

INTRODUCTION

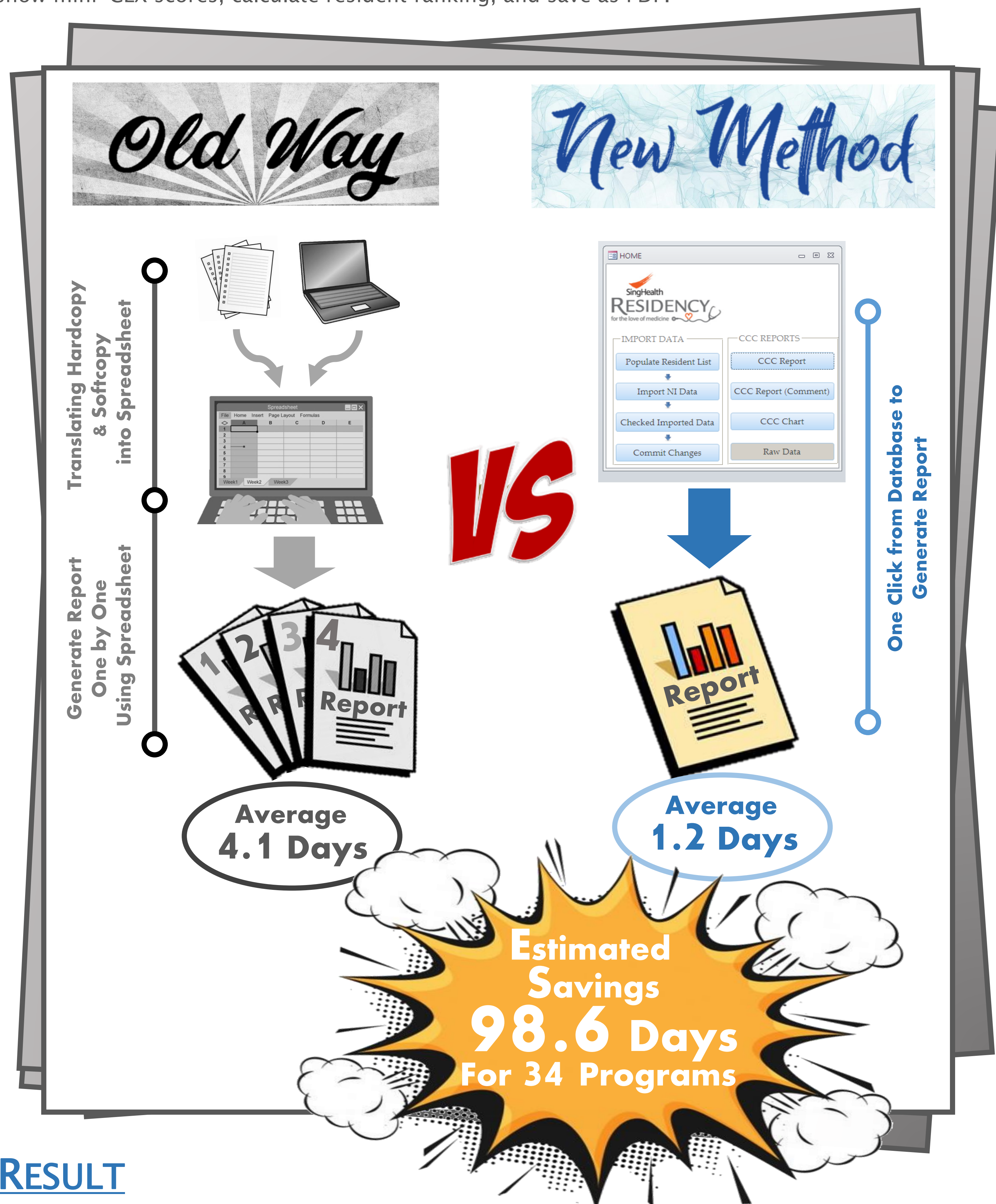
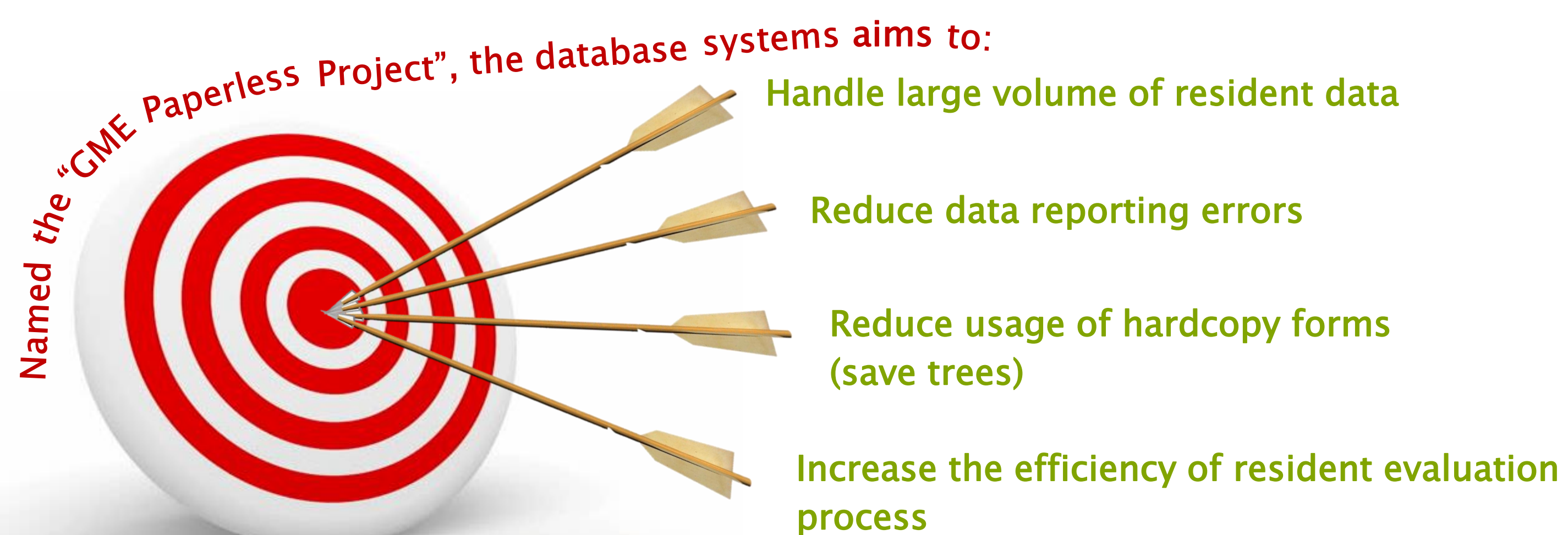
In SingHealth Residency, preparation for the regular Clinical Competency Committee (CCC) deliberations requires the Program Executives (PE) to prepare summaries of the residents' evaluation data. These summaries include the average rotation evaluation and average specific competency evaluation per resident, and a ranking of all residents within the program. This involves collating the results from both paper forms and online systems, and using spreadsheet to perform the necessary calculations. Several of the residency programs have more than 100 residents. For the PEs, this task was laborious and time-consuming. The large file size of the spreadsheets also led to file corruption and potential loss of data, contributing to more delay.






METHODOLOGY

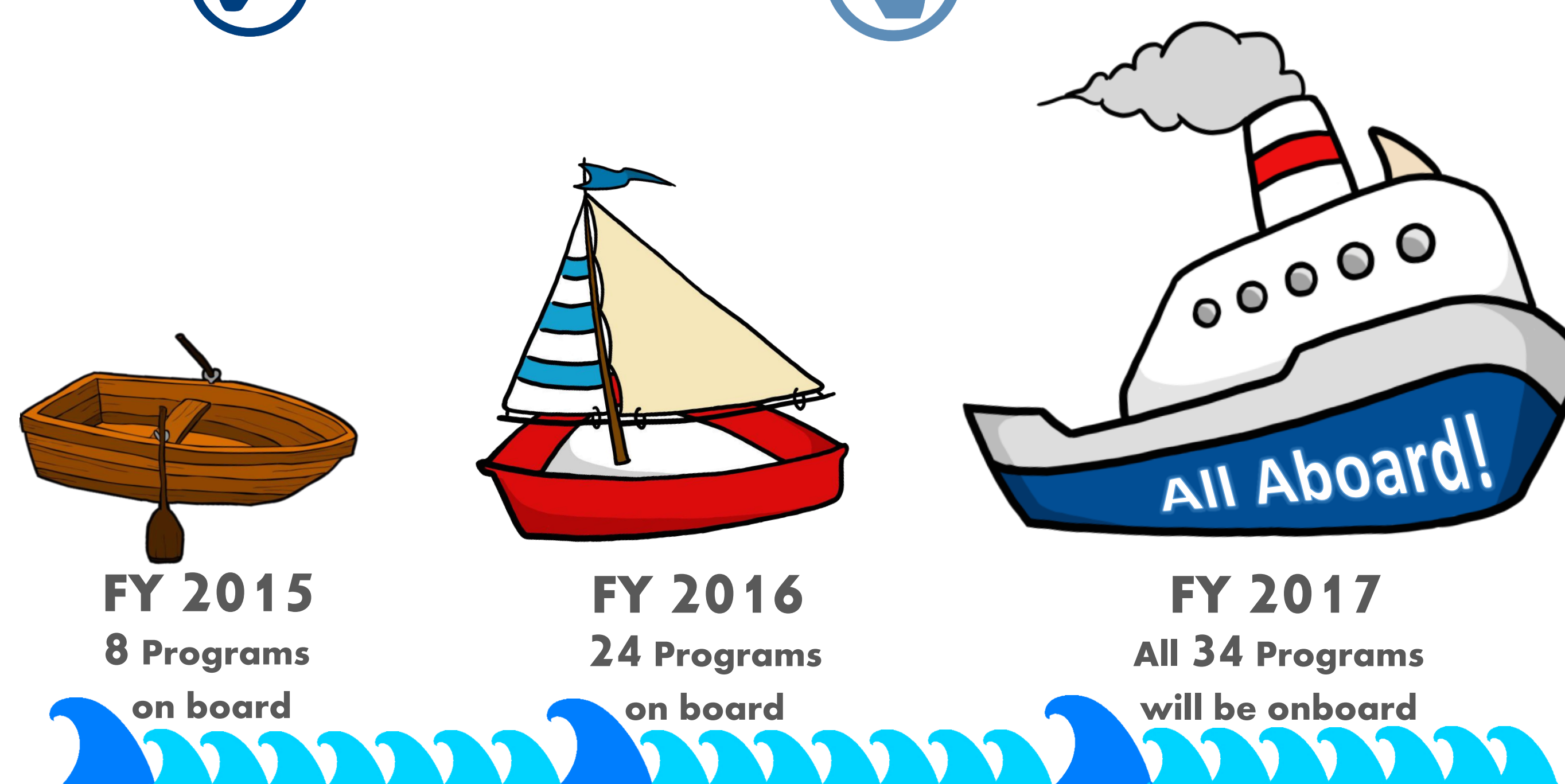
Paper-based forms were first converted to online format to facilitate collation of data. Instead of spreadsheet software, a database software was used. The database could accommodate a greater amount of data, thus reducing the probability of file corruption. The database incorporated the necessary calculations and operations for the residents' evaluation data. To facilitate workflow, a simple user interface was created consisting only of buttons that corresponded to what the PEs needed to do. Examples of such buttons/actions include: import evaluation data, show mini-CEX scores, calculate resident ranking, and save as PDF.

AIM

The Education Technology Team is tasked by the Designated Institutional Official (DIO) to devise a database system to automate the resident evaluation reporting for the CCC meeting.



- ✓ **Time Reduction** 
- ✓ **Error Reduction** 
- ✓ **Efficiency** 
- ✓ **Speed** 
- ✓ **Ease of Use** 



RESULT

The CCC Residents' Evaluation Database system was first used by the SingHealth Anaesthesiology program, with 55 residents in 2014. Since then, the system has been used by other Residency Programs. A survey of the 5 programs which have been using the system for more than 6 months indicated that time spent preparing residents' evaluation summaries changed from an average 4.1 days prior to its use to an average of 1.2 days after its adoption—a decrease of 2.9 days. The percentage of time spent correcting errors during preparation also decreased, by an average of 90%. All programs noted the accuracy and speed of the system as its main advantage, and gave positive ratings (average 8 out of 10) for satisfaction with the database and ease of use (average 7.4 out of 10). We are now in the process of rolling out the system to the remaining residency programs in our institution.

CONCLUSION

For our institution which has a large number of residents (1196 in FY2017), a computerized system consisting of a database incorporating programmed instructions has enhanced the overall efficiency of data management in the residents' evaluation process. In addition, the move to the database system encourages a more eco-friendly workplace in GME where reports are stored digitally in the system rather than in hardcopies. To complement the paperless project, the next phase of development will focus on digitizing data collection process via mobile and online platforms.