Project Title

Enhancing Data Reporting with Tableau

Project Lead and Members

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Organisation(s) Involved

SingHealth HQ

Healthcare Family Group(s) Involved in this Project

Healthcare Administration

Applicable Specialty or Discipline

Human Resource

Aims

To provide comprehensive overview and sensing of workforce demographics to facilitate decision-making for SingHealth Senior Management and SingHealth HQ Department Heads. The Strategic HR (SHR) Planning Team took on the project to revamp existing reports and create new reports in Tableau, to enable data-mining for in-depth HR analytics. This also allows for timely addressing of manpower data queries.

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Conclusion

See poster appended / below

Additional Information

Singapore Healthcare Management (SHM) Conference 2021 – Shortlisted Project (Human Resource Category)

Project Category

Technology, Digital Health, Data Analytics

Keywords

Tableau, Data Mining and Reporting

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Enhancing
Data Reporting
with Tableau

Singapore Healthcare Management **2021**

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SingHealth Defining Tomorrow's Medicine

AIM

To provide comprehensive overview and sensing of workforce demographics to facilitate decision-making for SingHealth Senior Management and SingHealth HQ Department Heads. The SHR Planning Team took on the project to revamp existing reports and create new reports in Tableau, to enable data-mining for in-depth HR analytics. This also allows for timely addressing of manpower data queries.

"The goal is to turn data into information, and information into insight."
- Carly Fiorina, American businesswoman/ politician

METHODOLOGY

Step 1: Identify reports to be developed in Tableau to enhance Data Reporting
Determine which reports would benefit from Tableau, based on the amount of time savings and how beneficial it would be for user to slice and deep-dive into the data to derive the insights they need. The following reports were generated: (1) Cluster Workforce Dashboard, (2) Cluster Nursing Dashboard, (3) SHHQ Workforce & Resignation Report and (4) SHHQ People Management Dashboard.

Step 2: Design Tableau Dashboard
Identify data fields of interest to Management , decide how data is to be charted, taking into consideration the good practices for Data Visualisation, building the filters for drill-down of data, designing the data source file and lastly incorporate benchmarks for meaningful comparisons.

Step 3: Validate Dashboard Output
Before publishing the report for the first time, values generated in the Tableau Dashboard were cross-checked against Excel. This is to make sure the figures are accurate and Tableau is able to produce the same data output compared to the report in excel format.

+ableau

RESULT

Comprehensive Overview and Data Mining of Workforce Demographics

- **Comprehensive overview** of various HR metrics of management interest/ concern.
- **Detailed data mining** can then be carried out using the filters for deeper data analysis and to highlight areas of concern and insight.
- Multiple filters may be selected at one time to allow for quicker, wider and deeper **multi-dimensional analysis**, which is difficult and time-consuming to achieve using static tables/ charts.

Timely and Responsive Addressing of Manpower Data Queries

- Users are empowered to **self-help** and get answers to their manpower data-related queries quickly using the **interactive dashboard**.
- **Benchmarks** may be included, which provides users with a **holistic view** of the organisation.
- Ability to **customise Tableau's user interface** with variations of chart types.
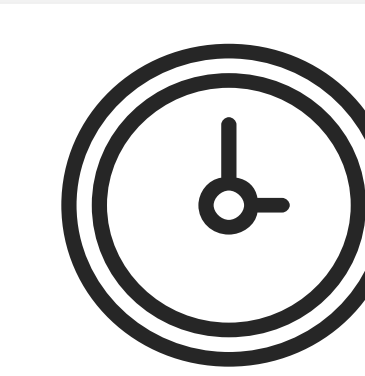
Time Savings in Report Generation

- The dashboard report generation **saves up to 70 hours** of report preparation time for each report.
- **Increase in productivity** due to faster reporting capability.
- Ability to **create real-time dashboards** by connecting the updated data source file.
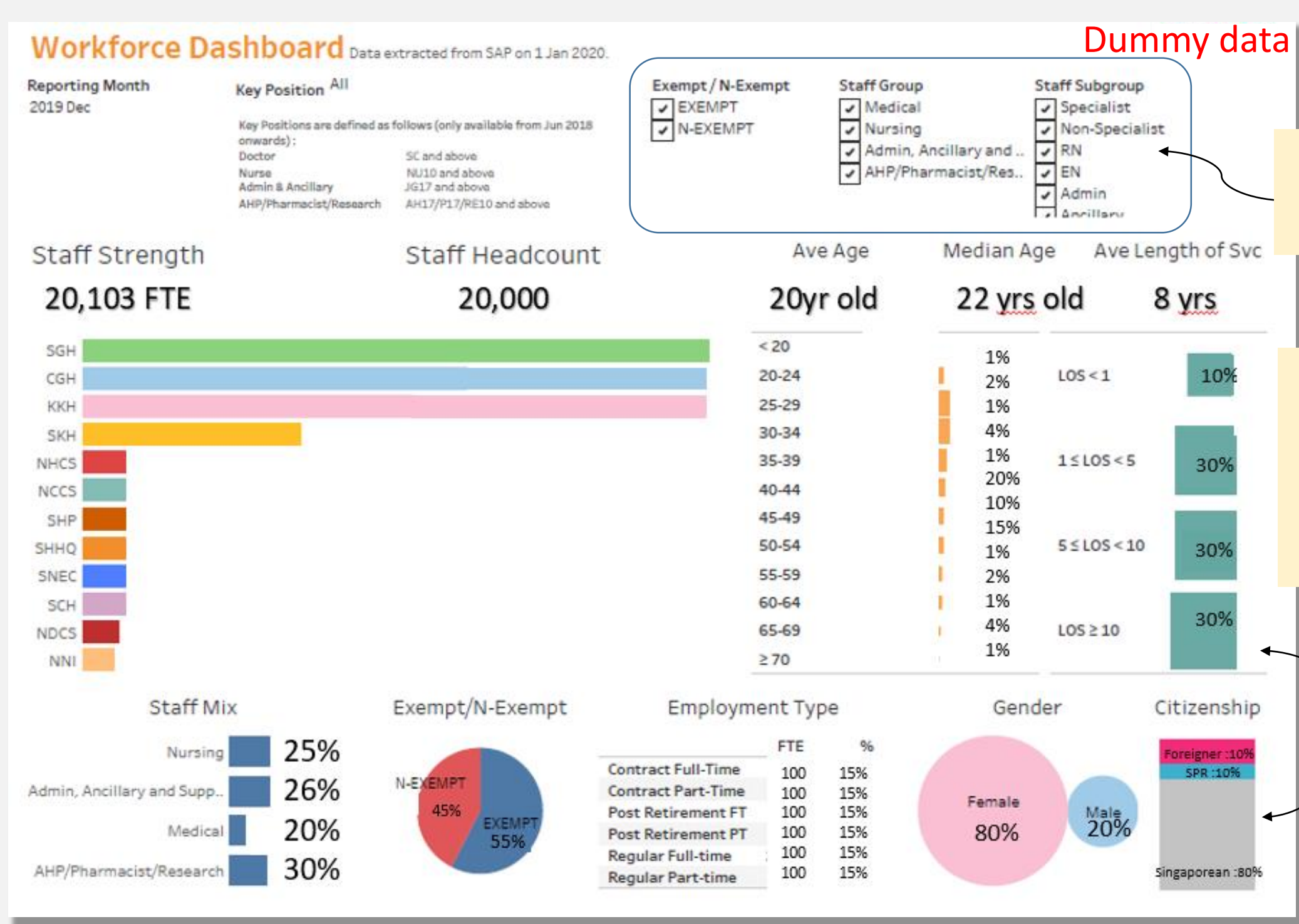
Multiple filters may be selected

Provides quick insights and sensing of workforce demographics

Ability to create different chart types
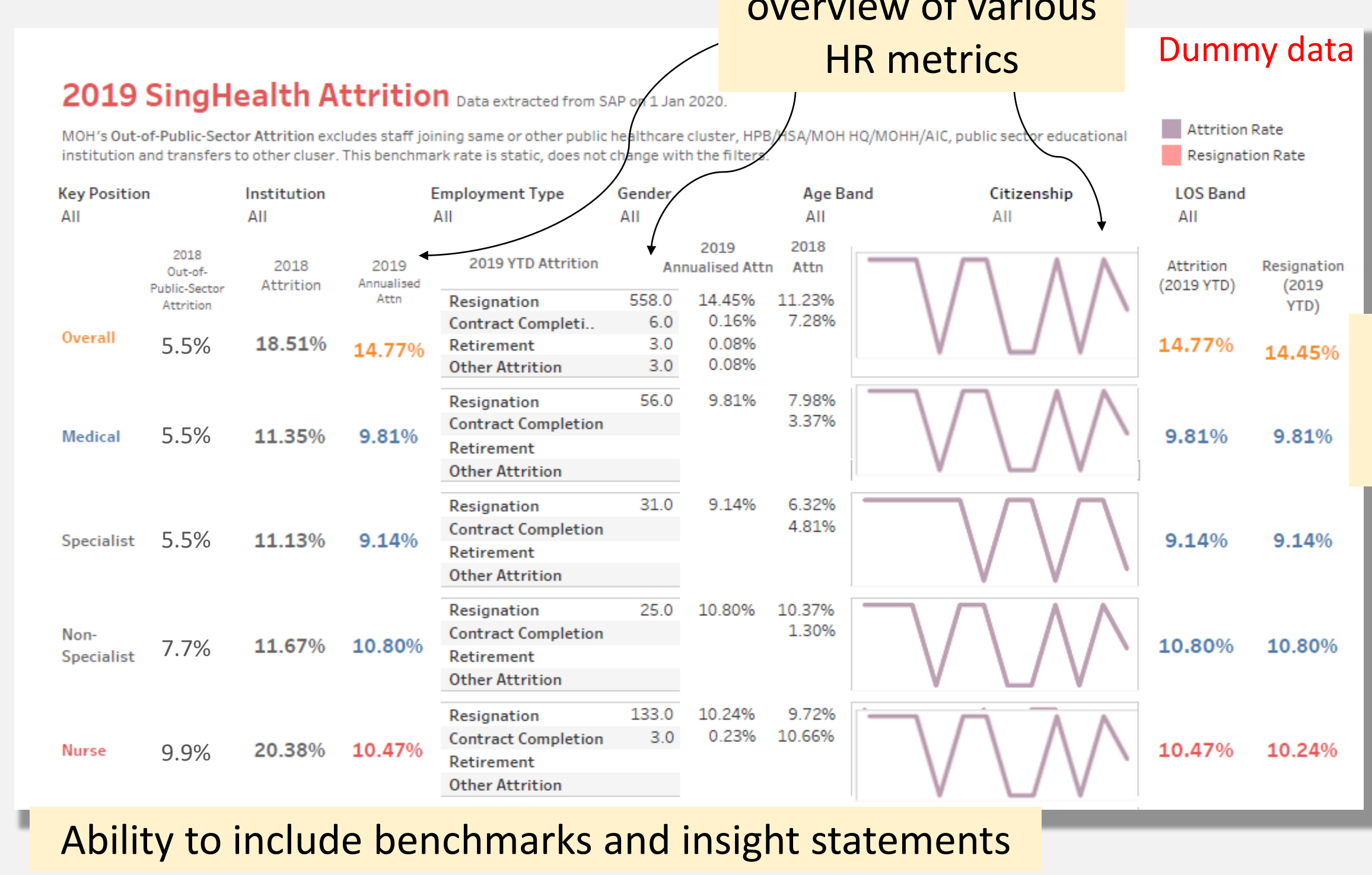
Comprehensive overview of various HR metrics

Interactive and user-friendly dashboard

Ability to include benchmarks and insight statements

CONCLUSION

Overall, Tableau has brought about many improvements to Data Mining and Reporting within the HR context. Tableau does have limitations, for example, inability to customise visibility of data according to different data access rights of users, for which some manual data manipulation is necessary. However, with the upcoming HR Datamart and Cloud-based HR Information System, HR's capacity to provide Data Mining and Reporting will be further enhanced with automation and predictive analytics.