**Functional Specification Request**

*Document Name*: PS-100 Functional Specification Request (Version 0.1)

*Abstract*: Provides details of the functional requirements requested by our client, ***MTO Vinyl Cutting***, and the test plans relating to the project.

*Scope*: Relates to all team members

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**Written By:** William Bell

Signed

*William Bell, QAD*

*SOW* accepted by: XXXX

Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

XXXX, *Penn State Project Manager*

*This document is intended to be used as an outline plan only and must be tailored to the specific requirements of each project and contract.*

1. **Introduction**

This functional specification request describes the QAD/Penn State understanding of the technology required by ***Team MTO Vinyl Cutting*** to create and end-to-end inventory management process as well as design of a system which will receive material, process this material, manufacture and ship this material to their customers. ***Team MTO Vinyl Cutting*** desire is to have a seamless process that is efficient and maximizes utilization of resources.

**2. Specification**

***Team MTO Vinyl Cutting*** is looking to have a unified look across all facilities for their inventory handling and management process. We would like for the Penn State team, as our sub-contracted technology architects, to create a tailored module that will:

* Process Sales Orders:
  + Receive Sales Order (SO) from customer
  + Confirm Sales Order from customer
  + Allocate material to SO
  + Generate Demand
* If material is not in stock, then:
  + Create Purchase Order (PO) for required components for customer order
  + Receive inventory into stock via Purchase Order
  + Navigate that stock to the proper warehouse location based on material specifications
* Monitor inventory levels and stocking locations
* Create Work Orders (WO) based on customer requirements/demand
* Issue material to said work orders
* Process material in the manufacturing process based on the items routing, which consists of:
  + Operation 1: Cutting vinyl to required size
  + Operation 2: Wash vinyl
  + Operation 3: Hold vinyl in quality control location to review for defects
  + Operation 4: Roll cut length of vinyl
  + Operation 5: Package for shipment
* Process Sales Orders for shipment:
  + Ship the Sales Orders (Shipping the material to the customer)

**3. Test Plans**

To ensure that process module is working as expected, the following test plan will need to be checked and approved by all parties.

* Receive a Sales Order requirement from a customer
* Create Purchase Order for new material (Order component material)
* Receive Purchase Order (Receive material into inventory)
* Confirm Sales Order lines so material can be allocated and demand can be generated
* Issue a work order based on customer requirements
* Process work order through operations
* Receive Work Order (recieve finished good into shipping location)
* Issue Sales Order to customer (Ship the material)

**4. Expectation on Deliverables**

It is the expectation of QAD and ***Team MTO Vinyl Cutting*** that Penn State Project Team will complete requested process module by December X, 2018 and complete a full end-to-end demonstration on the functionality and usability of the module.

**5. Revision History**

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| --- | --- | --- | --- | --- |
| **Revision Number** | **Date** | **Description** | **Approved by** | **File location** |
| Version 0.1 | 06/12/18 | Initial Release |  | WFB’s Google Drive |
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