MET415 Introduction to Business Analytics
Module 4

Business Analytics and Business Reporting

Business analytics and reporting are two critical activities every business works on daily. Even though they're separate activities, they're deeply intertwined.

Business analytics activities are executed before reporting activities. It involves understanding and mapping out business needs into business solutions by gathering necessary customer, user or general stakeholder requirements (current needs). That information is then translated into processes, tools and solutions that speak to those needs and provide a solution to the requestor.

Business Reporting activities involves collecting and summarizing business and process performance metrics in formats that are ready to be read, consumed, understood and acted upon by business owners and key decision makers that use reporting information to discuss and make business decisions.

Together, these two activities (Business Analytics and Business Reporting) indicate a wide variety of tasks and job responsibilities that, in large organizations, are managed by different roles. Data analysts and business intelligence managers may take on their fair share of the reporting responsibilities. In smaller organizations, a business analyst may cover business analytics and reporting activities.

Examples of Business Reporting Activities

- Develop business dashboards and reports that inform business owners and stakeholders on past, current and projected business performance.

- Hold discussions with business stakeholders around the development of key performance indicators (KPIs) to feature in reporting solutions.
- Perform a technical analysis of the best technology stack that supports reporting activities. Take data availability, frequency and latency into consideration.
- Report vendor evaluations to determine the best platform solutions that can support the business reporting needs at any given time.
- Collaborate with data engineering, analysis and technical teams to improve the performance of reporting solutions.

Purpose of Business Reports

Reports are a key to communication in any organization. In big organizations, there are no other options other than reports. It highlights the key points and the purpose of business reports

Transmitting Information: Business reports are the best source to transmit information from one person to the other. In large enterprises, where there are complex data to handle reports comes in handy to managers to acquire necessary information.

Interpretation and Explanation of event: Reports helps the users to understand the information easily. It explains and interprets the data to an understandable format.

Making Decisions: A report is a tool to help stakeholders take decisions. A report is the basic management tool for making decisions and to help solve problems.

Communication with external stakeholders: It helps to communicate information to not just the internal stake holders but also with external stakeholders.

Development of knowledge base: Reports also help in establishing a rich source of information base in an organization. It records all the activities of the business operations permanently which are archived for future references.

Controlling: Reports provide the required information to enforce controlling techniques.

Recommending actions: Reports not only provide information but also stands a source to provide solutions to problems.

Types of Business Reports

1. Analytical Reports

Analytical reports are critical for any company and help in times of crucial decisions. It helps the management to get the relevant data with related descriptions.

For instance, during the quarterly operations analysis, the report would comprise the necessary activities taken by the executive team, the numbers from sales revenue, and the net profit or loss for the quarter.

2. Informational Reports

Informational reports include non-specific facts that it does not explain the “how to's” and “what if’s of the scenario. If you require any objective type answers, then an information report is what you must look for. It gives information on the number of employees, departments they work in, number of employees, and what is the role of each employee in the organization.

The information of an organization can be showcased in different ways - it can be in a graph, pie chart, or a table showing the employing details and so on.

3. **Research Reports**

Research reports are comprehensive which are required when a company is planning to venture into new areas, like launching a new product in the market or planning an expansion of its office in a new geographical area. A research report includes a specific information on relevant details and stats on a specific topic.

Benefits of Business Report an it's capabilities

1. **Profitability analysis**

Quickly see where your make and lose money based on profitability metrics and true employee costs.

2. **Meaningful metrics**

Track SLAs, open ticket count, ticket backlogs, time to resolution, and project hours spent on a per-project basis to maximize resource utilization.

3. **Sales forecasting**

See which opportunities are likely to close and how much you can expect to make for more accurate forecasts and to estimate potential ROI by opportunity and by employee.

Charts and Graphs used in Business Reporting (Data Visualization in Business Reporting or Visual Analytics)

https://365datascience.com/trending/chart-types-and-how-to-select-the-right-one/
(There are 9 types of charts in the above link. Study any four types of charts)

Business Performance Management (BPM):

Business performance management is a metric to determine overall business progress towards goals. Management teams assess individual employees and whole departments to make the right decisions about their company.

It is important to note that this method is not limited to analyzing the financial aspects of a business, but also considers employee and customer satisfaction.

Different Categories of Business Performance Management

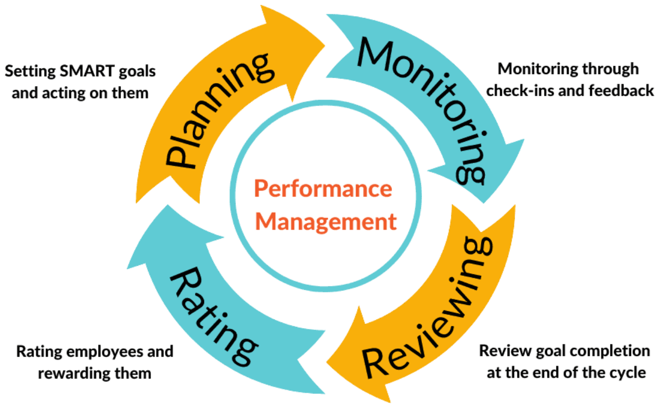
There are many different aspects of performance businesses can manage. The simplest way to break this down is to categorise business performance management according to its objective.

Team performance management
Department performance management
Organisation performance management
Individual performance management
Business unit performance management
Product performance management

The Business Performance Management Cycle

The following activities create a clear BPM framework for businesses to follow, known as a **business performance management cycle**. They're as follows:

1. Evaluate and plan (Planning
2. Monitor performance metrics (Monitoring)
3. Review and analyse (Reviewing)
4. Improve and repeat (Rating)



1. Evaluate Current Strategy and Goals and Plan Accordingly
Your business performance management process needs to align with your business strategy and the goals within it. This all starts with evaluating your current goals to ensure they're realistic and attainable. For a continuous process, setting SMART goals are a great way to achieve this:

- Specific
- Measurable
- Attainable
- Relevant
- Timebound

Goals without specifics are impossible to track and measure. If your goal is growth, but no specific amount of growth, you'll struggle to create a process in which you create sustainable growth long-term.

You also need to set a date for when you will achieve said performance targets. This can be monthly, quarterly and annually. The best bet is a mix of all three to ensure performance is being continuously monitored and reviewed.

2. Utilise Business Intelligence to Continuously Monitor Performance

With your performance goals set, your business performance management process is underway.

The next step is to monitor business performance metrics continuously. This means you need to have dedicated leaders of performance management within each department. They should be regularly reviewing real-time metrics using business intelligence solutions. This regular review allows businesses to better react and adapt. Goals can be adjusted to changing market conditions and internal challenges can be addressed quickly, as opposed to after the fact

3. Review and Analyse Performance Methods and Processes

As well as continuous monitoring, a business performance management process needs a set interval where the methods and processes are reviewed and analysed. This allows leaders to spot opportunities for improvement.

Utilise a larger collection of performance metrics to gain insight into where improvements can be made. Any planned changes should be recorded so businesses can identify the impact specific changes made.

4. Improve and Repeat for a Continuous Business Performance Management Process

Changes shouldn't be made ad hoc with no planning. What are the specific changes and what do you expect to see from them? How will you make the changes to the specific process? Who will lead these changes?

This final step actually takes you back to the first step, evaluating and planning. It is this step that makes the business performance management process one that is continuous and creates long-term improvement.

Performance Measurement System

Performance Measurement System is a System in which a process of quantifying and assessing the effectiveness and efficiency of an organization or individual in achieving their objectives or goals.

- It aims to clearly understand how well an organization or individual is performing and identify areas for improvement.
- Performance measurement collects and analyzes data to evaluate progress toward goals and objectives. It can be input-based, output-based, outcome-based, process-based, quality-based, or financial-based.

- It can help improve accountability, decision-making, motivation, and resource allocation.
- It can also have disadvantages, such as over-reliance on metrics, unintended consequences, inaccurate or incomplete data, and being time and resource-intensive.

Performance Measurement Process

Performance measurement are critical for organizations and individuals looking to improve their performance. The process of performance measurement involves several steps.

1. Identifying performance objectives or goals
2. Selecting performance metrics or indicators
3. Collecting and analyzing data
4. Reporting and communicating performance

Key Performance Indicators (KPIs)

Key performance indicators (KPIs) refer to a set of quantifiable measurements used to gauge a company's overall long-term performance. KPIs specifically help determine a company's strategic, financial, and operational achievements, especially compared to those of other businesses within the same sector.

Types of KPIs

1. Financial Metrics and KPIs

Key performance indicators tied to the financials typically focus on revenue and profit margins. Net profit, the most tried and true of profit-based measurements, represents the amount of revenue that remains, as profit for a given period, after accounting for all of the company's expenses, taxes, and interest payments for the same period.

Examples of Financial KPIs include:

- Liquidity Ratios
- Profitability Ratios
- Solvency Ratios
- Turnover Ratios

2. Customer Experience Metrics and KPI

Customer-focused KPIs generally center on per-customer efficiency, customer satisfaction, and customer retention. These metrics are used by customer service teams to better understand the service that customers have been receiving.

Examples:

- Number of new ticket requests
- Number of resolved tickets
- Average Resolution Time
- Average Response Time
- Customer Satisfaction Rating

3. Process Performance Metrics and KPI

Process metrics aim to measure and monitor operational performance across the organization. These KPIs analyze how tasks are performed and whether there are process, quality, or performance issues. These types of metrics are most useful for companies with repetitive processes, such as manufacturing firms or companies in cyclical industries.

Examples:

- Production Efficiency
- Total Cycle Time
- Throughput
- Error Rate
- Quality Rate

4. **Marketing KPIs**

Marketing KPIs attempt to gain a better understanding of how effective marketing and promotional campaigns have been. These metrics often measure conversation rates on how often prospective customers perform certain actions in response to a given marketing medium.

Examples

- Website Traffic
- Social Media Traffic
- Conversion Rate
- Click-through rates

5. **Sales KPIs**

The ultimate goal of a company is to generate revenue through sales. Though revenue is often measured through financial KPIs, sales KPIs take a more granular approach by leveraging nonfinancial data to better understand the sales process.

Sales KPIs

- Customer Lifetime Value
- Customer Acquisition Cost
- Average dollar value for new contracts
- Average conversion time
- Number of engaged leads

Analytics in Business Support Functions

Analytics in Sales and Marketing

Sales and Marketing analytics is the practice of using data to evaluate the effectiveness and success of Sales & marketing activities. Marketing analytics allows you to gather deeper consumer insights, optimize your marketing objectives, and get a better return on investment.

Marketing analytics benefits both marketers and consumers. This analysis allows marketers to achieve higher ROI on marketing investments by understanding what is successful in driving either conversions, brand awareness, or both. Analytics also ensures that consumers see a greater number of targeted, personalized ads that speak to their specific needs and interests, rather than mass communications that tend to annoy.

Marketing & Sales data can be analyzed using a variety of methods and models depending on the KPIs being measured. For example, analysis of brand awareness relies upon different data and models than analysis of conversions.

Some popular analytics models and methods used for Sales & Marketing Analytics include:

1. Media Mix Models (MMM): Attribution models that look at aggregate data over a long period of time.
2. Multi-Touch Attribution (MTA): Attribution models that provide person-level data from across the buyer's journey.
3. Unified Marketing Measurement (UMM): A form of measurement that integrates various attribution models including MMM and MTA into comprehensive engagement metrics.

Human Resources (HR) Analytics

HR analytics is the process of collecting and analyzing Human Resource (HR) data in order to improve an organization's workforce performance. The process can also be referred to as talent analytics, people analytics, or even workforce analytics.

This method of data analysis takes data that is routinely collected by HR and correlates it to HR and organizational objectives. Doing so provides measured evidence of how HR initiatives are contributing to the organization's goals and strategies.

For example, if a software engineering firm has high employee turnover, the company is not operating at a fully productive level.

Examples in HR Analytics
How can HR Analytics be used by organizations?

Let's take a look at a few examples using common organizational issues:

1. Turnover (Employees quitting the job)
When employees quit, there is often no real understanding of why they quit

There may be collected reports or data on individual situations, but no way of knowing whether there is an overarching reason or trend for the turnover.

With turnover being costly in terms of lost time and profit, organizations need this insight to prevent turnover.

HR Analytics can:

- Collect and analyze past data on turnover to identify trends and patterns indicating why employees quit.
- Collect data on employee behavior, such as productivity and engagement, to better understand the status of current employees.
- Correlate both types of data to understand the factors that lead to turnover.

- Help create a predictive model to better track and flag employees who may fall into the identified pattern associated with employees that have quit.
- Identify patterns of employee engagement, employee satisfaction and performance.

Financial Analytics

Financial analytics seeks to shape business strategy through accurate, factual insight rather than intuition. It provides firms with the tools they need to gain a deep understanding of key trends and take action to improve their performance by providing detailed views of their financial data.

Benefits of Financial Analytics

- Financial analytics helps leaders make timely and right business decisions due to the:

- Availability of real-time data and insights
- Easy to consume information that highlights areas requiring attention
- More accurate forecasts

Production and Operations Analytics

Operational analytics refers to the category of business analytics that focuses on measuring the existing and real-time operations of the business. It uses data analysis and business intelligence to improve efficiency and streamline everyday operations in real-time. With the support of data mining, artificial intelligence and machine learning, operational analytics provides businesses better transparency thereby Benefits of Operational Analytics

The following are the reasons why businesses are increasingly investing in operational analytics:

1. Expedites Decision Making helping them to make better decisions.
2. Improved Customer Experiences
3. Increased Productivity

Use cases for Operational Analytics in the Business world

Following are some of the common operational analytics use cases:

1. Banks use Operational Analytics to provide suitable Products
2. Production & Operational Analytics is used for Preventive Maintenance in Manufacturing
3. Production and Operational Analytics is used in improving Supply Chain Management
4. Production & Operational Analytics used in Marketing
5. Operational Analytics helping Product Manager make a product better