Whitepaper

Measuring Business Intelligence Effectiveness

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Introduction

In the last five years, the data and analytics industry has seen the traditional business intelligence (BI) market shrink even as modern BI registered an uptick. BI modernization programs have been predominantly riding on the wave of data on cloud programs. Data on cloud provided an opportunity to rethink the BI strategy especially around BI tooling, making the best of new features and capabilities offered by modern BI tools in the market.

Organizations have invested millions of dollars in modern BI tools, and many are migrating from traditional BI to modern BI tools, seeking better outcomes.

However, technical modernization of the BI stack alone does not guarantee better outcomes and most IT executives are aware of this fact. It is important to give attention to the overall effectiveness of the business intelligence strategy. Strategy remains a mere intention unless it is executed well.

The link between the strategy and execution is measurement —the measure of effectiveness. But how do you measure the effectiveness of business intelligence?

It has been seen that a comprehensive measurement method, when deployed, provides an unbiased and fact-based view of effectiveness. Here are few measures that we often employ to evaluate effectiveness and advise our clients on the way forward.

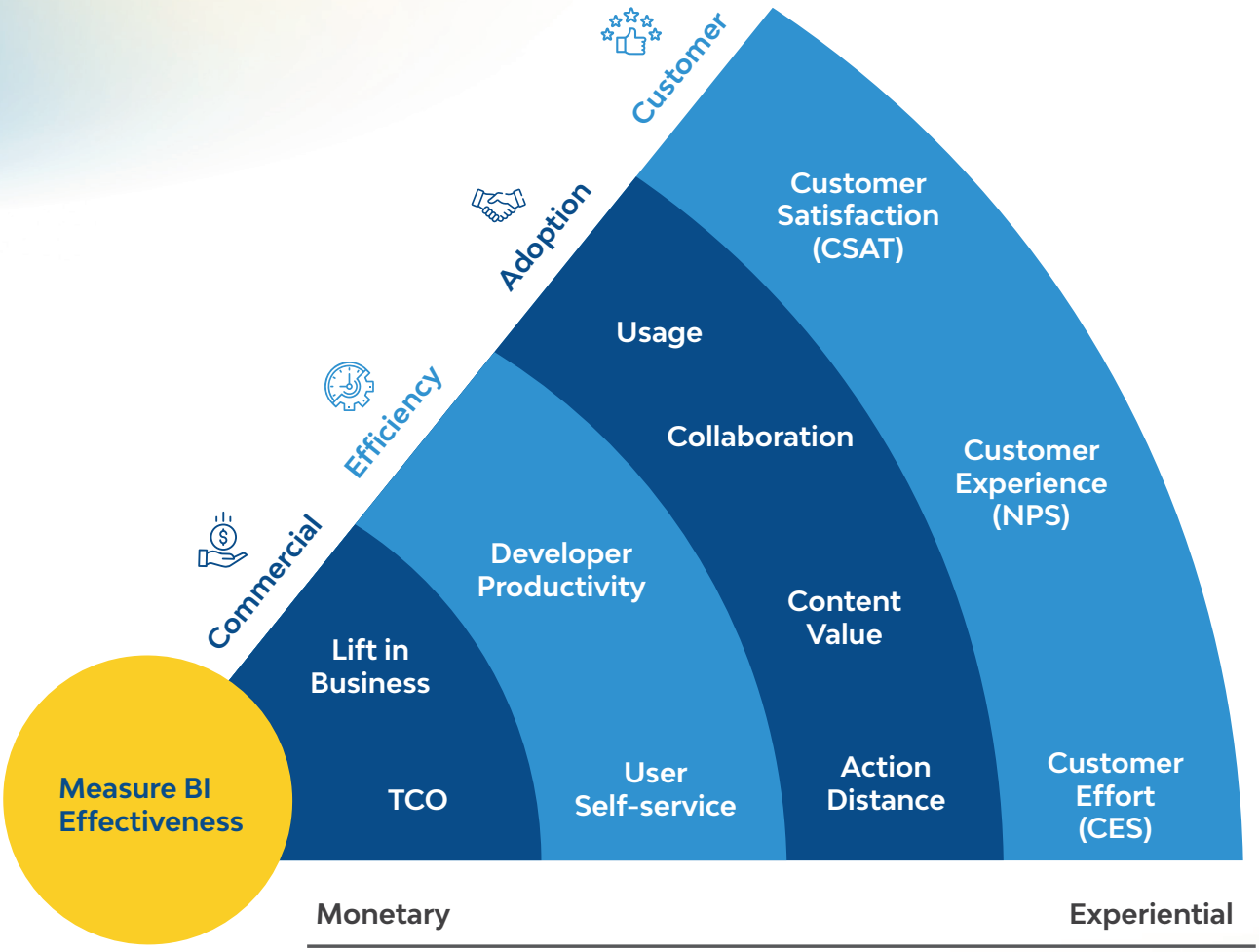

Figure 1: BI Effective Measurement Framework

Commercial

Commercial indicators are the most powerful measurement of IT effectiveness. Business Intelligence is not too different.

1. Measure the Total Cost of Ownership (TCO):

It is important to measure the total spend on business intelligence accurately to be able to apply financial prudence. Spend on business intelligence broadly includes:

- Platform cost comprising infrastructure and software
- Labor cost of platform administration, development, support, and maintenance
- Change management cost comprising user enablement, training, internal branding, and communication

Often, in addition to TCO, additional measures such as $ spend per user and $ spend per report helps to measure and control the outflow.

When we adopt an outcome-based or reward-based approach to invest in business intelligence, the definitive outcome indicators such as sale revenue, marketing campaign conversion rate, user enrolment, or cost reduction are assessed, baselined, measured, and monetized to determine further outlays in business intelligence.

2. Measure the Lift in Business:

Access to business intelligence improves the quality (accuracy) of the decisions and the speed of decision-making. Actions driven by quality decisions drive positive business outcomes. Conducting due diligence to understand and establish the decision loop is a good way to put this measurement method into action. It is important to identify, align, and quantify outcome resulting from decisions driven by insight.

Lift in business is one of the most powerful measures of BI Effectiveness. It is easy to determine the spend on business intelligence systems but difficult (though not impossible) to translate business outcomes resulting from better insights, in monetary terms.

Figure 2: Data Decision Loop

User Adoption

The desired payoff (ROI) is possible when the business users or decision-makers use business intelligence to make or influence business decisions or actions.

3. Measure User Engagement:

Insight metrics related to the usage of the reports and activities of the users on the business intelligence platform provide a good insight into usage. Number of daily and weekly active users, number of views, content created, updated, viewed are a few examples. These insights are valuable inputs to improve user engagement.

The is a subtle distinction between usage and adoption. Usage is an indication of user activities while adoption is an indication of the behavioural changes behind improved outcome. Individually these two measures are not sufficient indicators of effectiveness but collectively they are powerful indicators of success.

4. Measure Collaboration:

Extending the usage metrics to include collaboration metrics such as number of likes, number of shares, and number of comments provides insights into collaboration among BI users.

5. Measure Content Value:

It is important to ensure that the BI team and power users are creating and maintaining high value content. It is equally important to promote high value content and purge content not in use to avoid clutter. Measures such as new content created/edited, content shared, content viewed, and content deleted when analyzed over a time horizon, provide a view into the value of the BI content.

6. Measure Action Distance:

Action distance is the distance from the insight to action or point of action. It is measured in number of hops the BI users must make to act on the insight gained from BI applications. Lesser the action distance faster will be reaction to the stimulus (insight), improving the action time.

In traditional BI, BI users must step out of the BI application into Microsoft Teams or Skype, Slack, Microsoft Outlook, or other collaboration platforms to initiate action based on the insights gleaned from the BI application.

Modern BI tools have shortened this distance by providing capabilities to collaborate—chat with colleagues, exchange notes and seek opinion, trigger an automation workflow with a click of button—all without having to leave the BI application. This is one of the critical elements in improving the speed of decision-making.

Efficiency

While we are measuring BI effectiveness, we may ponder on the need to include or exclude efficiency measures. A well-thought-out BI strategy and BI tool selection will focus on two key aspects that impact the total cost of ownership (especially labor cost) – developer productivity and self-service enablement. Hence efficiency measurements have a mention in the list.

7. Measure of Efficiency:

It is measured using the number of new or enhancement requests, average time taken to service a new and enhancement request, and average cost to service a new and enhancement request. These metrics are often captured for BI developers in IT and power users, as an indicator of the developer productivity and user self-service enablement.

8. Measure of Self-Service:

Measure of the content created or edited by users without IT interventions vis-à-vis the content developed by the BI developers provides a view of the success of self-service. Data literacy in the organization and self-service BI capabilities enabled by the BI tool both significantly contribute to the success.

Customer

While we are measuring BI effectiveness, we may ponder on the need to include or exclude efficiency measures. A well-thought-out BI strategy and BI tool selection will focus on two key aspects that impact the total cost of ownership (especially labor cost) – developer productivity and self-service enablement. Hence efficiency measurements have a mention in the list.

9. Measure of Customer Satisfaction:

The Customer Satisfaction (CSAT) score, if not skewed by sample selection or response rate, is a good indicator of customer satisfaction and provides necessary inputs for future course of action. It provides a good view of how satisfied your customers are with the BI services you provide them.

10. Measure of Customer Experience:

Net Promoter Score (NPS) is a popular indicator of customer experience. It is used to measure the overall experience, not just service touchpoints. It is a customer advocacy indicator of how likely a business unit and function would recommend BI services to other business units or function (if they had a choice).

Another duality is Customer Satisfaction and Customer Experience. Customer Satisfaction is an indicator of how happy the customer is with the BI services. It is transactional and more rational. While Customer Experience is the overall experience of the customer throughout the BI journey across all touchpoints—services and technology. It is subjective and experiential.

This measure covers the overall experience, how well the BI tool and its features suit their needs, how easy and agile is the BI development and support service structure, how responsive are contact channels, how associates in the BI team treat the customer, how well the BI organization communicates and engages on an ongoing basis, and finally how much the customer is willing to pay for value attributed to BI.

Another popular customer measurement worth applying to measure BI Effectiveness is Customer Effort Score (CES). CES is an indicator of the ease of doing business. It can be used to gather feedback wherever ease of experience is important. The BI user support or helpdesk where resolution of a customer issue is done, is critical. It assesses how much effort the customers must put in to have their request handled.

These 10 measures, individually, might not be conclusive of BI Effectiveness but collectively they provide a comprehensive view into the key facets of business intelligence.

Conclusion

To quote Peter Drucker "What gets measured gets improved." Do share with us measurement techniques you have deployed in your organization. Start measuring the effectiveness of business intelligence if you haven't already. If you would like to learn more about how LTIMindtree can help you build and implement a BI effectiveness framework reach us at **info@ltinfotech.com**

Author Profile

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Suresh Krishna Pai is Head of Business Intelligence and Next-Generation Data Management Center of Excellence in LTIMindtree. He has 18 years of experience in data and analytics, consulting clients on various related aspects of strategy and execution, architecture, and tool selection, implementing complex data engineering programs, and setting up shared services and centers of excellence.

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