ADVENTIST UNIVERSITY OF CENTRAL AFRICA

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RE ENGINEERING PROCESS OF REGISTRATION IN ADVENTIST UNIVERSITY OF CENTRAL AFRICA(AUCA)

DMAIC:

Stands for

- Define
- Measure
- Analyse
- Control

Application: DMAIC is used when a process is already in place but needs improvement. It is typically applied to optimize processes, reduce defects, errors, and variations, and enhance efficiency and effectiveness. DMAIC is well-suited for incremental improvements within an existing framework.

DMADV:

Stands for

- Define
- Measure
- Analyse
- Verify

Application: DMADV is employed when a new process, product, or service is being developed. It focuses on creating something entirely new or significantly redesigning existing processes to meet specific requirements or address identified problems. DMADV is more about innovation and creating breakthrough solutions.

1. Define

Problem: The current registration process at AUCA is time-consuming and inefficient, leading to dissatisfaction among students and administrative staff.

Goal: Speed up the registration process while maintaining accuracy and improving satisfaction among students and staff.

2. Measure

CTQs (Critical-to-Quality measures):

Average time for a student to complete the registration process (ATCR)

Accuracy of registration information

Student satisfaction index (SSI)

3. Analyse

Current State Analysis:

Identify each step in the registration process.

Measure the time taken for each step.

Identify bottlenecks, waiting times, and non-value-added activities.

Analyse the causes of delays, errors, and dissatisfaction.

Identified Issues:

Manual check-in process leading to waiting time.

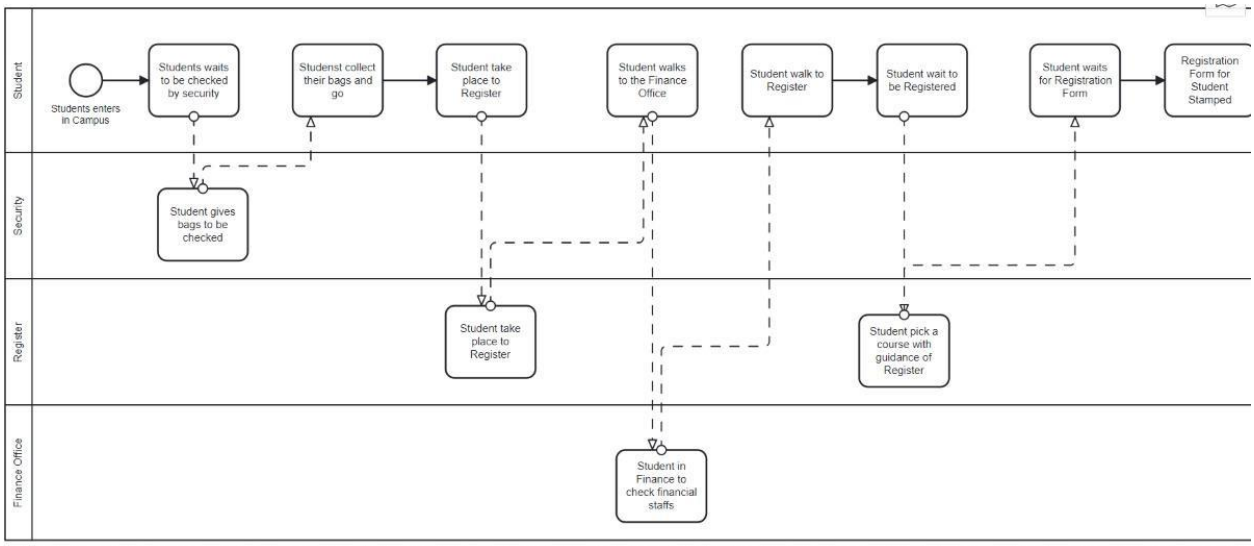
Paper-based registration forms causing delays and errors.

Manual assignment of advisors or reviewers.

Lack of real-time feedback for students.

Limited digital submission options for documents.

The current process of AUCA Registration



Data from Measure Phase

N^0	STEP	Time takes	type
1	Student enters in campus	0.0	Event
2	Student wait to be checked by security	2	Waiting
3	Student gives bags to be checked by security	2	Waiting
4	Student walk into metal detector	1	Activity
5	Student collect their carry bag	1	Activity

6	Student take sit and wait	30	Waiting
7	Student take place to register	1	Activity
8	Student walk to finance office for check up	1	Activity
9	Student wait to enter to be checked if no debt	40	Waiting
10	Student walk to register office	1	Activity
11	Student wait to be registered	30	Activity
11	Student wait for sit with register to pick course	30	Activity
12	Student pick course with guidance of register	15	Activity
13	Student wait for registration paper to be printed	1	Waiting
14	Student pick registration paper and wait for stamp	3	Waiting
15	Student end registration	1	Event
	Total	159	

4. Improve

Proposed Improvements:

Automated Check-in: Implement an online check-in system where students can pre-register online before arriving on campus to reduce waiting time.

Digital Registration Forms: Provide online registration forms accessible through the university's portal, allowing students to fill out forms digitally, reducing errors and processing time.

Automated Assignment: Utilize a system that automatically assigns advisors or reviewers to students based on predefined criteria, eliminating manual processes and reducing delays.

Real-time Feedback: Implement a system to provide instant feedback to students upon submission of registration documents, confirming receipt and notifying of any missing information.

Digital Document Submission: Allow students to submit required documents digitally through the university portal, reducing the need for physical paperwork and streamlining the process.

5.Control

Monitoring and Evaluation:

Regularly monitor the registration process to ensure adherence to new procedures.

Collect feedback from students and staff to identify any further areas for improvement.

Continuously analyse registration data to measure the effectiveness of the new process and make adjustments as needed.

By implementing these improvements, AUCA can streamline its registration process, reduce waiting times, minimize errors, and enhance satisfaction among students and staff.

Scenario>phase

Achievement have to be: Design and implement our improved process.

N	Activity	Type of waste
3	Security search bags	Waiting
6	Student take sit and wait to be registered	Waiting
8	Student walk to finance office for checking debt	Motion
10	Student walk to registration office with proof of payment	Motion
11	Student wait to be registered	Waiting
13	Student wait to be stamped on their registration paper	Waiting

Improvement Step 1

N	Activity	Type of waste
3	Security search bags	Waiting

Improvement for this step

- Make bag checks faster and smoother.

- Improvement for this step
- Train for staff to search bag quickly and safely

Improvement Step 2

N	Activity	Type of waste
6	Student take sit and wait to be registered	Waiting

Improvement for this step

- Schedule registration based on semester
- Make a website where student can register can register and upload document if needed.

Improvement Step 3

N	Activity	Type of waste
8	Student walk to finance office for checking debt	Motion

Improvement for this step

- Let student see and pay debts on the website.
- No need to visit finance office.

Improvement Step 4

N	Activity	Type of waste
10	Student walk to registration office with proof of payment	Motion

Improvement for this step

- Upload payment proof online if is needed.
- No need to go to the finance office

Improvement Step 5

N	Activity	Type of waste
11	Student wait to be registered	Waiting

Improvement for this step

- Allow student to pick the courses online them selves.
- Make registration Quicker.

Improvement Step 6

N	Activity	Type of waste
13	Student wait to be stamped on their registration paper	Waiting

Improvement for this step

- To reduce time spent when student waiting for stamp
- To Introduce Electrical Stamp

Improvement Step 7

N	Activity	Type of waste
14	Student pick registration paper and wait for stamp	Waiting

Improvement for this step

- Quickly Stamping

Improvement Step 8

N	Activity	Type of waste
15	Student end registration	Motion

Improvement for this step

- Student get stamped after they pay.
- All student to stamped themselves.

Data from the Measure Phase

N^0	STEP	Time takes	type
1	Student enters in campus	0.0	Event
2	Student wait to be checked by security	1	Waiting

3	Student gives bags to be checked by security	1	Waiting
4	Student walk into metal detector	1	Activity
5	Student collect their carry bag	1	Activity
6	Student take sit and wait	7	Waiting
7	Student take place to register	3	Activity
8	Student walk to finance office for check up	0	Activity
9	Student wait to enter to be checked if no debt	0	Waiting
10	Student walk to register office	0	Activity
11	Student wait to be registered	0	Activity
11	Student wait for sit with register to pick course	0	Activity
12	Student pick course with guidance of register	15	Activity
13	Student wait for registration paper to be printed	1	Waiting
14	Student pick registration paper and wait for stamp	1	Waiting
15	Student end registration	1	Event
	Total	29	

1. Define

Define the Project Scope and Objectives:

Clearly define the goals and objectives of redesigning the registration process for AUCA.

Identify the stakeholders involved, including students, staff, administrators, and IT personnel.

Establish the criteria for success, including key performance indicators (KPIs) such as registration time, accuracy of information, and user satisfaction.

Certainly! The DMADV (Define, Measure, Analyze, Design, Verify) methodology is typically used for designing new processes, products, or services rather than improving existing ones. Here's how you can apply the DMADV methodology to design a new registration process for AUCA:

2. Measure

Measure the Voice of the Customer (VOC):

Gather input from students, staff, and other stakeholders to understand their needs, preferences, and pain points related to the registration process.

Use surveys, interviews, focus groups, and other methods to collect qualitative and quantitative data on customer requirements and expectations.

3. Analyze

Analyze Customer Requirements:

Analyze the data collected during the measurement phase to identify common themes, trends, and patterns in customer requirements.

Prioritize customer requirements based on their importance to stakeholders and their impact on the success of the registration process.

4. Design

Design the New Registration Process:

Develop a detailed plan for the new registration process based on the analysis of customer requirements.

Utilize tools such as process flow diagrams, swimlane diagrams, and BPMN (Business Process Model and Notation) diagrams to visualize the new process.

Design the user interface and experience for any new technology or systems that will be implemented as part of the registration process.

5. Verify

Verify the Design:

Conduct feasibility studies and risk assessments to ensure that the proposed design is practical and achievable within the constraints of AUCA's resources and capabilities.

Prototype the new registration process and conduct usability testing with representative users to identify any usability issues or concerns.

Obtain feedback from stakeholders on the proposed design and make any necessary revisions or refinements based on their input.

1. Implementation:

Technology Integration: Implement the necessary technology solutions to support the redesigned process. This may involve developing or configuring software systems, setting up online portals or platforms, and integrating different tools and applications.

Training: Train staff members and students on the new registration process, including how to use any new technology or systems effectively.

Change Management: Implement change management strategies to ensure a smooth transition to the new process. Communicate the changes effectively, address concerns, and involve stakeholders in the implementation process.

2. Testing:

Pilot Testing: Conduct a pilot test of the new registration process with a small group of students to identify any potential issues or challenges before full implementation.

Feedback Collection: Gather feedback from students, staff, and other stakeholders involved in the pilot test to evaluate the effectiveness of the new process and identify areas for improvement.

Iterative Improvement: Use the feedback collected during the pilot test to make any necessary adjustments or refinements to the process before rolling it out on a larger scale.

3. Rollout:

Full Implementation: Once any issues identified during testing have been addressed, rollout the new registration process across the entire university.

Support: Provide ongoing support to students and staff as they adapt to the new process. Address any questions or concerns that arise and ensure that resources are available to help users navigate the new system effectively.

Monitoring: Monitor the implementation of the new process closely to identify any issues or challenges that may arise and take corrective action as needed.

4. Evaluation and Optimization:

Performance Measurement: Continuously monitor key performance indicators (KPIs) related to the registration process, such as registration times, accuracy of information, and student satisfaction.

Feedback Collection: Solicit feedback from students, staff, and other stakeholders on an ongoing basis to identify areas for improvement and address any issues that arise.

Process Optimization: Use the data collected and feedback received to identify opportunities for further optimization and refinement of the registration process. Implement changes as needed to improve efficiency, effectiveness, and user satisfaction.

Based on the information provided, here's a summary conclusion on the current registration process at Adventist University of Central Africa (AUCA):

The current registration process at AUCA appears to be manual, paper-based, and prone to inefficiencies and delays. Students are required to physically check-in, fill out paper registration forms, and submit documents manually. There are several steps in the process that involve waiting times, manual assignments, and redundant activities, leading to a prolonged registration timeline. The lack of digital options for registration and document submission contributes to the overall inefficiency of the process.

Furthermore, the analysis of the current registration process highlights various non-value-added activities, such as waiting times, motion, and redundant steps, which contribute to the overall inefficiency and dissatisfaction among students and staff.

In conclusion, the current registration process at AUCA is outdated and inefficient, resulting in delays, errors, and dissatisfaction among students and staff. There is a clear need for redesigning the registration process to incorporate digital solutions, streamline workflows, and improve overall efficiency and user satisfaction.