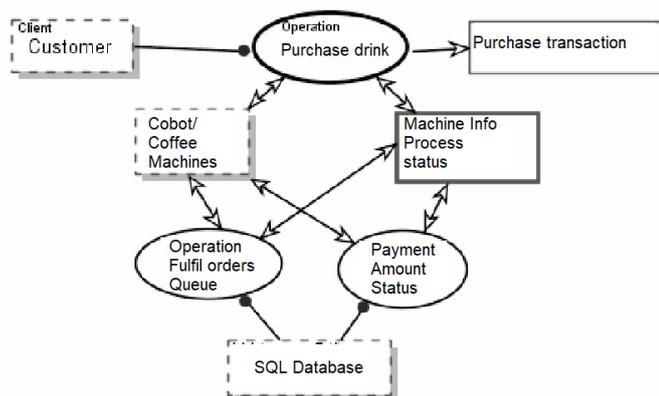


# Middleware for Co-bot and Machines

## Technology Overview

This invention falls under the category of software. Generally, the industry may refer to it as middleware or control software. With the industry 4.0 bringing sweeping changes across the industry, the integration of disparate components has become critical due to the presence of proprietary legacy systems. This invention offers an intermediary communication for the different standalone machines to communicate and perform synchronised functions. Customer can engage us for extension of production functionalities and development.

## Technology Features & Specifications



The middleware was developed to integrate robotic and automation elements allowing different machines to communicate through the middleware console. Through customisation, the software code developed could communicate through interfacing ports with different machines:

- Customisation for the disparate systems
- Options to connect by augmenting existing systems through sensorisation of systems
- Allows heterogeneous systems to operate with customisation

## Market Trends & Opportunities

Industry 4.0 is making sweeping changes to how products are manufactured and services offered. Connecting legacy systems with a more advanced system can be challenging. Manufacturing accounts for close to one-fifth of Singapore's GDP. It is paramount that companies adapt and transform in response to the intense pressure from regional competition coupled with rapid changing demographic locally.

### Benefits

- ✓ Adding capabilities to extend the usable life of existing machines / devices
- ✓ Connecting and synchronizing discrete processes

### Potential Application

- ✓ Automation / Production environment
- ✓ Collaborative Robots Control
- ✓ Retails

### Commercialisation

- ✓ Ready for deployment for customization
- ✓ Available for licensing

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