**INMT5501 Enterprise Information Systems**

**Group Report**



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**Database Name:**  **edu-WA Furniture Group 5**

# Introduction to WA furniture

WA Furniture is a make-to-order business offering a wide range of wooden furniture with both basic and customized design. The company has existed in the market for years without upgrading its systems causing discrete, unstandardized work processes. For instance, the obsolete MRP system could only allow the production department to obtain approximate costs by order resulting in inaccurate sale quotations and severe losses. WA Furniture also heavily relies on Excel spreadsheet to share information between department which increases the idle time, chance of error and misplaced information. WA Furniture has two main types of customers: individual and business (builders) customers. The customers can order both existing and custom orders from WA furniture.

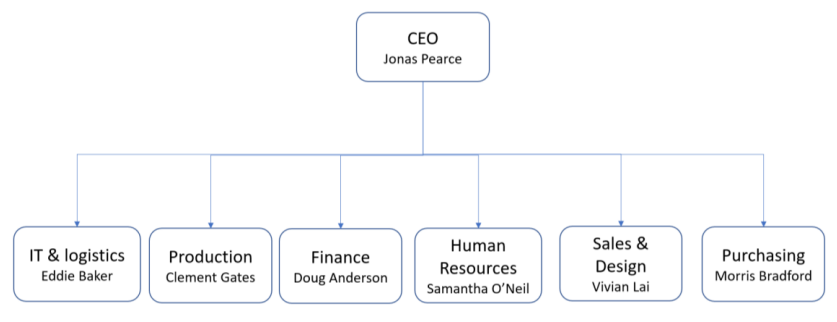


Figure 1: Organizational structure of WA Furniture

# Project scope

The management team of WA is interested in how the information flow can be improved using the Odoo system. WA Furniture, being a manufacturing business, the main criteria is to keep cost under control while producing high quality products. In addition, WA is accepting specific requests by allowing the customers to choose from the available, the system should be able to support order fulfilment process and the information flow to different departments within the company. An integrated data flow subsequently enhances the accuracy and efficiency in generating quotations, invoices and payment registration.

WA furniture has limited IT capabilities at the moment as the system is siloed. The departments work separately so the chances of error and misinformation are high. It is obvious that the MRP system is not enough to support the entire production process. Although it can meet the manufacturing needs of the firm, it will obstruct the future development of the system.

The following steps are what WA furniture expected from the Odoo ERP system:

1. Supports the order fulfilment process of WA furniture
2. Supports the production process
3. Supports the processing of payment and invoices
4. Supports the information flow between different departments

The functions required for these processes are

* Sales and design
* Accounting
* Procurement
* Production
* Inventory

|  |  |  |
| --- | --- | --- |
| **Implementation Activity** | **Vendor Responsibility** | **WA Furniture Responsibility** |
| **Project Planning** | | |
| Plan a business scenario | Yes | Yes |
| Develop Project charter (scope) | Yes | No |
| Requirement assessment | Yes | Yes |
| ERP Installation | Yes | No |
| Risk Management | Yes | Yes |
| Implementation and Deployment Strategy | Yes | Yes |
| **Fit/Gap Analysis** | | |
| Requirement Review | Yes | No |
| System Set up and usage | Yes | Yes |
| Gap Analysis | Yes | No |
| **Design** | | |
| Business Process Design | Yes | Yes |
| Technical Design (IT) | Yes | No |

# Key requirements

|  |  |
| --- | --- |
| Functional requirements | Non-functional requirement |
| * Sale and Design process * Improved Invoicing process * Inventory management * Procurement * Manufacturing process | * Call for Tender process * Apply loyal customer discounts * Automated inventory process * Adjusting product prices * Ability to reuse product attributes |

1. Once the firm received customer’s enquiries, the sales team should be able to start the consultation regarding the order. The team will assist the customer in choosing the designs of the furniture and input in the system. The system recognises the customer data and apply the discount if it is applicable.
2. After creating the quotation is created, and it will be confirmed by the customer. The system will create a sales order. The accounting team will accept a 30% down payment and produce the invoice accordingly. Odoo allows the invoice data to be printed or be downloaded as Excel files for the documentation processes by the accounting department.
3. The production team starts by checking the type of products from the sales order if the order is an existing or customised order.
4. For existing orders, the availability of components will be checked by the team responsible for the inventory. Later, the purchasing process will be automated using reordering rules in the system. For orders that require approval, the system will be set so that the purchase orders that amounted to over $500 will process only after the manager’s approval.
5. For customised orders, the procurement team will “call for tender” through purchase agreements in the purchase function. The request for quotation form can be sent to multiple vendors and the tender process will automatically end when quotation from chosen vendor is accepted.
6. After confirming that the components are ready to be manufactured, the manufacturing order will be created. WA Furniture should be able to perform each production step with specific work orders. When the work of production team is completed, the process will be transferred to the delivery team.
7. Sales Team will do due diligence over the quality the product, after it is confirmed, the final payment from the customer can be accepted by the accounting team.
8. Sales team can then proceed to deliver according to the customer’s preferred shipping method.

## Odoo’s event-driven-process (EPC) diagram for WA furniture

Using the Odoo system, WA furniture can make use of the order fulfillment, production, and payment processes workflows as shown in the EPC diagram as shown in the appendix and attached document.

## Verbal description of EPC diagram for WA Furniture is:

1) The process starts when a customer inquiry is received, and consultation is conducted by the sales team. The customers can choose the designs not only from the existing range but also from customised ones. Information such as customer data, preferred delivery as well as the loyalty discount can be added to the quotation. It is assumed that the discount will be applied to existing customers in the system.

2) Once the quotation is created and confirmed by the customer, a sales order is created, and the production process can proceed. On the other hand, the accounting function can accept 30% down payment and produce invoice accordingly. Odoo allows the invoice data to be printed or be downloaded as Excel files for the documentation processes by the accounting department.

3) The production process starts by checking the type of products from the sales order. The products can be for both existing and customised orders.

4) For existing orders, the availability of components can be checked in the Odoo inventory application. The procurement can automate the purchasing process using reordering rules in Odoo or can create a purchase order manually in the Odoo purchase application. For orders that require approval, Odoo set the system so that the purchase orders that amounted to over $500 will process only after the manager’s approval.

5) For customised orders, Odoo allows the procurement function to call for tender through purchase agreements in the Odoo purchase application. The request for quotation form can be sent to multiple vendors and the tender process will automatically end when quotation from chosen vendor is accepted.

6) After the components are ready to be manufactured, the manufacturing order is created. Odoo allows WA Furniture to perform each production step and have specific work orders. When the production process is complete, the product is then ready to be delivered.

7) Sales function can have a final validation of the product and quantity, after it is confirmed, the final payment from the customer can be accepted by accounting. Odoo allows accounting to create invoices for outstanding amounts easily.

8) Sales team can then proceed to deliver according to customer preferred shipping method.

# Addressing to the limitations

Using the Odoo system, WA furniture will be able to gain insights and more visibility over the operation processes including manufacturing process and inventory management.

The Odoo system provides reports in real time with dashboard and up-to-date data over operations. Most importantly, it can boost the production process which is a huge benefit for manufacturing firm. The Odoo system can give WA Furniture full overview over its production process, from arranging Bill of Material (BOM) and automate a full production cycle by creating manufacturing procedures, work centers. It can keep track of the entire production process while providing insight into every work process real time.

By using the Odoo system, not only the manufacturing process but also Inventory management and Supply Chain system can be managed. In order to deliver quality furniture in a timely manner, it is important to keep track of inventory. Knowing the current capabilities and stock on hand and to reorder is important to not overload the orders. And with information on inventory, the company can make decisions over inventory management and supplier management.

In term of supply chain management, as WA furniture undertakes customized orders, it is crucial to manage the suppliers that can source quality materials. The Odoo ERP system can provide the ability to manage multiple warehouses at different locations all over the country, as well as different suppliers, from a single dashboard, eliminating the old way of having to check multiple Excel spreadsheets.

ERP system can serve as centralised solution whereas the Odoo system offers interconnectivity, time management and control over data. Another intangible benefit is that the system can be upgraded to future needs such as analysing the trends in the market. It can accelerate the firm to be a pioneer in furniture manufacturing and the firm will have a competitive advantage over competitors. In addition, the workflow will be significantly improved:

* Improve sales by managing customer demand
* Eliminate paperwork via automation
* Eliminate resource wastages (time and labor)
* Speed up the production with forecasted planning
* Efficiently manage promotion and pricing

1. Support order fulfillment process:

-Inventory automation and approval: WA furniture can make use of automated fulfillment of stocked products using reordering rules in Odoo. The system also allows the purchase approvals for purchase orders of specified amount.

- Inventory storage: products/components are stored based on existing sales rather than being hold for future sales. As WA Furniture is a make-to-order business, the company constantly orders customized components. The system allows the company to inventory goods efficiently and minimize overstocking.

- Order processing: the system improves the picking and packing activities because products are attached with specific information and attributes such as SKUs, timber types, sizes, etc.

- Shipping: the company could create different forms of shipping with different carriers allowing flexibility for both Perth metro and interstate delivery choices.

2. Support production process:

- Inventory: Avoid stock deficit. Goods could be automatically reordered when reaching certain amount by setting up reordering rules. The system also supports purchase agreement for customized components.

- Manufacturing: BOM reusability for customized product. Monitoring processes of the work center.

3. Support processing of payments and invoices:

- The product price and input cost are tracked by the system and can be easily adjusted, which ensures the accuracy of quotations and invoices.

- Invoices are stored digitally reducing the risk of missing documentation. Additionally, the system allows the company to associate with several banks to perform card payment. Ultimately, it decreases delays in processing of payment.

4. Support the information flow between different departments

- Integration and standardization by using only one software for every department. For instance, after sale order is confirmed, the manufacture and inventory department could instantly receive replenishment requirement and manufacturing order.

- Several processes are automated such as restocking, replenishment requirements, manufacturing order, etc.

- Sales department could easily communicate with accounting department to generate invoices with deducted down payment.

- Inventory department could easily interact with manufacture department to confirm stock level so that the work order could be conducted.

- Inventory department could contact purchase department for specialized products and then report it back to the manufacture department.

With the help of ERP, not only business process and management processes will be improved but also the IT infrastructure will be improved. As WA furniture used to manage things manually, implementing ERP system is a good way to build a foundation on a safe and secure database system. The supply chain and manufacturing processes of WA furniture are slightly complex as the firm takes on customized orders. The production line should have the capability and efficiency to manage order combinations. The Odoo system provides real-time data without needing IT expertise within the organisation. The data preparation had to do to be fully integrated into the system. This process may be time-consuming, but it is h helpful to future IT development.

# Recommendations

* Integration of CRM data

Although Odoo allows adding loyalty discounts in the system, however, to identify loyal customers accurately, Odoo CRM module should be added.

* eCommerce Integration in the future

In the age of internet, ecommerce store can be an option WA furniture explore to. The Odoo system has the capability to handle and allow the transfer of sales and supply chain database. In addition, with the wide range of Odoo’s resources, it is possible to connect with eCommerce solution providers.

* Training program

Using real life situations such as a sandbox environment which will not affect live business data, in this case, it is easier to practice as WA furniture do not have a prior live database system.

* Communications Management

ERP project requires the organisation to communicate to inform every step of the changes and how the changes will affect WA furniture. WA furniture is completely new to the Enterprise system, so it is crucial to keep employees informed.

# Conclusion

WA Furniture is in dire need of changing the system. It is clear that the system needs to be change for a future benefit and incorporating Enterprise system will be a competitive advantage for WA Furniture. The new ERP system will promote the interconnectivity within the departments which WA Furniture failed to do. Moreover, the system supports not only the management process but also the operation process of WA furniture. Ranging from order fulfillment process to manufacturing process, the new system has full capacities to accommodate WA furniture needs. Also, it empowers the sales process as it creates a smother information flow by interacting the sales orders with the replenishment and with real-time data. The team will be able to produce an accurate quotation so WA furniture can expect to minimize the cash flow loss.

# References

Business Flow: Furniture Store | Odoo Tutorials. (n.d.). Odoo S.A. Retrieved October 21, 2022, from https://www.odoo.com/slides/slide/business-flow-furniture-store-1123

‌ Motiwalla, Luvai F., Thompson, Jeffrey, (1953), Enterprise systems for management. Pearson