# Purpose

The purpose of this evaluation is to assess database (DB) upgrade options for our Point of Sale (POS) and Reporting systems.

## Reason for Change

Our POS DB will not be supported point forward by the software provider. This materially affects stability and security. Our Reporting DB is outdated, on version 5.7 vs 8.0. This materially affects features available1. Regarding both, there are significant performance improvements2

## Business Requirements

Successful upgrade of our [Describe what the users need and their expectations regarding this task. Describe the current user experience, if applicable.]

# Solutions

We can perform this migration in house, hire a contract employee, or have a 3rd party perform this service for us.

# Recommendation

After performing analysis, we recommend having the 3rd party Pythian perform this migration. The costs and benefits of this are enumerated in the addendum.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **In House** | | **Contract Employee** | | **3rd Party** | |
| **Pros** | **Cons** | **Pros** | **Cons** | **Pros** | **Cons** |
| Least expensive | High failure risk | Medium failure risk | Security | Lowest failure risk | Most expensive |
| Gain valuable experience | Time consuming: Rob and I finding time amidst other priorities | Good balance of cost to value | Warranty: accountability if failure | Warranty, Most Accountable if Failure |  |
|  |  | Expertise In deploying and configuration | Hiring Process: time consuming, HR has to be involved | Determinate cost: estimated cost is the cost |  |
|  |  | Establishes relationship for future consulting and support | Indeterminate cost: what happens if contract period has to be extended | Expertise In deploying and configuration |  |
|  |  |  |  | Establishes relationship for future consulting and support |  |

1. Features of MySQL 8.x
   1. Enhanced JSON support (data formatting commonly used for exchange of information on Web) included better functions, storage, search, and editability
   2. Common Table Expressions (allows ranking); EG a report that shows the top 10 SKUs by every location; can be done currently but is arduous
2. <https://severalnines.com/database-blog/mysql-performance-benchmarking-mysql-57-vs-mysql-80>