investigated the fundamentals of Self-Service Analytic along with the implementation of Alteryx, Power BI and Tableau Business Intelligent tools for designated Tax mechanism and Uber Like databases. In addition, it made use of R statistical language to draw an underlying comparison between SSA and coding programming environment. It, therefore, demonstrated the power of SSA in the process of data exploration and creating dashboard or ad hoc report when turning data into insight and action. In addition, the main thing worth mentioning is that the generation of join table or general table that ensure customer to have precise data source is fundamental although BI tools can handle their work effectively. In this respect, this study was successful to employ the approach that can minimize the possibility of producing the inconsistent insightful analysis. This approach enables business users to manipulate and blend data from prepared tables that IT department created with logic sense depending on requirements. In other words, it put forward the view that with SSA, business users and IT team can foster their fruitful collaboration, which yields the substantial benefit to enterprises

proceedings are collated.

5. REFERENCES

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