Improving Work Efficiency, Enhancing Data Quality and Delivery for Cluster Risk Reporting

Singapore Healthcare Management 2019

Chloe Tay Yu Tong, Lin Xinyan

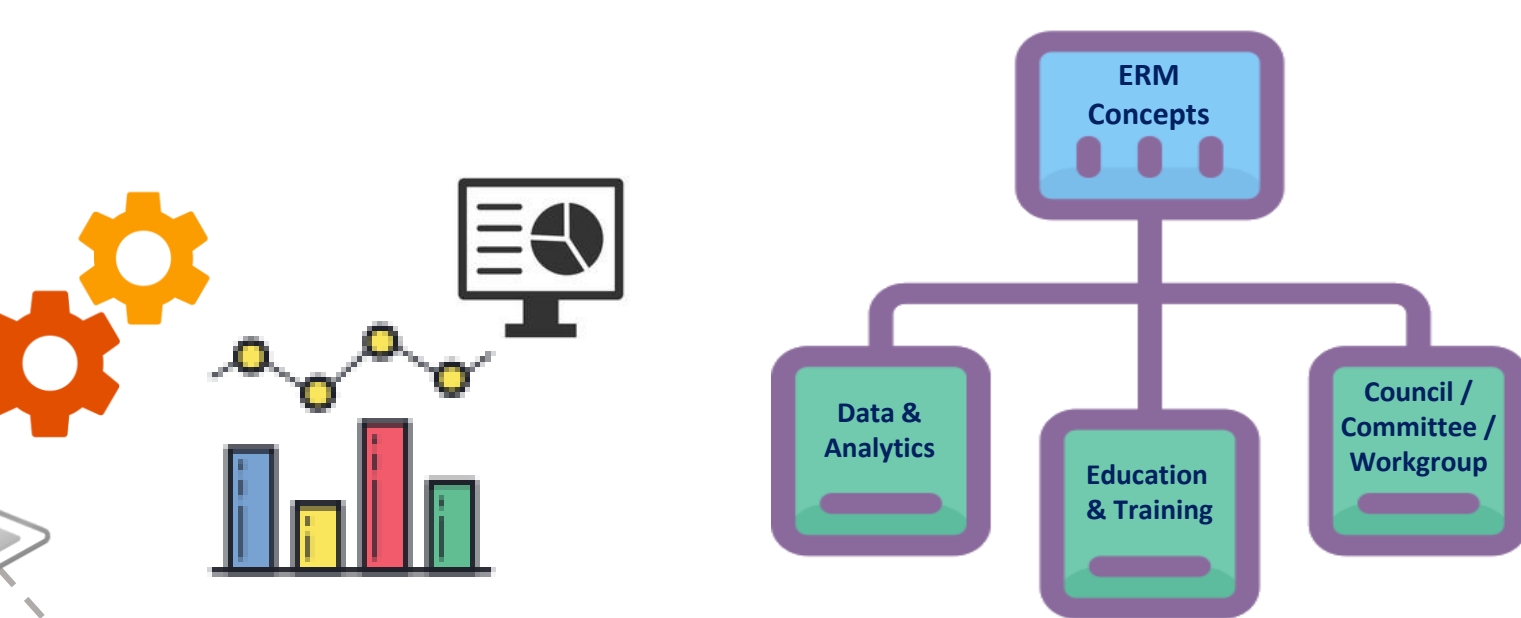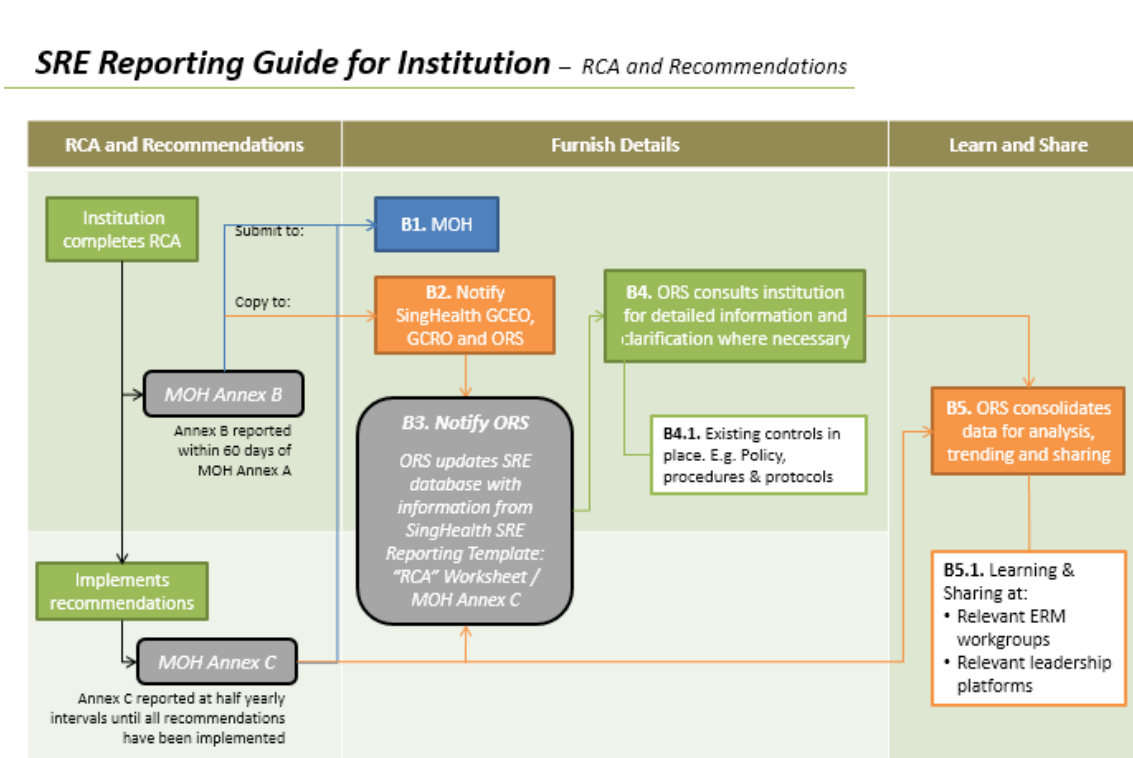*With thanks & appreciation to Ms. Ng Mee Yoke and ORS Team*

SingHealth — **O**ffice of **R**isk **S**ervices

INTRODUCTION

SingHealth adopts a three-pronged approach in its ERM implementation. **"Data & Analytics" segment** comprises the gathering of granular risk-related data for collation, analysis and trending at Cluster level to facilitate identification of key risk areas for addressing and initiate improvement projects to raise risk management performance.

AIM

Project aims to achieve the following:
- ❖ To **streamline** work processes through development of **interactive dashboard**
- ❖ To enable **ease of tracking and monitoring** of trend lines for various reporting to Cluster Risk Management Groups and Senior Leadership
- ❖ To leverage on existing tools to ensure **consistency in data quality**
- ❖ To **optimize and reduce time and resources** in data processing and analysis

METHODOLOGY

3-Steps Approach:

SRE Reporting Guide for Institution – RCA and Recommendations

STEP 1
Identify issue/problem(s):

Understand and review the current work flow for data collection, collation and analysis

- ✓ IDENTIFY
- ✓ ACCESS
- ✓ REVIEW
- ✓ CONTROL

Data Quality Dimensions

- Is all necessary data present? — **Completeness**
- **Validity** — Are all data values within the value domains specified by the business?
- **Timeliness** — Is the data available at the time needed?
- **Data Quality**
- **Consistency** — Is data consistent between systems? Do duplicate records exist?
- Are the relations between entities and attributes consistent? Within tables and between? — **Integrity**
- **Accuracy** — Does data reflect the real-world objects or a verifiable source?

STEP 2
Identify root cause(s):

A — **Duplication of data in multiple templates and database**
- ⊗ Inconsistency in data collation
- ⊗ Data not updated in all templates

B — **Timeline for data collection**
- ⊗ Missing information
- ⊗ Unclear and redundant fields used in templates
- ⊗ Incomplete data received due to different practices
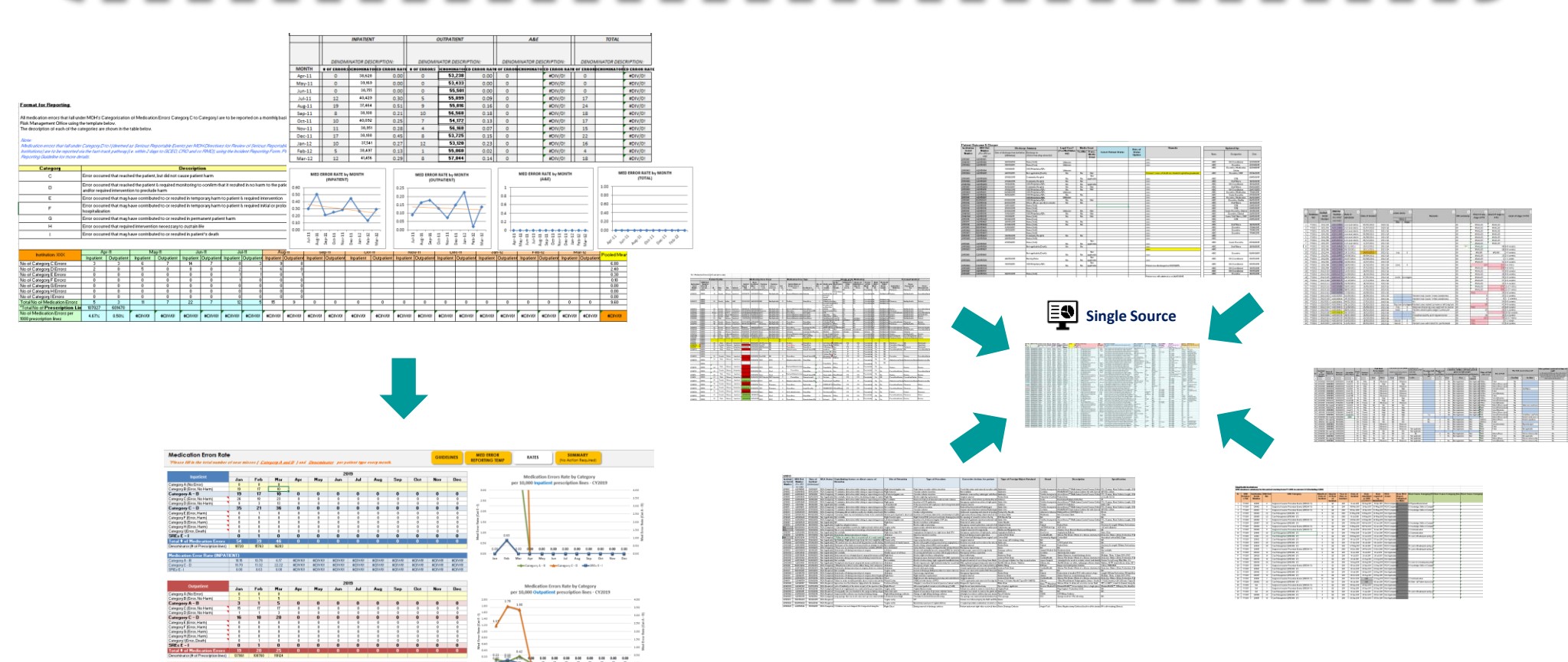
C — **Manual Intervention**
- ⊗ Time consuming
- ⊗ Prone to human errors (i.e. typo)

STEP 3
Develop solutions to address root cause(s):
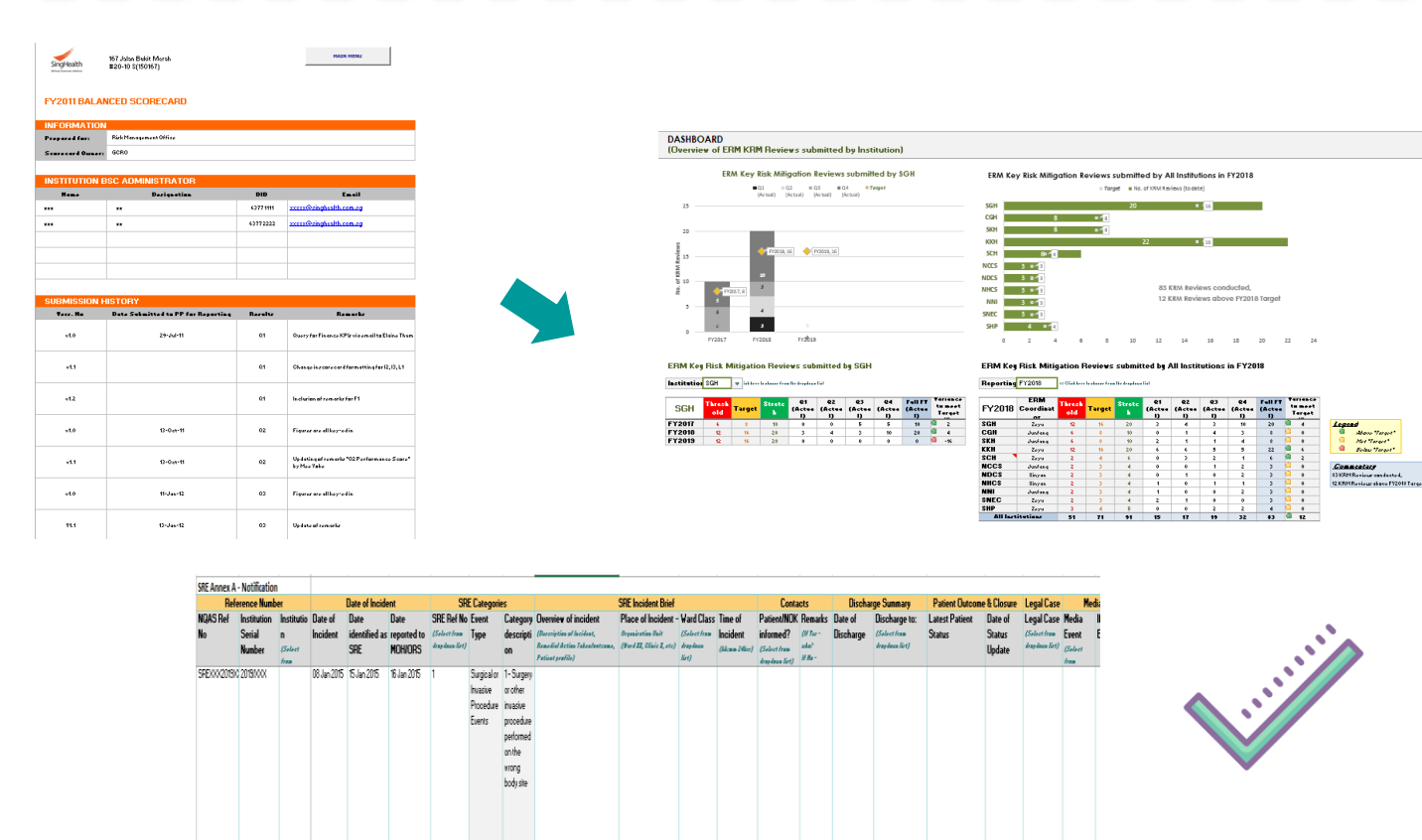
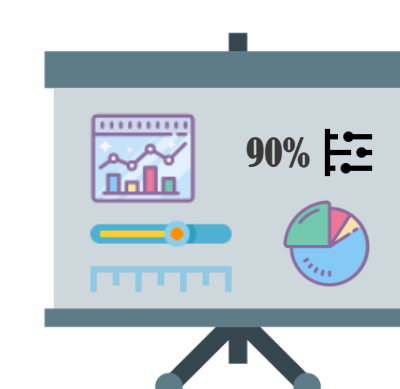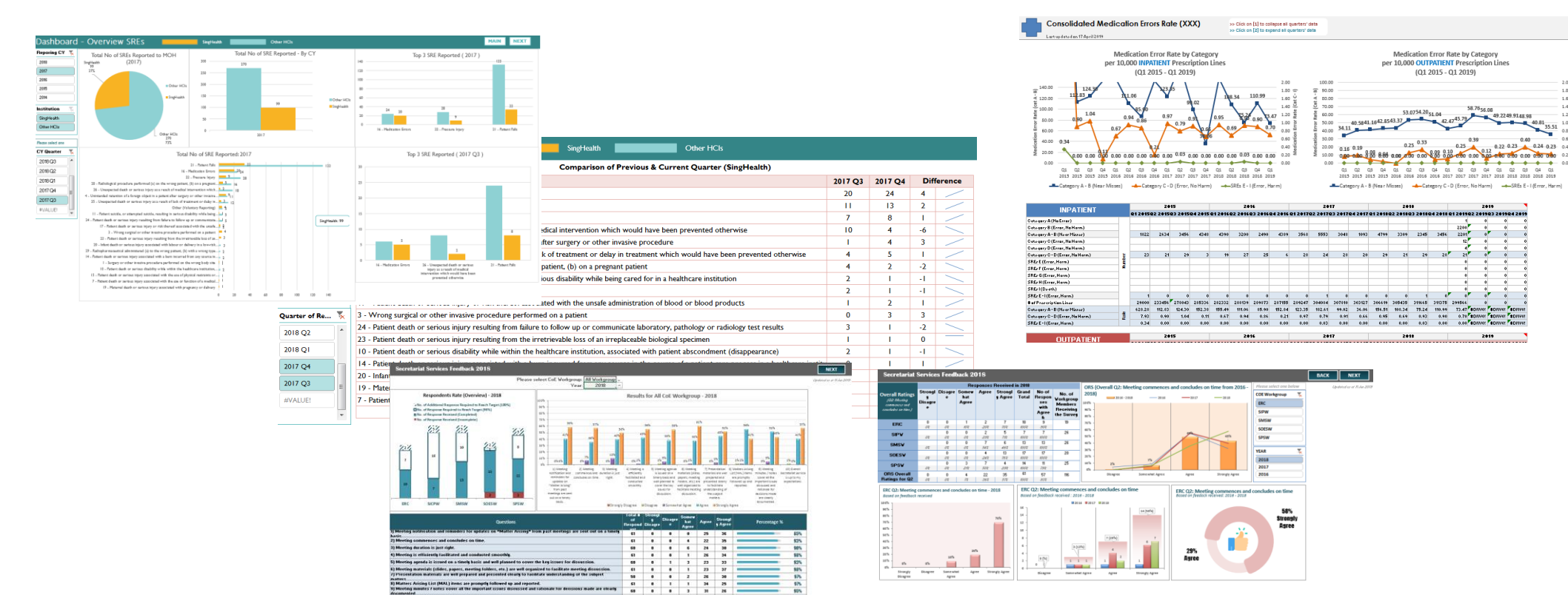✅ **Eliminate unused / meaningless data**

Cleaning of data and combining all database into one source

✅ **Revise data collection tool**

Ensure complete information

✅ **Implementation of interactive dashboard by leveraging on technology to automate work processes**

Pilot development of the interactive dashboard for i.e. Annual Secretariat Feedback, ERM KRM Reviews, Medication Errors, Serious Reporting Events reported by all SingHealth institutions.

RESULT

👍 ↑ Efficiency = ↑ Productivity

Expected results after completion of the proposed solution:

Approx. **35%** man-hours saved per week

Utilization of the automation features and interactive dashboard can effectively helped to reduce the significant amount of time spent to perform repetitive work. With the potential savings of **2 to 3 man-hours per week**, staff would be able to focus on analysis and problem solving, thus increasing the efficiency and productivity in completion of other major tasks.

1. Significant reduction in time taken
Less processing time required to update database on multiple sources. Automation in keeping track and monitoring of the data for various reporting and notification to the management.
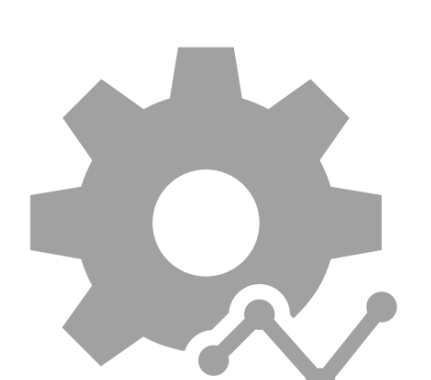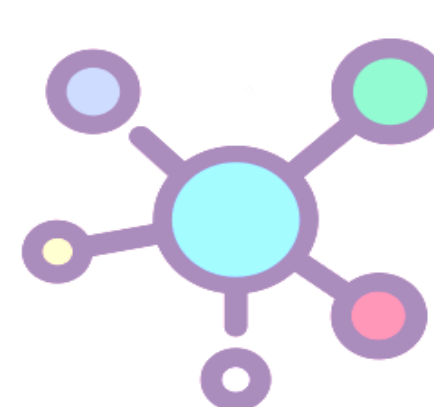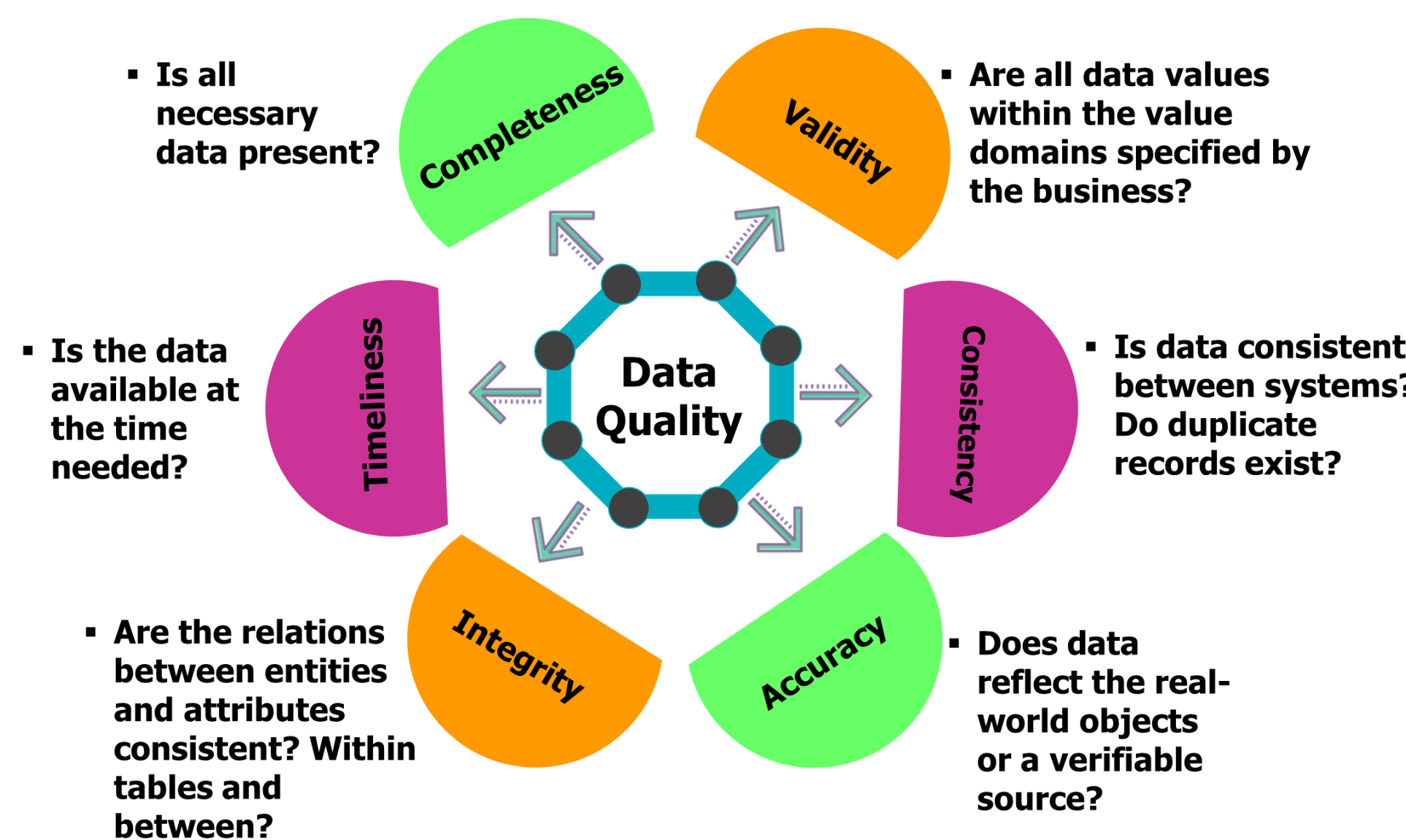
2. Minimise human error risk ⚠️
The use of programmed formula and features available to help in data validation and verification. Eliminate the need to manually update and check against multiple templates used, thus ensuring data consistency and accuracy.

3. Ease in tracking and monitoring of data available
Enhanced data visualisation through the use of interactive charts, graphs for reporting.

CONCLUSION

With the development of the interactive dashboard as well as revision to the workflow, processing time taken in data collection, collation, generating and preparation of reports was reduced. Through reviews and evaluation of the workflows, we had identified the importance of maintaining a clean database with quality over quantity, would eventually aid in support of better risk – based decision making.

The use of the dynamic and user-friendly platform allows easy tracking and monitoring of various indicators, thus minimising the risk of data inconsistency due to human errors. It will not only enhance work productivity and efficiency, but also to ensure accuracy in delivering data and information. Implementation of the dashboard is an ongoing effort, and the team will continue to further improve and monitor the results for effectiveness and sustainability.