



# Data Analytics and Visualization For Managers

COVID-19 has changed the way we live and work overnight McKinsey & Company

### Relevance of Digital Skills

With the emergence of the Digital Economy, technological developments and innovation have altered the business landscape and consumer preferences. As a result, companies are having to rewire their businesses, adopt digital technologies and also reskill their workforce. Moreover, the pandemic has fundamentally changed the way we work and live, thereby accentuating the need for reimaging business models and reskilling.

According to McKinsey & Company, **Digital Skills** is one of the four key skill sets needed for an organization's success in the post Covid era. Regardless of the industry sector or function, most employees will need basic digital skills to perform in an environment where interfaces with customers, suppliers and other stakeholders would have changed.

### How will Skills in Data Analytics help you?

Knowledge of analytics will be an essential skill that employees would be expected to possess in the **new normal,** irrespective of their role. As illustrated below, analytics is required by every function and acquiring skills in data analytics will help in:

- > Understanding importance of data management and deriving insights from raw data
- ➤ Learning how data analytics and visualization can be used to make better decisions and managing tasks more effectively.

#### Manufacturing



Process Improvement
Predictive Maintenance
Warranty and Spares
Demand Forecasting

Right Fit Performance & Productivity Retention Employee Engagement





Inventory Management Space Optimization Distribution Optimization Demand Forecasting

### Finance



Cash Flow Analysis Profitability Analysis Financial Forecasting Risk Management

#### Data Management Business Intelligence Data Modelling Predictive Analytics



#### Sales



Customer Segmentation Campaign Effectiveness Customer Churn Sales Forecasting

1

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### **Learning Objectives**

This training program is aimed at facilitating participants to gain an understanding of application of analytics and the tools that can be used to obtain more powerful insights from raw data. Business analytics is effective only when a well-defined model is used. Hence, we have designed a training program which will help participants use the following framework to apply analytics skills:

**Key Business Challenges (KBCs)** 

Defining KBCs and performance measures (KPIs), framing objectives for analytics and visual reporting. Data Organization & Preparation

Identifying the type of data required

Identifying the type of data required, sourcing and organizing data.

Data Analysis & Visualization

Identifying the type of data required, sourcing and organizing data.

Presenting Results

Tell your story and present the results

### **Training Program**

1

3

This training program on 'Data Analytics and Visualization for Managers' will enable participants acquire skills is understanding concepts of data management, data analysis with Excel, statistical analysis and visual presentation of data and dash boarding. This program will cover the following topics:

4

- Introduction to Business Analytics (types and areas of analytics)
- Excel Commands custom and conditional formatting, logical and reference functions, if statements, vlookup, index, match etc.
- Data analysis with basic statistics
- ➤ Advanced Excel Commands pivot tables, grouping, statistical functions
- Dash Boarding graphs, charts and interactive charts and dashboards
- > Data Visualization and Presentation

More details in curriculum

### **Program Delivery**

The training will be delivered in an online mode. The format will be a combination of discourse, breakout sessions and knowledge sharing for participants to internalize their learning. The training will be conducted in sessions of 3 hours each spread over 6-8 days.



### Who Should Attend

Individual contributors, managers and senior managers from any industry will benefit from this training program.

For more information please call 74394 81638 or send a mail to <a href="mailto:swarup.dutta@kaalp.com">swarup.dutta@kaalp.com</a>

In the digital era, professionals must reskill and upskill to remain relevant and in demand.

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## Curriculum

TOPICS	TECHNIQUES IN EXCEL
KEY BUSINESS CHALLENGES	
Evaluating Key Business Challenges	Evaluating Business Background, Framing Business Objectives, Defining the analytics outcomes and identifying the KPIs and constraints.
DATA ORGANISATION & PRESENTATION	
Know Your Data	Data Types - Structured vs unstructured data Data Scales - Nominal, Ordinal, Interval/Ratio Working with string data, date & time
Data Preparation	Importing csv and Tab delimited Files Connecting to external databases Hyper linking Excel worksheets and workbooks Database Merging Filters, Sort and Transpose data commands Data Mining - (CRISP DM) methodology Advanced Data Validation & Searchable Drop Down Auto Updation of Sheets and linking
DATA ANALYSIS & VISUALIZATION	
Data Analysis	Sum product, Rank, Count ifs & Sum ifs & Average ifs, Indirect, Look-Up & Index Match Functions, Offset, Advanced Date and Time applications Data Analysis using Statistical Tools (Optional) Summary Statistics-Mean, Median and Mode, Variance, Standard Deviation and Coefficient of Variation.
Visual Analytics	Introduction to Visual Analytics Slicers, Table, Pivot Table, Pivot charts, Excel Dashboards, Gantt Charts
PRESENTING RESULTS	
Tell Your Story	Bar chart-Stacked and Grouped, Pie chart, Line chart, Column chart, Histogram, Scatter Plot. Column Chart with Percentage Change Conditional Doughnut Progress Chart Interactive Histogram Dynamic Histogram or Frequency Distribution Chart
Advanced Use of Charts, Dashboards and Visualization	Dashboard Development Interactive Waterfall Chart Dynamic Data Labels Zoom with Charts Macro

79/3A Sunny Brooks, Sarjapur Road, Bangalore 560035. Phone: + 91 91487 06970 Email: info@kaalp.com www.kaalp.com

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