Proposing a Database Solution:

Sairam Soundararajan

CMIS 320

Professor Liu

University of Maryland Global Campus

October 29th, 2022

Dear Supervisor:

For all the meetings, trainings, and events that happen within our architectural firm Perkins Eastman, I would like to propose one solution that might benefit our business: the use and development of a relational, SQL-based database that can be navigated by seminars and participants. This database would be used here at Perkins Eastman in which all employees could access it to sign up for an event that we hold. They can register with their first and last name, employee ID, email address, company name, job position, and date of registration. The seminars can be searched by title, date of event, and location. Why do I suggest this solution? Relational database solutions can be useful to several business problems because they use a model of data that concentrates more on complete relationships rather than organizing data that involves the user to know how to simply sort through data. Using relational database management system (RDBMS) can resolve issues that would otherwise be occurring if not used.

## How RDBMS can solve the issues

Using RDBMS can provide many benefits to the company. Aside from storing and organizing data, RDBMS can help employees keep data more secure and work efficiently with other team members. According to Tarika Arun (2020), consolidating data in one place gives the employee the ability to access all important employee data from one main location. Navigating specific information can be time-consuming if employee data is managed manually. However, employee data can be easily searched with an efficient database management system (DBMS), resulting in informed business decisions being made faster. Secondly, the employee DBMS improves data security by allowing employees to prohibit others from accessing sensitive data, protecting employee database from both internal and external threats. Employees would only retrieve data that is essential for them. Protection for the database is ensured further by making every part of information password protected. Thirdly, overall work productivity is increased because all the important data on the employee DBMS can be accessed with a single mouse click, which is more efficient than maintaining employee data on an excel spreadsheet. This helps employees restructure routine tasks linked with the data and allocates them more time to focus on other tasks/projects. Fourthly, an employee directory is another advantage of an employee DBMS since employees can quickly navigate their colleagues’ contact information at any time necessary. Information such as contact numbers, designations, email addresses, seating details, employee ID numbers, and other data will be available. This reinforces collaboration among employees, even when working remotely. Fifth, employee DBMS helps in mitigating compliance risks by ensuring the highest level of accuracy and security for each employee. Finally, an employee DBMS gives employees access to the company’s hierarchy, allowing them to contact the right person who can resolve an issue directly. The hierarchy aids in assigning the right job to the right person and guarantees that no employee is overloaded (Arun, 2020). Given the advantages of relational database management system, our business and work environment could enhance in many ways than ever before.

### Industry example

Gensler, another competing global architecture and design firm, manages database in two different ways. According to the company website, Wisp is a space management software used by Gensler to combine data with interactive floor plans for real-time reporting by giving real estate and facilities teams with materials and measurements necessary to manage and enhance their business. This led to teams making data-informed decisions, incorporate an efficient approach, and value data integrity (Space management software: Projects, n.d.).

In addition to Wisp, Gensler also utilizes Activity Analysis that was developed to conduct observational analysis involved with space deployment. After collecting data management, reporting, and administration, they analyzed the data for intuitions that could clearly inform clients on matters such as mobility, modes of working, and industry benchmarks. Subsequently, they translate occupancy data into useful information for their clients and design teams. Occupancy data is an important tool to understand space demands and utilization. Recording the frequency in which spaces are being utilized, and whether or not they are being used as expected can provide useful awareness into understanding and developing a client’s space. Currently, their database includes over 1 million observational data points. Through data analysis, Gensler observed a number of trends. One of those trends entail individual workstations that tend to remain unused for 62% of the time, leading to the likelihood of increasing efficiency through different workstations or mobile work solutions (Activity analysis, 2011).

#### Recommendation

As we saw in the example, data and database management can be used for tasks specifically related to the architecture work that we do as well as the office environment around us. Database management can even help with matters as basic as keeping an organized system in place. While it would be extremely useful for teams to use RDBMS for architectural projects, the best place to start with RDBMS is employee management. This may include employees signing up for training sessions, seminars, and events that happen on behalf of Perkins Eastman. As we consistently get into practice with using this established system, I believe that the architectural firm can slowly build its way into using RDBMS for tasks as complex as working on architectural projects. Using RDBMS can help the company save money, increase work efficiency, and reinforce collaboration among employees/teammates.

References

*Activity analysis*. Gensler. (2011, November 30). Retrieved November 3, 2022, from https://www.gensler.com/gri/activity-analysis

Arun, T. (2020, May 31). *How an employee database management system improves your business. eLearning Industry*. Retrieved October 31, 2022, from https://elearningindustry.com/how-employee-database-management-system-improves-business

*Space management software: Projects*. Gensler. (n.d.). Retrieved November 3, 2022, from https://www.gensler.com/projects/space-management-software

Wang, V. A. P. B. A. Y. (2020, May 1). *Database Design and Implement of a Medium-sized Interior Design Firm*. Yiren Wang. https://yiren-wang.com/2019/12/15/database-design-and-implement-of-a-medium-sized-interior-design-firm/