

## OPIM5272: Project Proposal (Phase I) Background

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### Current Situation + Motivation

The toy company School is Cool Inc. (SIC) is currently experiencing challenges with managing its vast amount of internal data, which is currently stored in Excel and other non-dynamic formats. Cross-functional teams are not able to align on the most up-to-date data, and there is difficulty in leveraging this information to make both day-to-day and high-level strategic decisions in a timely, safe, and effective manner. This is due to the following 3 reasons:

1. Company Growth + Location Changes: More employees were hired to execute the increased workload, both domestically and internationally. Specialized roles and teams, along with social changes in the workplace, including flexible work hours and remote work are contributing to the decentralization of information.
2. Large IP Sensitive Brand Portfolio: SIC handles a vast brand portfolio with many IP sensitive properties. This sensitive information includes naming conventions, product release date, and product descriptions, all of which cannot be released before the shelf date. These deadlines are established by SIC's strategic partners and are communicated through a small number of SIC employees who are responsible for sharing the information to the applicable SIC teams. Following these date guidelines is imperative to maintaining SIC's business relationships and integrity.
3. External Environment: The advancement of technology, along with consumer expectations of timely and relevant product availability, requires that information is shared, updated, and executed quickly. As with other firms, security is also an issue for SIC; its current practice of passing various spreadsheets and other documents to groups inside and outside the organization makes SIC vulnerable to information leaks.

### Potential Benefits of the Database:

- Minimize data edits across multiple tables using atomic attributes
- Improve communication across functional teams
- Greater ease of making updates
- Provide more reliable and up-to-date reports for improved and agile decision making
- More IP security, both internally and externally

### Description of the Business Rules/Requirements:

SIC has a vast number of products. Each product can have one and only one brand, and each brand must have at least one product as part of its portfolio. In SIC's case, customers are retailers, who must make at least one product purchase to be considered as such - due to company policy, there are no price negotiations or deals made with retailers. Products can be purchased by zero or many customers; this is because there are products that can be manufactured, and not ready to be sold yet. Each purchase is recorded as a transaction for improved inventory and customer relationship management. Each customer is handled by one and only one sales rep, and each sales rep can handle one or many customers. A product can be stored in one or many warehouses, and warehouses store many products. The warehouse product data is recorded in order to better manage inventory. Suppliers can provide one or many raw materials to contribute to the creation of a product, but each specific raw material is sourced from one and only one supplier. The same type of raw material can be used in many products, and one or more raw materials can be used to create a single product. For cost management purposes, it is imperative to note each raw material cost by unit weight. Here, product cost is recorded based on the raw materials cost and raw materials quantity used in the creation of that specific product.