

TIME AND WORKFLOW MANAGEMENT

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Abstract – Nowadays, industries are growing faster as they don't have time to manage every piece of thing by a single individual. Here comes the automated web tool. It is mainly used in industries to calculate the estimated time to complete a particular task. Automation is yielding high production often time with minimum resources like Raw materials, Time, Import and Export, Working of machines, and Health conditions of workers. It includes a step-by-step process from taking the order to fulfilling the user requirements. This study abridged to reduce the burden on industries and estimates the time to deliver the product to the consumer. This tool helps us to create templates and orders, keep track of them via mail and update them accordingly. And it differentiates the current status of the product with various color coding based on a time-generated automation tool. Here all the tasks will be shown in the calendar view to identify easily by date filtration. It shows only required information to the departments and the remaining data are stored on servers. All these processes were done in the background by an automation tool and only results will be shown to the user.

Key Words: Raw materials, Time, Import and Export, Working of machines, and Health conditions of workers.

1. INTRODUCTION

Time and workflow management are essential skills in today's fast-paced world. Proper time and workflow management can help to increase productivity, achieve goals, and improve overall performance. The ability to manage time and workflow effectively is especially important in today's work environment, where technology and the constant flow of information have made it more challenging to stay focused on tasks. In this project, we will discuss the importance of time and workflow management, and provide strategies and techniques for effectively managing time and workflow.

The ability to schedule certain actions to occur at specific times, such as automatically submitting a form at a certain date and time. This allows tasks to be completed efficiently and with minimal human intervention, which can save time and improve productivity.

Time and Action refer to the process of planning and scheduling a set of tasks or actions in a specific sequence and within a specific time frame. It is a critical aspect of project management and is used to ensure that all tasks are completed on time and that the project is delivered on schedule. Time and Action planning is the process of identifying the key activities, determining the duration of each activity, and determining the dependencies between activities. This process helps to identify potential issues and risks and to develop strategies to mitigate them. Additionally, Time and Action planning also helps to optimize resource allocation and improve overall efficiency. It is a critical tool in ensuring that projects are completed on time and within budget.

We will look at the best practices, tools, and methods that can be used to manage time and workflow efficiently and effectively. Furthermore, we will discuss how to apply these strategies in different work environments and how to measure their effectiveness.

2. METHODOLOGY

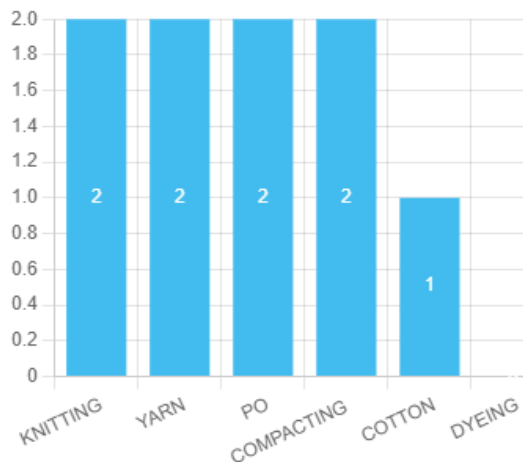
The purpose of the methodology that was used in this research study is to build the classification rules of the best model.

1. Gantt Chart Model:

This model is used to create a visual representation of a project's schedule, outlining

the tasks and their corresponding deadlines. It helps to manage the workflow by identifying dependencies between tasks and highlighting any potential delays or issues.

Top Activities



Graph-1. Stages representation in Clothing Industry

2. Kanban Model:

This model is used to manage workflow visually, using a board to track the progress of tasks. It helps to identify bottlenecks in the workflow and prioritize tasks to ensure they are completed on time.

3. Critical Path Method (CPM) Model:

This model is used to determine the longest path of activities in a project, which is known as the critical path. It helps to identify which tasks are most critical to the project's success and must be completed on time to avoid delays.

By using graphical representations the delays department-wise will be reduced.

Department wise delayed



Graph-2. Section-wise delays in Manufacturing Industry

3. PROCEDURE

Process of implementation involves of roles:

1. SUPER ADMIN
2. ADMIN
3. MERCHANT
4. TASK OWNER

SUPER ADMIN

One of the best features is Super Admin Panel. For example, if we want to give the web tool to different companies, it's very difficult to create the updated web tool by changing the content every time, so the feature is that the Super Admin can create the companies and can create the credentials for them by creating a valid LICENSE EXPIRY DATE to the particular user, so that in the case if the company is in trial period, we can prevent them from using our tool by validating this license expiry date.

ADMIN

In this case, the person or owner of the company who manages everything like creating orders, etc. there will be a LIBRARY option shown for the admin.

LIBRARY:

- **BUYERS:** The admin can add all the information about buyers where he/she will receive the order.
- **SEASONS:** Admin can add the seasons from when will the order be received.
- **PRODUCTS:** The admin can add different kinds of products that the company can manufacture.
- **DEPARTMENTS:** There will be different departments in the industry like Sewing Department, Production Department, and Fabric Development Industry.

MERCHANT

The merchant is the one who is the head of the department. And all the task owners work according to the merchant. Task owners have to report to merchants about the task they performed and if there are any issues while performing tasks.

TASK OWNER

The task Owner is the one who will be assigned the task and update them after completion. They perform tasks that are given by the Merchant.

PROCESS

Process of Time and Workflow Management includes various sections

USER CREATION PROCESS

Users can be created with multiple email-address and they provide credentials to the industry employees based on their roles like Task owners and Merchants.

ACTIVITY SECTION

This is the section where the admin can save, edit or delete the activities that are to be done under the company. In the case of the apparel industry, the processes may include

- LAB DIP SUBMISSION
- FIT SAMPLE
- GRAPHIC STRIKE OFF
- PRODUCT APPROVAL
- TESTING
- PRODUCTION KIT



Fig-1. Workflow Process in Textile Industry

TNA TEMPLATE SECTION

Here comes the vital role, the admin adds the template which consists of the following details Template Name, Template Number, Product, Buyers, Lead Days, and Delivery days.

Lead days are the days that are used to automate the tool to calculate how many days the process should be completed. After filling and saving the template, it will automatically calculate the planned days of the template. There will be different options available. After selecting the required options, it will calculate the planned days automatically, the main automation begins here.

TNA ORDER CREATING SECTION

If the admin receives the order from the buyer, he will create the order template which has been already created that matches the constraint fields. The major implementation we have done is, they can include multiple variants and multiple size break-ups of the product. After successful creation, it will link the template to the order created and manages the time flow and time automation automatically.

Now the task owner logs in with his credentials and opens the tasks, he will be showing the tasks that are related to the order and the tasks that are related to the task owner department only. Task Owner can update the task by the completion of the date/time and also with any attachments and also delayed reasons if the task is delayed.

Color coding will be shown based on the time generated by the automation tool. The red color will be shown if the task is pending. Yellow color if the task is delayed more than one day. The black color will tell if the task is upcoming and no need to worry about the task. The green color will be shown if the task is completed on the time.

Name	Lead Time	Due Date	Completed Date	Delay Reasons
Fabric PO Issue	O + 002	Apr 3, 2020	Apr 2, 2020	
BOM Generation	O + 020	Apr 21, 2020	Apr 30, 2020	Waiting for size break-up from buyer
Trims PO Issue	O + 022	Apr 23, 2020		
PP + Pre-run Yardage in-house	O + 050	May 21, 2020		

Fig-2. Color coding representation of various tasks based on their current status

TASKBOARD VIEW SECTION

Here all the tasks will be shown in the calendar view to identify easily by date filtration and many more features. All these processes were done in the background by our automation tool and only the results will be shown to the user.

There are different types of views generated by our tool:

- Calendar View
- List View
- Activity View

Fabric Sourcing Team view						
Orders						
	PO Ref. No	Buyer	Season	Order Qty	Order Date	Fabric Launch
<input type="checkbox"/>	550105	Hugo Boss	AW 21	2000	Apr 13, 2020	Apr 15, 2020
<input type="checkbox"/>	150111	Dressman	AW 20	2000	Apr 13, 2020	Apr 15, 2020
<input type="checkbox"/>	150109	Dressman	AW 20	1200	Apr 18, 2020	Apr 21, 2020
<input type="checkbox"/>	150107	Dressman	AW 20	3100	Mar 11, 2020	Mar 12, 2020
<input type="checkbox"/>	550104	Hugo Boss	SS 21	700	Apr 1, 2020	Apr 2, 2020

Fig-3. Task board view section for Task owner.

DASHBOARD

It is the main part of every user, where he/she can be visualized with the result of all the analyzed processes. Detailed analysis reports with percentages, pie charts, trend graphs, bar charts, stacked charts, and radar charts are shown.

It's very easy for the user to check the dashboard with keeping an eye on every section.

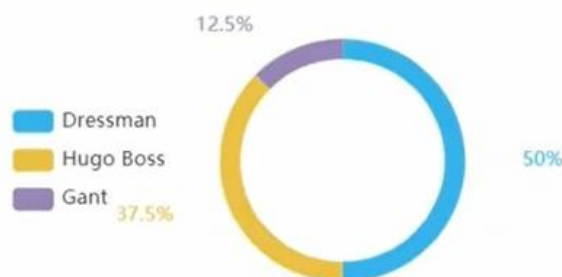
- For task owners, the dashboard analysis will be shown according to their tasks only.
- For merchants, the dashboard analysis will be shown for the complete department of which he is the head.

Merchant View						
Orders						
	PO Ref. No	Buyer	Season	Order Qty	Order Date	BOM updation
<input type="checkbox"/>	550105	Hugo Boss	AW 21	2000	Apr 13, 2020	May 6, 2020
<input type="checkbox"/>	150111	Dressman	AW 20	2000	Apr 13, 2020	May 5, 2020
<input type="checkbox"/>	150109	Dressman	AW 20	1200	Apr 18, 2020	Apr 27, 2020
<input type="checkbox"/>	150107	Dressman	AW 20	3100	Mar 11, 2020	Apr 1, 2020
<input type="checkbox"/>	550104	Hugo Boss	SS 21	700	Apr 1, 2020	Apr 21, 2020

Fig-4. Dashboard view of a Merchant to send tasks to Task owner.



Pie Chart-1. Order Status



Pie Chart-2. Delayed Top Buyers

SUPER ADMIN DASHBOARD

Super admin can view the analysis of all the companies with data filtration.

MESSAGES SECTION

Different users can be communicated with each other in the company from the message section. They can be communicated with their owner also. If the message is received then it tells the user with a notification sound and there is a feature live-to-live notification. At the same time, the opposite can reply. One user may also have multiple email addresses

DAILY MAIL NOTIFICATIONS

If the respected task is pending, daily at midnight, mail will be received to the task owner and merchant (Head of the department) that their tasks were pending requesting them to complete them.

Activity Overdue Alert				
NoReply <noreply@jaza-soft.com>				
to me				
20:36 (0 minutes ago)				
Hi,				
Below activities are overdue-				
PO Reference	Buyer	Style	Activity	Due Date
550105	Dressmann	550105-001	PP Meeting	05 May 2020
550106	Hugo Boss	SS20 P-50	PP Sample Completion	07 May 2020
550107	Dressmann	550107-005	BOM Generation	04 May 2020
550108	Dressmann	550108-002	Fabric PO Raise	06 May 2020
Thank you.				
This is an automatically generated notification.				
<input type="button" value="Reply"/> <input type="button" value="Forward"/>				

Fig-5. Daily e-mail updates are sent to the merchant.

FEATURES OF TNA ARE:

1. Security Web Flow.
2. Completely Automated.
3. Mail Notification.
4. Mail Automation.
5. Pending tasks e-mailing.
6. Real-time messaging service.
7. Dynamic retrieval from Backend.

8. Filtration of Data.
9. Searching of Data.
10. Export data in the form of Word and Excel.
11. Detailed analysis.
12. License Expiration and Validity.
13. Cookie and JWT Authentication.
14. AtoB and BtoA Encryption.
15. Charts and Graphs.
16. Handlebars to send the dynamic pending tasks as an e-mail to the task toner and merchant.
17. Role-based dashboard analysis.
18. Role-based task board analysis.

RESTRICTIONS

- Task owners can only update the tasks and view them.
- Merchants can edit and update the tasks.
- Super admin has full control over the Tool.

4. CONCLUSION

Time and workflow management are essential for staying organized and productive. Effective time management techniques include setting clear goals, prioritizing tasks, and using tools such as calendars and to-do lists to stay on track. Proper workflow management involves identifying and streamlining processes, delegating tasks, and using project management tools to keep everything on schedule. By implementing these strategies, individuals and organizations can increase efficiency, meet deadlines, and achieve their goals.

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