IST 645: Managing Information Systems Projects
Assignment 1A: Charter/Scope

CASE PROBLEM: Implementation of Neurala AI visual inspection software at Floyd Furniture to improve quality at scale

PROJECT CHARTER

Karan Bharadwaj
IT Project Manager, Floyd Furniture
March 7, 2021

Project Name: Neurala VIA integration into Floyd's Salesforce CRM

Project Identification Number: 645_1

Project Manager: Karan Bharadwaj

Summary of project background and overview description

Floyd is an e-commerce based furniture brand with a mission to redefine the way people purchase and use furniture, by providing furniture kits with easy assembly instructions. Two months ago, Floyd received an inquiry from online market giant, Wayfair, for a possible order of about 5000 units of various types of Floyd furniture kits to be offered through the online retailer.

This being the largest single order the company has ever received, Floyd has to adapt to match the scale. Problems encountered by Floyd in the recent past, such as the inconsistency in the quantity of fasteners in the kit and the quality of the surface finishing need to be resolved in order to retain brand identity, and handle larger scale production. And what better way to solve this than replacing manual, random inspection with systematic, automated, AI powered inspection.

Neurala, from Boston, develops an easily configurable visual inspection system – Vision Inspection Automation (VIA) which uses AI techniques to monitor the quality of production, as needed. Integration of Neurala's AI system into the manufacturing quality assurance process at Floyd would solve its existing problems, and potentially open new opportunities for the firm.

Project Business Case

The integration of Neurala's Vision Inspection Automation (VIA) into Floyd's Salesforce CRM system would enable automated inspection of defects on furniture parts and ensure adequate quantity of fasteners in the kit, all while eliminating manual intervention and human errors. Reduction in human intervention and increased automation leads to productivity improvements, including higher throughput, minimal required intervention, and lower waste costs. It would help limit recruiting additional manpower to support the enhanced scale of production expected.

Neurala's AI system integration into quality assurance process at Floyd would give Floyd a shot in the arm when it comes to maintaining consistency in manufacturing, which would be expected as the brand evolves. Floyd will be in a better position to achieve higher levels of customer satisfaction, while also maintaining brand equity and reputability.

Neurala's VIA is easy to use, eliminating the need for an ML/AI engineer. The products on the manufacturing line can be examined in real time without the need for manually taking a product off the line for inspection, thereby improving throughput.

There is a scope for unexpected and/or minor defect identification that would help improve manufacturing processes and achieve optimal consistency.

A success in implementing this technology for two of Floyd's products – the Floyd shelving system and the Floyd round table would empower the company to accommodate Neurala's AI software to a host of other products and processes to achieve maximum levels of automation with respect to inspection of products.

Better customer satisfaction and optimal consistency across product manufacturing would eventually increase Floyd's market share.

Product and Process Deliverables

- Successful integration of Neurala's Vision Inspection Automation (VIA) software into Floyd Company's Salesforce CRM system, that is used to control orders and manufacturing processes at Floyd. This implementation is to be done initially for Floyd Shelving System and Floyd Round Table.
- Ensuring effective configuration and training of VIA software with the help of Brain Builder – by creating custom vision AI solutions.
- Developing a technical design document.
- Developing a functional design document.
- Necessary Knowledge Transfer (KT) to employees on the working of VIA software on a need-to-know basis.
- Ensuring hardware requirements to support the software are met, including installation of GigE Vision Standard cameras.

Project Time and Cost Constraints

- The project will commence on March 1, 2021.
- No discussion has yet been held regarding target dates or budget constraints.

Project Scope

Organizations involved: Floyd Furniture, Neurala

- Integrating Neurala's AI system into the manufacturing quality assurance process at Floyd.
- Configuration and training of the VIA software using the Brain Builder interface.
- Ensuring relevant hardware requirements are met to deploy the VIA software.
- Ensuring seamless detection of missing fasteners in the kit and anomalies in surface finishing is being accomplished by performing multiple rounds of testing.

- Ensuring the new integrated system goes live into production with minimal disruption to the manufacturing process.
- Training relevant employees on the efficient use of the AI software.
- Project plan documentation deliverables.

Out of scope: Implementation of Neurala's VIA software to assist in quality control of other furniture products apart from shelving system and round table is currently out of scope.

Project team member names

Name	Role	Reports to
Karan Bharadwaj	IT Project Manager	
Sarah Broadwater	Customer Experience Team Lead	Karan Bharadwaj
Nithin Vejendla	Systems Developer	Karan Bharadwaj
Jennifer Hui	Digital Product Designer	Karan Bharadwaj
Tiberius Fields	Product Engineer	Karan Bharadwaj

Other stakeholders

Name	Role	Reports to
Barbara Watkins	Account Executive	External (Neurala)
Daniel Glasser	VP of Client Operations	External (Neurala)
Jeffrey Fagan	Lead Product Designer	External (Neurala)

Ben Cooper	Software Engineer	External (Neurala)
Rachel Brown	Floyd's VP of Marketing	
Josh Oswald	Floyd's Business Operations Manager	

Project Milestones

1. **Requirements gathering and analysis:**

   This phase includes gathering all requirements for the AI integration including details of existing quality assurance procedures and details of what is expected from the new system. This would include few meetings with key stakeholders, including those from Neurala to get conversant with the objectives, resources, hardware requirements and other contractual obligations. This phase would also include preparation of a document that discusses the existing inspection methodology leading to the proposed VIA integrated inspection methodology.

2. **Preparation of a project charter document**

   This document would include the overview, scope, business case, resource allocation, risks involved, and defining key stakeholders.

3. **Decision on budget and signoff from finance**

   After obtaining a detailed proposal with budget, an approval from Ms. Ashley Bishay, Floyd's Financial Controller is required to move ahead with the implementation.

4. **Technical and functional design and documentation**

   Collaborating with Neurala and designing the technical and functional design of the VIA integration with Salesforce CRM used by Floyd. This also includes steps to configure and train VIA using Brain Builder interface. Furthermore, a technical design document and functional design document is to be prepared by Nithin Vejendla, Ben Cooper and Jeffrey Fagan. These documents are reviewed and signed off by key stakeholders.

5. **Integration, Testing and Knowledge Transfer**

   The list of activities to be accomplished in each sprint is decided. The integration of the VIA software into Floyd's Salesforce CRM system to be done in multiple releases

sprint wise. The cost of the project and staff assignments are recalibrated with every sprint. **Agile sprints are necessary for this project, as fine tuning the configuration and training of VIA using Brain Builder is necessary through a series of iterations to achieve optimal performance.**

Finally the integrated software is subject to multiple rounds of testing on a production line. A test document is created and signed off by key stakeholders, which signals the readiness to deploy it live in Production. An effective KT is arranged from the project team to employees working on production lines and monitoring on a need-to-know basis.

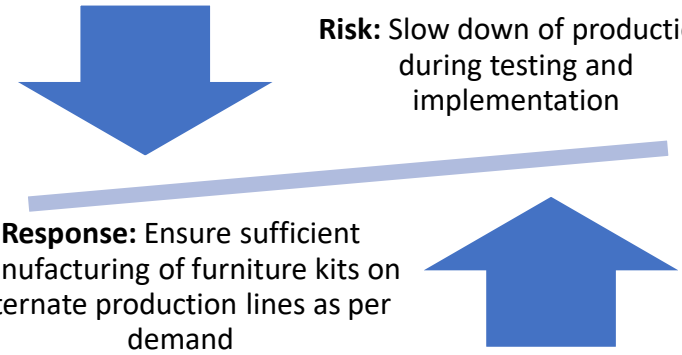
6. **Deployment, final documentation and project closure**

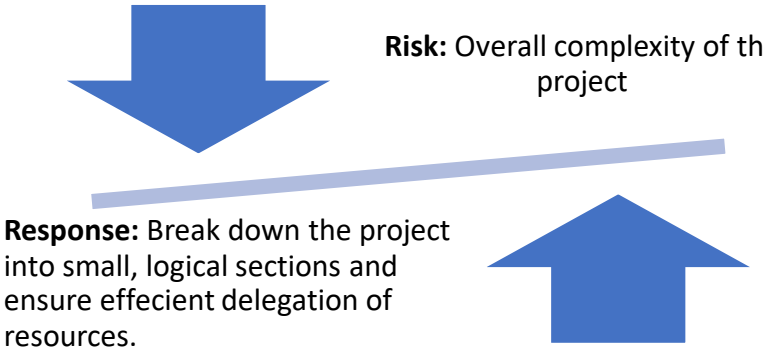
The Neurala VIA software goes live in production. Project management tool JIRA is used to create a detailed report of all processes and tasks along with any training materials. The project completion is acknowledged and signed off by project management and key stakeholders.

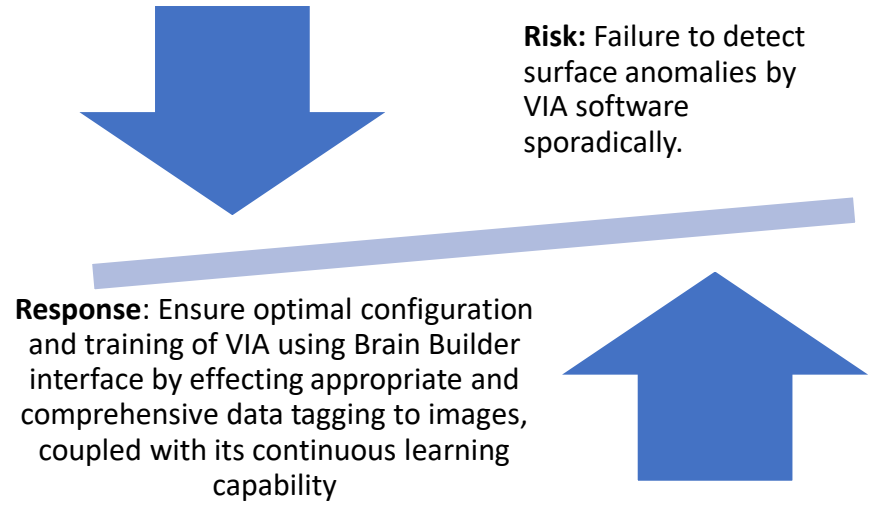
Project Management and Integration

- Build a project charter document outlining framework and get approval
- Finalise technical and functional design
- Take stock of the strategy to be adopted, risk involved and back up plans for each activity.
- Delegate tasks to different team members
- Organise meetings with stakeholders, team members on a weekly basis to seek updates, clarifications and to keep track of requirements.
- Recalibrate timelines, scope in accordance with the approved budget.
- Manage project execution by constantly observing evolving scope and finances.
- Ensure exhaustive testing of the VIA software before pushed into production.
- Ensure all deliverables are driven home and adequate documentation is built for each part of the project.
- Obtain stakeholders acceptance of the delivered project in writing, and take all contractual and legal obligations to its logical conclusion.
- Reward team members adequately for their efforts in ensuring timelines and quality of deliverables.

Risks involved

- 

- 

- 

Signature

1. Karan Bharadwaj

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2. Josh Oswald

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3. Rachel Brown

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4. Daniel Glasser

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