Methods of Gathering Data

Preventing Issues with Inaccurate and Skewed Information

Introduction

There's a proverb that says your data collection quality determines how good your outcomes can be. Businesses are depending more and more on data-driven decision management and analytics for planning, forecasting, supply chain management, inventory control, and strategy formulation.

Since people are reluctant to question decisions due to the complexity of mathematical models, the abundance of data further complicates the process of making unbiased decisions. Consequently, the robustness and well-intentioned models we have remain completely dependent on the quality of the data they are given. The methods we employ to get this data and the ability to discern between the many forms of data we gather determine the quality of the data.

In addition to debunking myths about data quality and teaching participants how and when to apply various strategies, this Course N Carry Methods of Gathering Data training course will also highlight typical instruments and procedures used to gather data. It will also cover the necessary number of samples to be collected. In addition, the participants will receive examples of data collection plans, insights into data collection from automated systems, and current technologies that can be used to gather data via online monitoring systems.

This instruction session will emphasise:

- How Can a Plan Be Created for Data Collection?
- Establish a Sufficient Sample Size
- Common mistakes and biases that may exist in the data collected
- Concepts of Big Data
- The Distinction between Secondary and Primary Information
- The Methods of Data Collection
- Techniques for Real-Time Data Collection

Objectives

This training course on data gathering techniques aims to give participants sufficient knowledge of data collection methods, including focus groups, surveys, observations, interviews, and big data collection and warehousing. The delegates will gain insight into how to guarantee data quality and comprehend how to eliminate or resolve problems in the data that has been gathered.

Upon completion of this training programme, you will be able to:

- Recognise the necessity of a plan for gathering data.
- Make a distinction between primary and secondary data.
- Determine the appropriate sample size.
- Define and utilise the checklists for data quality.
- Recognise the characteristics of big data.
- Acknowledge the advantages of real-time data collection techniques
- Recognise privacy concerns before performing a data collection

Training Methodology

Using a problem-based learning approach, this training course on data collection techniques will teach participants various techniques for gathering data, their advantages and disadvantages, how to prepare and implement a plan for gathering data, how to conduct interviews, how to create and administer surveys, and how to prevent biases in the process. There will also be a presentation on automated data collection techniques. Additionally, attendees will gain knowledge about data gathering across a variety of industries, including supply chain management, the use of RFID for inventory and transportation planning and management, and the use of cell phone data for traffic and transportation planning.

Organizational impacts

Every day, organisations make a thousand decisions, ranging from basic office furniture arrangements to strategic choices on the development of new products or the optimisation of production processes.

Because there is an availability of data, organisations are more likely to rely on data-driven decision making. This leads to an emphasis on robust and complex algorithms, sometimes at the expense of data quality, which can result in conclusions that are insufficient or less than ideal. By sending their staff on this training session, organisations may expect to benefit from the following: based on the paradigm that the results are only as good as the data you get, the participants will learn how to avoid the traps and misconceptions of data collection.

- The capacity to first determine the purpose of data collection
- Knowing how many samples to actually take in order to make the best decisions
- Understanding when and when to use secondary data

- Boost comprehension of the relationship between the models and the data
- Enhanced Utilisation of Big Data
- Possibility of using real-time data collection techniques that are automated

Personal Imapct

Each participant will obtain firsthand knowledge of how data is gathered, which methods are suitable for particular business requirements, and how to carry out particular data collection depending on the approach chosen and the aim of the data collection. Delegates will especially learn:

- The ability to identify the purpose of data collecting
- The methodical approach to developing a plan for gathering data
- Understanding of the various data techniques and the domains in which they are used
- The knowledge of how to assess what is acceptable error in the obtained data
- The benefits that data analytics offers to corporate decision-making
- Structure for integrating data
- How and When to Apply Big Data
- An understanding of the real-time monitoring and automated data collection
- How may the knowledge be used in practical situations?

Who should attend?

This Course N Carry Methods of Data Gathering training course is intended for professionals whose work entails data collection, analysis, decision-making, and optimisation. It is also intended for anyone who works for or aspires to work for a company that bases decisions on scientific methodology.

Though a wide range of professionals can benefit from this training, the following will be especially noted:

- Managers of Operations
- Supervisors of Projects
- Managers of Finance
- Information Analysis
- Planners for the City
- Engineers in Transportation and Traffic
- Managers of the Supply Chain
- Managers of Risk
- Managers of Plants
- Planners of Production
- And everyone else interested in learning how to collect data of the highest calibre

Course Outline

Day 1

The Value of Gathering Data

- Context of History
- Sources of Data
- Outlining the Strategy for Gathering Data
- Calculating the Necessary Sample Size
- Project Overview
- Typical Data Sources

Day 2

Gathering Information

- Most Often Used Methods of Data Collection
- How to Hold an Interview
- Utilising Surveys and Questionnaires
- Observations and Discussion Boards
- The Big Data Aspects
- Automated Methods for Gathering Data
- Strategy for Data Management

Day 3

Instances of Data Collection Technique Use

- Organising and Performing an Interview
- Constructing and Organising a Survey
- Choosing Survey Metrics
- Carrying Out Experiments
- Organise and Make Use of Electronic Online Surveying Tools
- Secondary Data Sources
- Utilising and Citing Secondary Information

Day 4

Concepts of Big Data

- Big Data Essentials
- Big Data's Five Vs

- Enterprise Technologies for Gathering and Analysing Massive Data
- Processing and Storing Large Data
- Analytics for Big Data
- Big Data Approach
- Privacy Protection in Big Data Applications
- Completeness, originality, timeliness, validity, correctness, and consistency are examples of data quality.
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Day 5

Real-time Data Collection and Its Use

- What Real-time Data Gathering Means
- Data Collection with RFID
- Mobile Phone Geolocation Data Collection and Its Application in Urban Planning
- Multimedia Information
- Data Collection for the Management of Risk and Uncertainty
- Errors and Their Reduction in Real-Time Information Collection
- Novel Ideas, Approaches, and Prospects