

New database and existing database



**ASSIGN
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All design based on above analysis and requirements. The assumption made is new database is compatible with existing database. High Level Design Riordan Manufacturing has several plants that produce different products. Each plant warehouse and manufacture need portable scan device, Label printer, and computer desktop to input local inventory and product data information. Because the company is a global company, web application is highly recommended. A web based application will process input information and store it to the central database.

The benefit of web base application is easy to maintain and deploy, especially for a global company. Below diagram is the system high level diagram. Local scan device and computer system will be used for data inputting and reviewing. Components on central web server/application server will add/update inventory information and save to central database server. High level diagram Working Flow Raw materials received from vendors will arrive with bar coded labels and an invoice of all items shipped.

Upon arrival equipment will be scanned with a portable data terminal (PDT). This information will be wirelessly sent to the plant database and automatically update the inventory as well as flag any discrepancies between what was ordered and what was received. Prior to the beginning of each work day a random list of items and locations will be sent to the PDT's. Inventory clerks will perform a cycle count by scanning the package label and confirm that the quantities are correct. If there is a discrepancy it will be researched then.

After the Cycle Count, items can be scanned out of the warehouse for delivery to the production line. When assembly is complete the new product will be labeled with a bar code, scanned and staged in the finished product warehouse. In the shipping stage, shipping orders will be sent to the PDT's and the shippers will use that to collect and scan items for customer shipments. When the customer order is complete the PDT order screen will go green and a final label will be placed on the shipping box/container.

This information will be relayed wirelessly to the data center and an email notification will be sent to the customer and the sales person with a tracking number and expected date of delivery included. Inventory management system database design to store material information, keep tracking inventory, record product and shipment information. It will also interact with the current order and billing system back end database, in order to get product order ID. Data can be retrieved from this database for reporting purposes as well.

Since the company is employing 550 people with projected annual earnings of \$46 million, we expect high volume interaction between client application and back end database. Database optimization is required to make sure the system meet the requirement, for example: table indexing. Below is a database design diagram. New database design contains six major tables and four reference tables. Database design diagram Implementation recommendation Since the new system automated inventory checking process, new wireless handheld scanner is required. We recommend products from Intermec.

Intermec provides inventory tracking and supply chain solutions for businesses. We also recommended two web servers and two database servers for data process and storage. Major software products requested in this project are Oracle database and Microsoft. NET Framework and Visual Studio. NET. In order to launch on time, we estimate the project needs four developers, at least one database administrator and one system administrator. In addition, each plant site needs additional one or two information technical personal for system set up and maintain.