# Business Analysis Requirements Template

Requirements Template

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# Overview

The Business Analysis Requirements Template is intended to provide business analysts working on RPA initiatives with the structure and guidance to capture needs, scope, and detail focused requirements, specifications, and models. The Requirements Specification will serve as a repository for all Business Analysis artifacts produced.

# Using the Requirements Template

The Requirements Template provides readers with a comprehensive understanding of the needs, scope and specifications leading to a solution. When using the Requirements Template:

- Uniquely identify each artifact documented
- Complete the Requirements Trace Matrix to ensure comprehensive requirements coverage

## Requirements Template Author(s)/Reviewer(s)

The Business Analyst(s), or alternative role(s) authoring or reviewing the Requirements Template. Reviewers are the individuals who evaluate the content for quality, completeness and accuracy. List the names, roles performed on the project, when they were engaged and the date they sent in their final acknowledgement of completed review

| Name | Role (Author/Reviewer) | Start/Review Date |
|---|---|---|
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## Requirements Template Distribution List

Those who will receive a copy of the completed, signed off Requirements Template. Provide the full name, role and contact information.

| Name | Role | E-Mail |
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## Requirements Template Approver(s) List

Those Business and/or Technology leads who will receive a copy of the completed Requirements Template, and who must accept what has been documented in the Requirements Template.

| Name | Title | Date | Signature |
|---|---|---|---|
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## Requirements Template Reference Artifacts(s)

This information in this section provides context for the project, based on the input information used to support the vision and needs of this initiative.

| File/Artifact Name | Source/Location |
|---|---|
| | |
| | |
| | |

# 1 Introduction

This section of the Requirements Template provides readers of this document with the Business Requirements of the Initiative. This will include; Goals, Objectives, Problem/Opportunities, and Current State Process Maps. For each table, add rows as required.

## 1.1 Goal(s)

Qualifiable statements defining what the organization is seeking to establish and/or maintain.

| Unique ID | Goal Statement |
|---|---|
| GO001 | Improve LMS communication systems |
| GO002 | Improve student engagement |
| GO003 | Improve attendance tracking with the LMS |

## 1.2 Objective(s)

Statements of the quantitative measures of success to be realized.

| Unique ID | Objective Statement | Traced to: |
|---|---|---|
| OB001 | To increase the view rate of course announcements by 30% at the end of the school year, compared to pre-implementation levels. | GO001 |
| OB002 | Ensure instructors are able to deliver announcements to all related students, decrease the last minute or missing announcement rate by 20% at the end of the school year. | GO002 |
| OB003 | Attendance data is synchronized with the LMS daily, with 95% overall accuracy. | GO003 |
| OB004 | To increase instructor usage rate of engagement metrics by 30% by the end of the school year, as measured by the frequency of instructors accessing the engagement metrics under the 'Analytics' section in the LMS before and after implementation. | GO002 |

## 1.3 Problem/Opportunity Statement(s)

The Problem/Opportunity Statements (POs) provide factual, quantifiable, and concise descriptions of a problem or opportunity. The statement(s) do not recommend or provide a solution. Identify who the impacted actor/organization is, what the issue is, and where and when the issue is occurring.

| Unique ID | Problem/Opportunity Statement | Traced to: |
|---|---|---|
| PO001 | The current system for communicating announcements is fragmented. Announcements are inconsistently shared through the LMS and email, leading to confusion among students and reducing their ability to stay informed. | OB001 |
| PO002 | The current system does not allow instructors to schedule the announcements any time before it is published. Sometimes | OB002 |

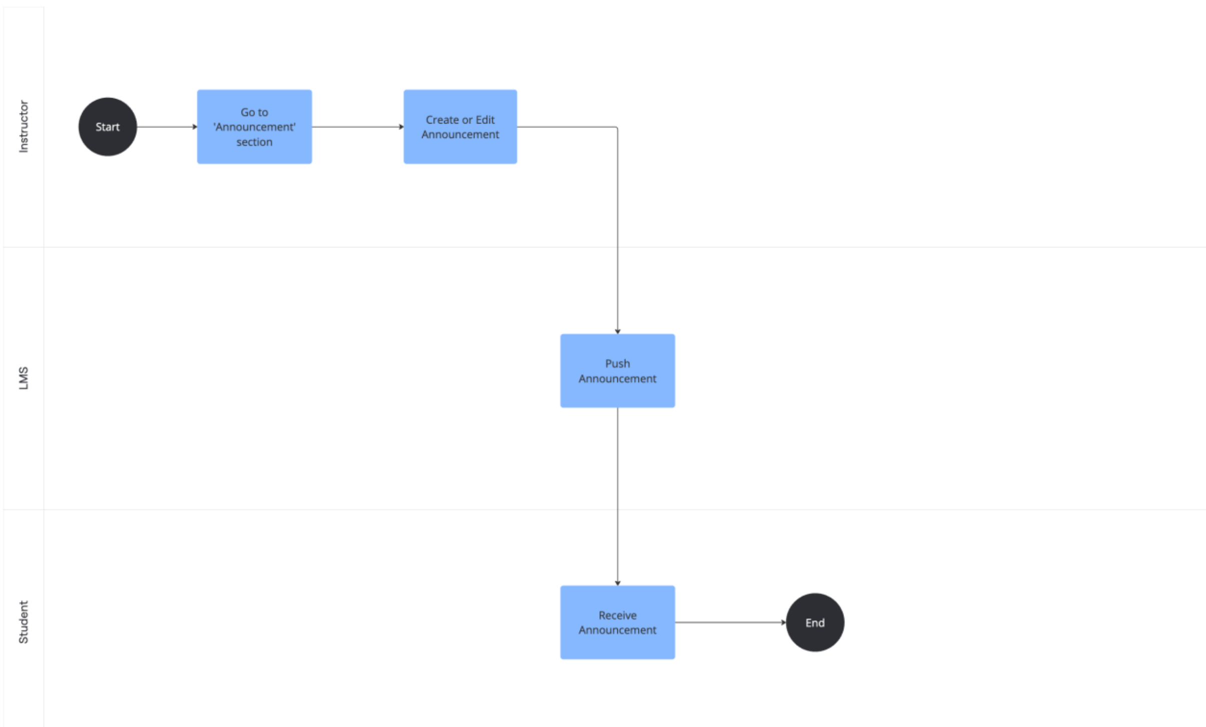
| | | |
|---|---|---|
| | instructors are just too busy and doing last minutes or even forgot to send out the announcements at the right time. | |
| PO003 | The current attendance tracking system relies on a third-party app, Atklass, which does not regularly synchronize data back to the LMS. This lack of integration leads to inconsistent attendance records, causing confusion among students and reducing instructors' ability to identify and intervene in a timely manner when students show signs of disengagement. | OB003 |
| PO004 | The current system for tracking student participation captures only basic metrics, such as overall grades, missed due dates, and days since last login. It lacks detailed engagement insights, for example, time spent on course materials, and the patterns of access (e.g., the days and times when students most frequently engage with materials), which limits instructors' ability to fully understand and support students' learning needs, as well as improve course offerings. | OB004 |

## 1.4 As-Is/Current State Process Map(s)

Capture the current state processes following the process taxonomy defined (L2/L3). For each process mapped, provide a summary description. Replicate these tables as needed for each map.

### 1.4.1 As-Is/Current State Process Map(s) – Level 2

| | | | |
|---|---|---|---|
| Process Name: | LMS Announcements creation and posting | | |
| Unique ID: | LMS-001 | Level: | L2 |

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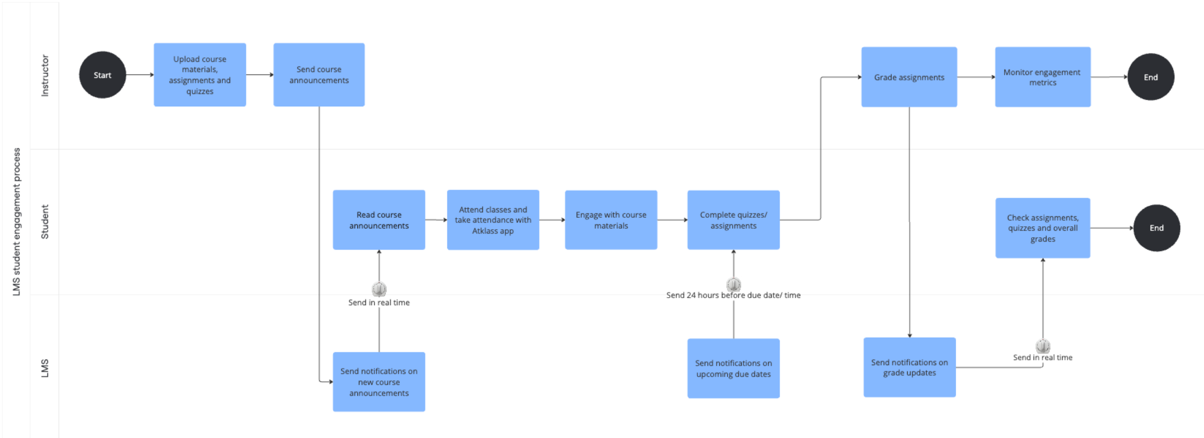
| | |
|---|---|
| Description: | The L2 map represents how instructors create and push announcements. |
| Process Metrics: | 1. LMS is available 24 hours every day<br>2. The process when instructor creating and posting announcements<br>3. It is typically busiest during the daytime and evening hours when there is no class or during office hours |
| DOWNTIME Analysis: | High system usage, system maintenance or connectivity issues of LMS may cause potential delays and inaccuracies in the delivery and unsuccessful announcement delivery. |

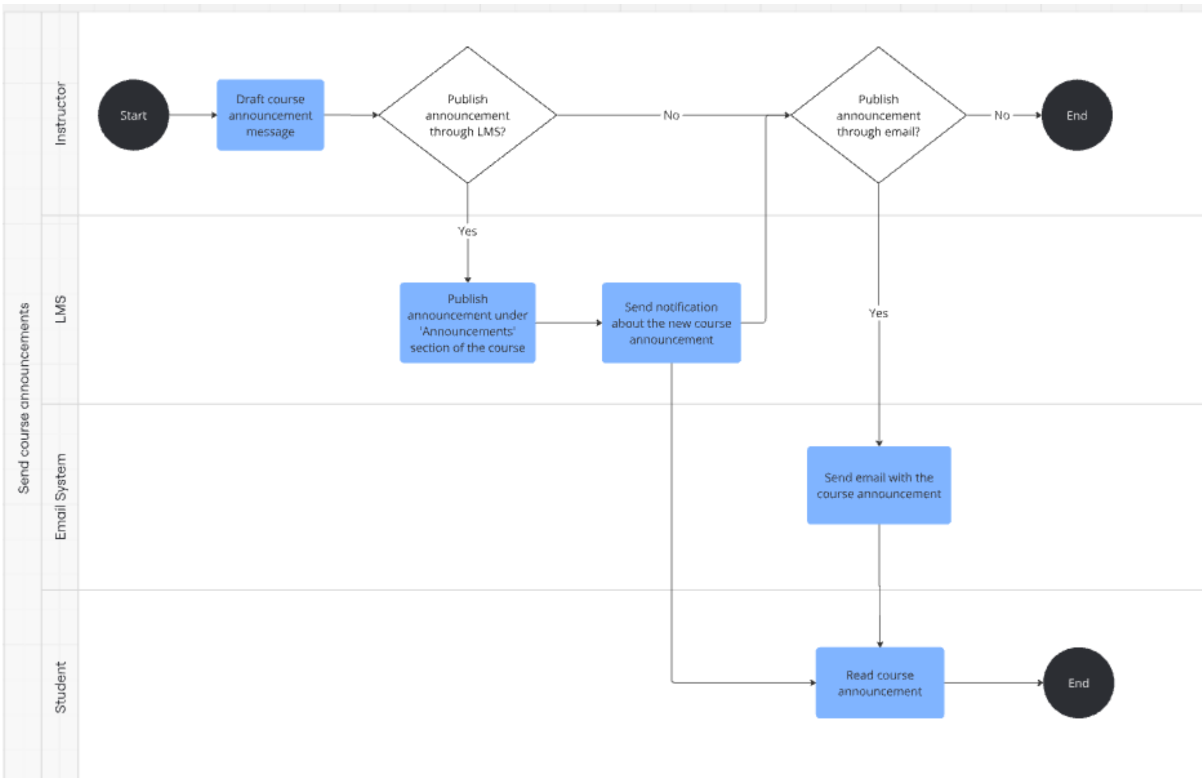
| | |
|---|---|
| Process Name: | LMS Student Engagement Process |

<table>
<tr><td>Unique ID:</td><td>LMS-002</td><td>Level:</td><td>L2</td></tr>
<tr><td colspan="4">

MIRO board: https://miro.com/app/board/uXjVL3S68FY=/?share_link_id=513795205256</td></tr>
<tr><td>Description:</td><td colspan="3">The L2 map represents the student engagement process within scope for this initiative.</td></tr>
<tr><td>Process Metrics:</td><td colspan="3">1. LMS is available 24 hours every day.<br>2. The process occurs daily, with activities varying based on the course schedule set by instructors.<br>3. It is typically busiest during the daytime and evening hours when classes are in session.</td></tr>
<tr><td>DOWNTIME Analysis:</td><td colspan="3">High system usage, system maintenance or connectivity issues of LMS may cause potential delays and inaccuracies in the engagement process steps, such as delayed assignment submission and unsuccessful announcement delivery.</td></tr>
</table>

### 1.4.2 As-Is/Current State Process Map(s) – Level 3

| Process Name: | LMS Announcements creation and posting | | |
|---|---|---|---|
| Unique ID: | LMS-001.S1 | Level: | L3 |

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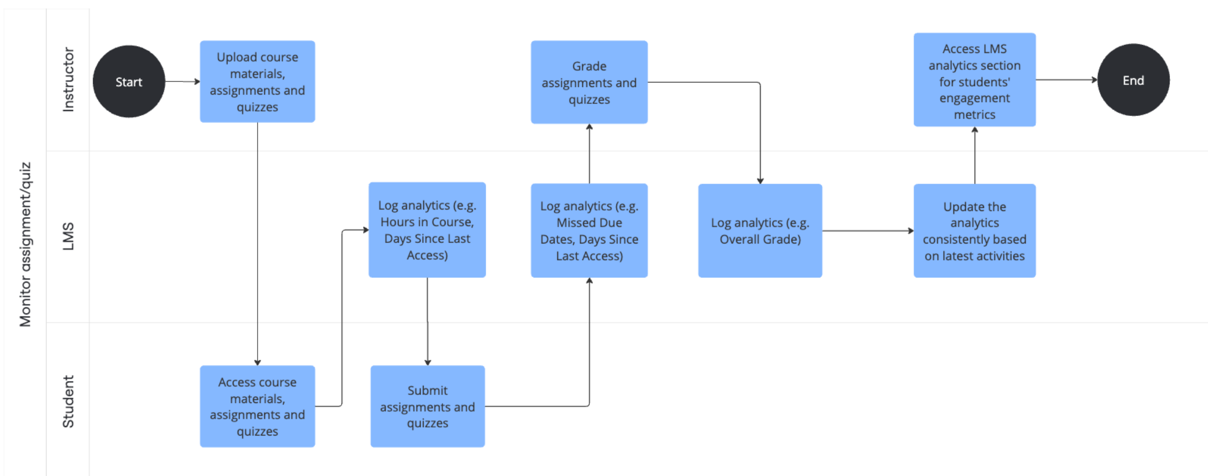
| Description: | This process map outlines the process by which instructors send course announcements to students. |
|---|---|
| Process Step Details: | 1. Start Point<br>2. Instructor drafts the course announcement message<br>3. Decision Point: Whether to publish the course announcement through LMS?<br>i. Yes Path: LMS publish the announcement under 'Announcements' section of the course, and send notification about the new course announcement to students<br>ii. No Path: Leads to second decision point: Whether to publish the course announcement through email?<br>4. Decision Point: Whether to publish the course announcement through email?<br>i. Yes Path: Email system sends an email with the course announcement<br>ii. No Path: End Point<br>5. Students read the course announcement<br>6. End Point |

| | |
|---|---|
| DOWNTIME Analysis: | High system usage, system maintenance or connectivity issues with the LMS or email system may prevent the posting or delivery of announcements. |

| | | | |
|---|---|---|---|
| Process Name: | Monitor Engagement Metrics | | |
| Unique ID: | LMS-002.S1 | Level: | L3 |

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|---|---|
| Description: | This process map outlines the current LMS engagement metrics tracking process. |
| Process Step Details: | 1. Start Point<br>2. Instructor uploads course materials, assignments and quizzes to LMS<br>3. Students access the course materials, assignments and quizzes<br>4. LMS logs metrics to analytics section such as ‘Hours in Course’ and ‘Days Since Last Access’<br>5. Students submit assignments and quizzes<br>6. LMS logs metrics to analytics section such as ‘Missed Due Dates’, ‘Days Since Last Access’’<br>7. Instructor grades assignments and quizzes<br>8. LMS logs metrics to analytics section such as ‘Overall Grade’<br>9. LMS updates the analytics section consistently based on latest activities<br>10. Instructors access the analytics section on LMS for students’ engagement metrics<br>11. End Point |
| DOWNTIME Analysis: | High system usage, system maintenance or connectivity issues may cause delays in tracking, score calculations, and data integration, leading to inaccurate or delayed updates in the engagement metrics. |

# 2 Requirements Scope

Scope/Stakeholder Requirements address the business need(s). These statements and models form the boundary of the 'Requirements Scope', which is a subset of the overall project scope. This section will include: High-Level Requirements Statements, Out-of-Scope, and scope models (e.g. Business Context Diagram). For each table, add rows as required.

## 2.5 High-Level Requirement(s)/In Scope

Statements of the needs of a particular stakeholder or class of stakeholders that enable the Business Requirements. The initiative must meet these needs. For each Requirement Statement, ensure to define the Priority (High, Medium, Low) as well as trace to P/O statements.

| Unique ID: | High-Level Requirement Statement(s) | Priority | Traced to: |
|---|---|---|---|
| HLR001 | Instructors must be able to use the system's pre-scheduling feature for announcements, allowing them to set preferred dates and times for publishing. | High | PO002 |
| HLR002 | Instructors must receive a delivery report summarizing the status of announcements after they are published. | High | PO002 |
| HLR003 | Students must receive an email with the announcement sent directly to their George Brown College email addresses automatically as soon as it is published by the instructor. | High | PO001 |

## 2.6 Out-of-Scope

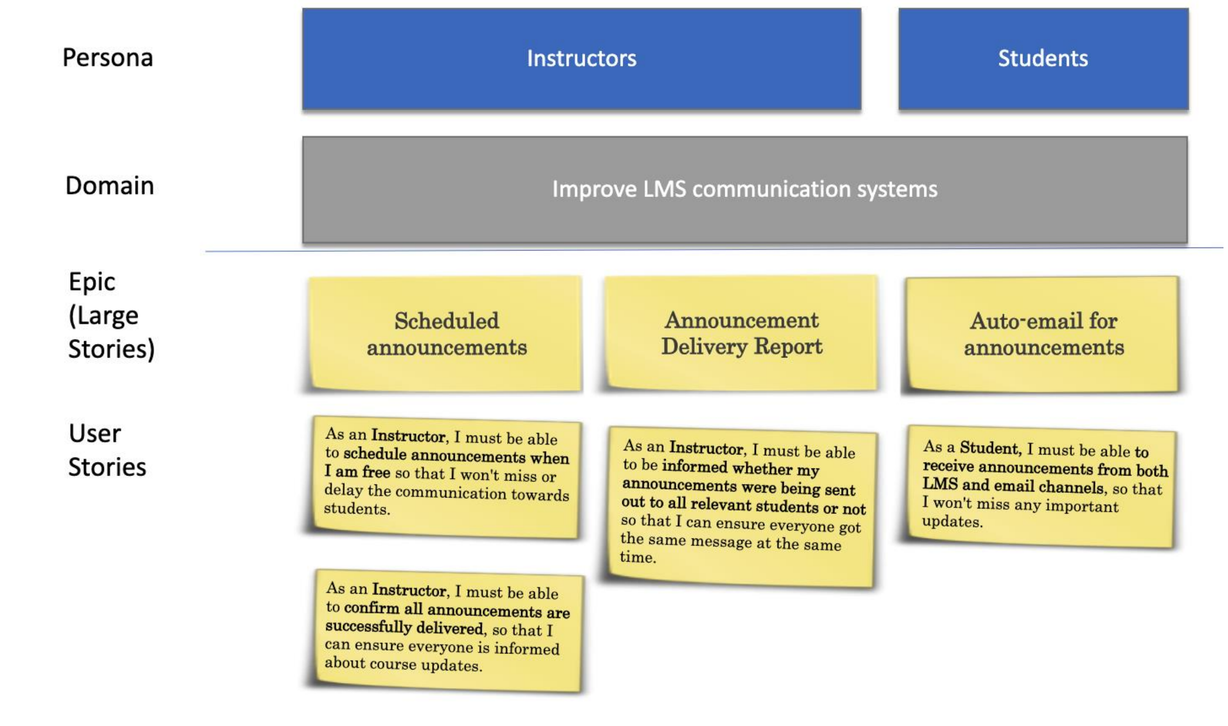
This Section is meant to document results of the discussions and decisions that were made to exclude requirement(s) from the scope of the initiative. Be sure to define the rationale for exclusion.

| Unique ID: | Out-of-Scope Statement(s) | Rationale |
|---|---|---|
| OS001 | Additional engagement metrics about the time students spend on course materials. | Advanced data analysis, such as tracking student access patterns or time spent on materials, involves intricate technical challenges and dependencies beyond the project's current capabilities. |
| OS002 | Additional engagement metrics about students’ access patterns to course materials, categorized by specific hours of the day and days of the week, with insights available at both the individual student and class levels. | Advanced data analysis, such as tracking student access patterns or time spent on materials, involves intricate technical challenges and dependencies beyond the project's current capabilities. |
| OS003 | Transfer of the students’ attendance data from Atklass to LMS on regular basis. | The primary goal of this project is to ensure announcements are reliably scheduled and delivered to students via LMS and email channels for effective communication, making ancillary features less critical at this stage. |

## 2.7 Scope Model(s)

Technique(s) that provides a view of the business needs, external of the solution. Describe each of the entities and information flows depicted in the diagram to avoid ambiguity.

| Scope Model: | User Story Map | | |
|---|---|---|---|
| Unique ID: | USM001 | Traced to: | HLR001, HLR002, HLR003 |




| | |
|---|---|
| Entity Descriptions: | • Instructor – Course tutors who are responsible for guiding students' learning experiences and fostering effective communication to ensure student success.<br>• Student – Students registered in the course who actively engage with course materials, participate in course activities and stay updated with course updates to achieve academic success. |
| Information Descriptions: | • Course Announcements – Messages from instructors providing important course-related information and updates.<br>• Delivery Report – Report to update instructors that announcements have been delivered to all relevant students |

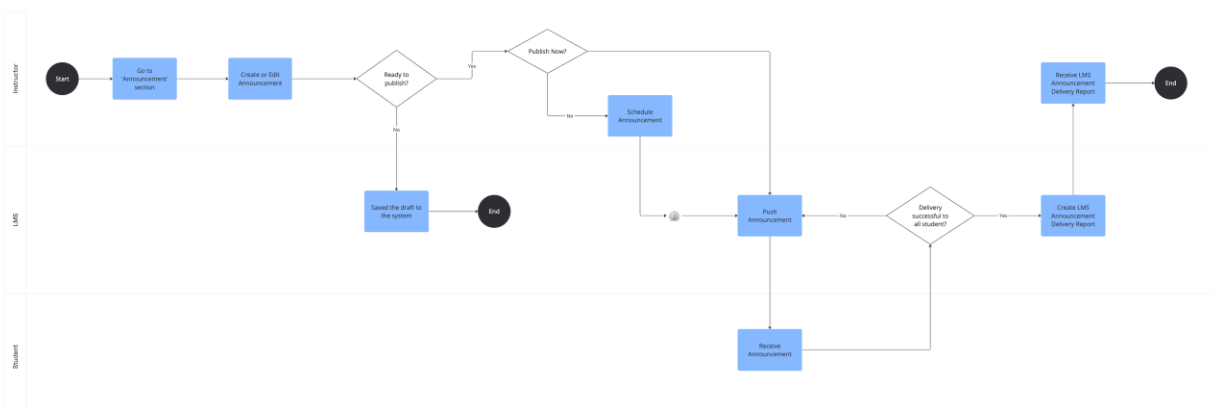
# 3 Solution Requirements

This section describes the capabilities and qualities of a solution that meets the stakeholder requirements. They provide appropriate level of detail to allow for development and implementation of the solution. This section will include: Future State/To-be Process Maps (L2/L3), Process Specifications (Use Cases), Business Rules & Calculations, Data Requirements, UI/Screen Specifications & Notifications, Reporting Requirements, and Non-Functional Requirements.

## 3.8 To-be/Future State Process Map(s)

Document the future state processes following the process taxonomy defined (L2/L3). For each process mapped, provide a summary description. For L2 Future State Maps, be sure to summarize each key activity/function defined. Replicate these tables as needed for each map.

### 3.8.1 To-be/Future State Process Map(s) – Level 2

<table>
<tr><td>Process Name:</td><td colspan="3">Announcement Creation and Delivery</td></tr>
<tr><td>Unique ID:</td><td>FSPM-001</td><td>Level:</td><td>L2</td></tr>
<tr><td colspan="4">

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<tr><td>Description:</td><td colspan="3">Instructor Actions:<br>
• The instructor initiates the process by navigating to the "Announcement" section in the LMS.<br>
• They decide whether to create a new announcement from scratch or use an existing draft.<br>
• After drafting or editing the announcement, the instructor selects the recipients (e.g., specific students or groups).<br>
• The announcement is reviewed to ensure accuracy and completeness.<br>
• If the announcement is ready for immediate release, the instructor can publish it directly. Alternatively, if it needs to be sent later, a scheduled date and time are set.<br>
LMS Actions:</td></tr>
</table>

<table>
<tr>
<td colspan="2"></td>
<td colspan="2">

- If a scheduled announcement is created, the LMS records the desired date and time and waits until the specified moment.
- At the appropriate time, the system attempts to push the announcement to all recipients.
- The LMS verifies whether the announcement has been successfully delivered to all students. If the delivery fails, the system retries up to five times.
- A delivery report is generated by the LMS, summarizing the success or failure of the announcement.

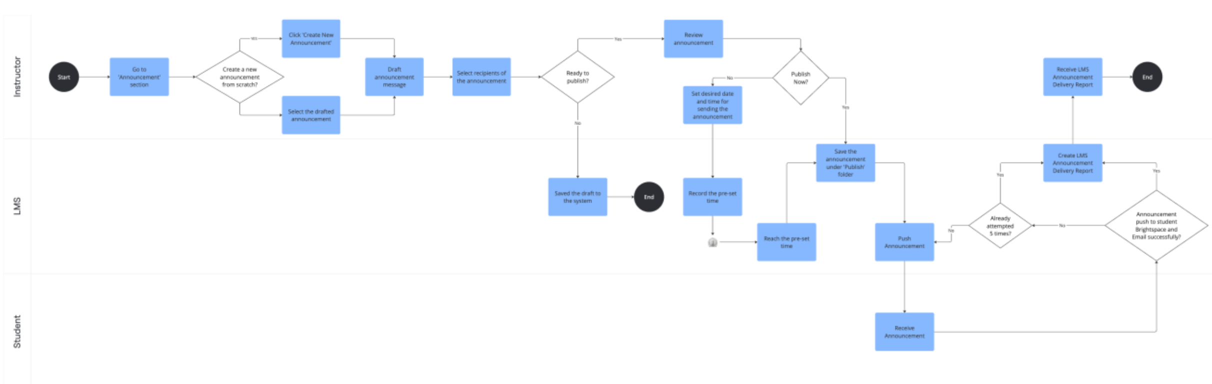
Student Actions:

- Upon successful delivery, students receive the announcement via the LMS platform or mobile notifications, ensuring they are informed promptly.

</td>
</tr>
<tr>
<td colspan="2"></td>
<td>Traced to:</td>
<td>All HLRs</td>
</tr>
</table>

### 3.8.2 To-be/Future State Process Map(s) – Level 3

<table>
<tr>
<td>Process Name:</td>
<td colspan="3">Announcement Creation and Delivery</td>
</tr>
<tr>
<td>Unique ID:</td>
<td>FSPM-001.S1</td>
<td>Level:</td>
<td>L3</td>
</tr>
<tr>
<td colspan="4">

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</td>
</tr>
<tr>
<td>Description:</td>
<td colspan="3">

Instructor Actions:

- The instructor navigates to the "Announcement" section within the LMS.
- Decide whether to:
    - Create a new announcement from scratch, or
    - Select and edit an existing drafted announcement.
- Write or update the announcement's content.
- Specify the recipients (e.g., all students or specific groups).
- Ensure the announcement is complete, accurate, and ready for publication.
- If the announcement is ready, decide whether to:

</td>
</tr>
</table>

| | |
|---|---|
| | ○ Publish it immediately, or<br>○ Set a desired date and time for scheduled publication.<br>LMS Actions:<br>• If a scheduled announcement is created, the LMS records the desired publish time and waits until the designated moment.<br>• When the time arrives, the LMS pushes the announcement to all specified recipients.<br>• The LMS checks whether the announcement has been successfully delivered to all students. If delivery fails:<br>○ The system retries up to five times.<br>○ After five unsuccessful attempts, a report is generated for the instructor.<br>• The LMS creates a delivery report summarizing whether the announcement was successfully sent and notifies the instructor.<br>Student Actions:<br>• Students view the announcement via their LMS dashboard, mobile app, or other notification channels. |
| Traced to: | FSPM-001 |

## 3.9 Use Case(s)

The Use Case Specification provides elaborated details of a L3 Business Process Map. Within the context of a Process Map, it demonstrates the expected interaction with the system(s). In the context of an RPA initiative, the Robot will be identified as an actor, so that interaction, scenario flows, logic, and information used by the Robot are clearly defined.

### 3.9.1 Actor Summary

Define the actors (people, systems) in scope of the use case specifications provided. A Use Case Diagram can be used to visually represent actors.

| Unique ID: | Actor Description | Role (Primary/ Secondary) | Traced to L3: |
|---|---|---|---|
| ACT001 | Instructor - Creates and manages course announcements | Primary | FSPM-001.S1 |
| ACT002 | LMS System - Delivers announcements, save announcement draft, record announcement timestamp, and generates delivery reports. | Secondary | FSPM-001.S1 |
| ACT003 | Student: Receives and views announcements | Secondary | FSPM-001.S1 |

### 3.9.2 Use Case Specification(s)

The Use Case Specification provides details on steps, data, rules, interface, and reporting for each Use Case identified in the Use Case Diagram.

| Unique ID: | Use Case Specification Name & Description | UC Specification File (attachment) | Traced to L3: |
|---|---|---|---|
| UC001 | Publishing Announcement: Instructor creates and publishes announcements via LMS. | Use Case Specification – Publishing Announcement.docx | FSPM-001.S1 |

## 3.10 Report(s)

Reporting requirements document the business knowledge to be presented in the process of enabling a goal.

| Unique ID: | Report Specification Name & Description | Report Specification File (attachment) | Traced to: |
|---|---|---|---|
| REP001 | LMS Announcement Delivery Report: Provide the announcement delivery status to students. | BA Reqs Reporting Template - LMS Announcement Delivery Report.docx | FSPM-001.S1 |

# 4 Non-Functional Requirements

Non-Functional Requirements describe a system operation, or quality. These qualities may include describing a systems performance, capacity, security, availability, redundancy and recovery, and continuity. Listed below are a primary subset of key NFRs for RPA consideration. Complete this only as needed, as NFR conditions may have already been included as part of the HLR statements.

| Unique ID: | NFR Category | NFR Requirement | Traced to: |
|---|---|---|---|
| NFR001 | Hours of Usage | LMS must be operational 24/7 to support instructors in scheduling course announcements anytime. | HLR001, HLR002, HLR003 |
| NFR002 | Days of Usage | The system must be available all 365 days of the year with planned maintenance during off-peak hours. | HLR001, HLR002, HLR003 |
| NFR003 | Usage Time Exceptions | Planned maintenance windows must be communicated 48 hours in advance, lasting no more than 2 hours. | HLR001, HLR002, HLR003 |

| | | | |
|---|---|---|---|
| NFR004 | Response Time | LMS pages must load within 3 seconds under normal conditions and announcement delivery reports must be generated in under 5 seconds. | HLR001, HLR002, HLR003 |
| NFR005 | # of concurrent events | The LMS must handle at least 500 concurrent announcements and 10,000 concurrent logins without performance degradation. | HLR001, HLR002, HLR003 |
| NFR006 | # of system users | Support up to 100,000 users (students and instructors) with scalable infrastructure to handle future growth. | HLR001, HLR002, HLR003 |
| NFR007 | # of peak events | The LMS must handle peak loads during the first two weeks of a semester with no more than 5% degradation in performance. | HLR001, HLR002, HLR003 |

# 5 Requirements Trace Matrix

Use this table to summarize the traceability between the requirements artifacts captured throughout this document.

| Goals | Objectives | Problems/ Opportunities | HLRs | BCD | FSPM L2 | FSPM L3 | Actors | Use Case(s) | Reports | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| GO001 | OB001 | PO001 | HLR003 | USM001 | FSPM-001 | FSPM-001.S1 | Instructor, student and LMS | UC001 | | |
| GO002 | OB002<br>OB004 | PO002<br>PO004 | HLR001<br>HLR002 | USM001 | FSPM-001 | FSPM-001.S1 | Instructor, student and LMS | UC001 | REP001 | OS001<br>OS002 |
| GO003 | OB003 | PO003 | | | | | | | | OS003 |