



# NextGen Systems

## Analysing Report

### EduFlow Staff Scheduling App

**Date:** 10 February 2025

**Version:** 1.0

**Prepared By:** NextGen Project Analysis Team

Name	Role	Employee ID
Samuel Mok Wei Sheng	Lead Analyst	2403295
Tay Yu Xuan Jolene	Business Analyst	2402963
Tee Zhi Ming	Systems Analyst	2400690
Thian Yu Xuan Raynard	Business Analyst	2400617
Timothy Jeremy Tay	Risk & Quality Lead	2400850



72 Digital Hub Avenue, #09-14  
Singapore 018956  
Tel: +65 6123 8899  
[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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**Ref:** NGS-AR-2026-001

**To:** Bobby Lim, Project Manager, NextGen Systems

**From:** NextGen Systems Project Analysis Team

**Date:** 10 February 2025

**Subject:** Analysis Report - EduFlow Staff Scheduling Application

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Dear Mr Lim,

The Solutions Analysis Team is pleased to submit the Analysis Report prepared in response to the approved Project Specification for the EduFlow Staff Scheduling Application, commissioned by EduCore Learning Institute Pte Ltd.

This document presents our analysis and interpretation of the customer's operational context, challenges, and objectives, as outlined in the Project Specification. It reflects our current understanding of EduCore Learning Institute's scheduling and attendance management practices, key operational constraints, and the problem areas driving the proposed solution.

The Analysis Report serves as an internal evaluative artefact to support project planning, stakeholder alignment, and further discussions with the client. It does not define system design, implementation details, or technical specifications; these will be addressed in subsequent project phases, subject to your guidance and client approval.

Prepared in accordance with NextGen Systems' internal governance standards, this report is submitted for your review and feedback prior to onward submission to the client.

Yours sincerely,

**Samuel Mok Wei Sheng**

Lead Analyst

NextGen Systems Pte Ltd



72 Digital Hub Avenue, #09-14  
Singapore 018956  
Tel: +65 6123 8899  
[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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## Declaration on the Use of Artificial Intelligence

NextGen Systems Pte Ltd maintains an internal policy governing the responsible and ethical use of Artificial Intelligence (AI) tools in the preparation of project artefacts and professional documentation.

For this Analysis Report, AI-based tools were utilised strictly as supporting aids to enhance productivity, clarity of expression, and structural organisation. Such tools were used for activities including language refinement, formatting assistance, and ideation support. All analytical content, interpretations, professional judgments, and conclusions presented in this document were conceptualised, reviewed, and validated by the vendor's analysis team, and were not generated autonomously by AI.

We used the following prompts:

- What to write in a cover letter addressing a project specification
- Help to correct the report grammatical errors and sentence structure

## Declaration on Plagiarism and Originality

NextGen Systems Pte Ltd upholds a strict policy on originality and intellectual integrity in all professional deliverables.

This Analysis Report is an original work produced by NextGen Systems analysis team for the stated purpose of responding to the EduFlow Staff Scheduling Mobile App Project Specification. All ideas, analyses, interpretations, and written content presented herein are the result of the team's own work, except where explicitly referenced or acknowledged.

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This declaration is made on behalf of the analysis team by the Lead Analyst, who has reviewed and approved the final contents of this document.

A handwritten signature in black ink, appearing to read 'Samuel Mok Wei Sheng'.

10 Feb 2026

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**Samuel Mok Wei Sheng, Lead Analyst**

**Date**



72 Digital Hub Avenue, #09-14  
Singapore 018956  
Tel: +65 6123 8899  
[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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72 Digital Hub Avenue, #09-14  
Singapore 018956  
Tel: +65 6123 8899  
[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

## 1 Executive Summary

This report presents NextGen Systems Pte Ltd's vendor-side analysis of the Project Specification (PS) for the EduFlow Staff Scheduling Mobile Application commissioned by EduCore Learning Institute Pte Ltd. EduCore seeks to implement a mobile-based solution to support academic scheduling and attendance management within a regulated institutional environment.

Following the project award, the analysis team conducted structured requirements engineering activities using the Breakdown, Clarify, Interpret, and Categorize (BCIC) framework to evaluate the clarity, consistency, and feasibility of the defined Business Operations and Technical Requirements. The analysis identified structural incongruities, mixed concerns, and areas requiring clarification, while confirming that the PS establishes appropriate scope boundaries and regulatory considerations at its intended level.

At the time of writing, all BCIC activities have been completed. The revised and standardised requirements are prepared for inclusion in the Software Requirements Specification (SRS) in the upcoming specification phase and are currently pending review and approval.

## 2 Breakdown

The purpose of the Breakdown activity is to examine the PS to distinguish cogent requirements from those that exhibit incongruity, such as unclear obligation, mixed concerns, or structural complexity. Using the IRC and supporting analytical judgement, this activity identifies requirements that require clarification, decomposition, or further interpretation before progressing to later requirements engineering stages.

### 2.1 Incongruous Requirements Checklist (IRC)

The IRC is a tool used during the breakdown activity to flag business operational and technical requirements that exhibit common forms of incongruity, such as unclear obligations, structural complexity, or contextual issues. It supports the separation of cogent requirements from those requiring further clarification or further interpretation, and is intended as a practical aid rather than an exhaustive quality assessment.

Description	Requirement ID(s) Flagged
<b>Imperative</b>	
Obligation wording does not match the stated priority	REQ-TCR-L0-03
Mandatory behavior is not expressed using clear imperative verbs	REQ-TCR-L0-03



Optional or desirable behavior is phrased as mandatory	-
Responsibility for the obligation is unclear or implied	REQ-BIZ-L1-05
<b>Continuance</b>	
Multiple obligations or behaviours are combined in a single statement	REQ-BIZ-L0-01 REQ-TCR-L1-04
Meaning depends on deferred references (e.g. "as follows")	-
Embedded lists or chained clauses obscure the main obligation	REQ-TCR-L1-04
<b>Contextual</b>	
Requirement meaning is ambiguous or open to multiple interpretations	REQ-BIZ-L1-05 REQ-BIZ-L0-01
Requirement is not directly testable or verifiable	REQ-TCR-L0-03
Requirement is inconsistent with other requirements or mixes concerns	REQ-BIZ-L0-01 REQ-BIZ-L0-02
Requirement appears incomplete or mixes assumptions with requirements	REQ-BIZ-L0-01 REQ-BIZ-L0-02
Requirement scope or priority is unclear due to grouping or placement	REQ-TCR-L0-07

## 2.2 Omission Checks Against Industry Practice

In addition to the IRC-based analysis, the PS was reviewed against common practices observed in comparable mobile scheduling and attendance management systems such as Blackboard and IN4SIT. This cross-check was performed to identify potential omissions, where expected concerns are not addressed in the PS.

Based on the review, no omissions were identified that contradict common industry expectations for a system at the PS level. The PS sufficiently establishes system scope, primary user interactions, and regulatory considerations. Certain aspects commonly detailed in later specification stages, such as fine-grained role differentiation and auditability of attendance changes, are not explicitly defined in the PS and have been identified as points requiring clarification prior to formal specification.



### 2.3 Breakdown Findings

The application of the IRC identified several recurring patterns of incongruity across both business operational (biz ops) and technical requirements. The following observations summarise the key findings:

- **Unclear interaction scope**

Some attendance requirements do not clearly define permitted actions for different user roles, creating ambiguity in system behaviour and responsibility.

- **Unclear platform wording**

Certain platform-related requirements blur the distinction between supported environment and guaranteed system behaviour.

- **Inconsistent imperative wording**

Some technical requirements use descriptive language instead of clear obligation terms, reducing clarity and testability.

- **Support items grouped with core technical requirements**

Documentation and support artefacts are grouped with core technical requirements, potentially obscuring technical scope.

- **Compound requirement structure**

Some requirements combine multiple obligations in a single statement, reducing clarity and increasing structural complexity.

## 3 Clarify

The purpose of the clarify activity is to determine the intended meaning and business priority of selected incongruent requirements identified during the breakdown activity. Clarification is carried out through direct engagement with relevant customer stakeholders to ensure shared understanding before progressing to later specification activities.

### 3.1 Areas Requiring Clarification

While some incongruities identified during the breakdown activity could be resolved through analytical judgement, a subset required direct clarification with the customer to confirm intent and business priority.

Specifically, clarification was required to determine:

- Whether attendance-related requirements imply view-only access or include authority to modify or manage records (REQ-BIZ-L1-05)



72 Digital Hub Avenue, #09-14  
Singapore 018956  
Tel: +65 6123 8899  
[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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- Whether platform-related wording reflects operational compatibility or an expectation of consistent system behavior across Android and iOS devices (REQ-BIZ-L0-01)
- Whether documentation-related requirements represent technical system requirements or supporting project deliverables (REQ-TCR-L0-07)
- How to strengthen imperative wording in technical requirements to ensure clear obligation statements (REQ-TCR-L0-03)

### **3.2 Engagement with Customer Stakeholders**

Engagements were supported by informal visual models such as a Paper Napkin Diagram (in the repository) to align understanding without introducing design-level detail.

### **3.3 Outcomes of Clarification**

Several requirements were successfully clarified. Remaining ambiguities have been recorded as open issues for resolution in the Interpret stage.

## **4 Interpret**

The Interpret activity transformed incongruent requirements identified during Breakdown and Clarify into congruent, specification-ready forms. Models used during clarification were refined into professional versions, and industry-standard requirement codification was applied to align with SRS conventions.

The customer's data dictionary is revised to support clarified requirements. The organisational chart and Gantt chart are treated as reference artefacts and remain unchanged unless agreed otherwise.

## **5 Categorize**

All clarified and interpreted requirements were systematically categorised following IEEE 830 guidelines and organised into the project repository using NextGen Systems' stock template. Requirements were grouped into six functional domains across four [IEEE 830 sections](#), yielding 16 structured requirements prepared for inclusion in the SRS in the upcoming specification stage.



72 Digital Hub Avenue, #09-14  
Singapore 018956  
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[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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Each requirement received a unique SRS codification (SRS01–SRS16) maintaining full traceability to the original PS clause and IRC record. The complete requirements list is maintained under version control at the repository cited in Section 8 - Repository.

The table below presents the full mapping:

L0 Requirement(s)	L1 Requirement(s)	SRS Code	SRS Category
BIZ-L0-01, 02, 03 TCR-L0-03, 04	BIZ-L1-01, 02, 03, 04, 05 TCR-L1-02	SRS01 - SRS06	3. System Features
TCR-L0-01, 02, 06	BIZ-L1-03, 04	SRS07 - SRS09	4. External Interface Requirements
TCR-L0-05	TCR-L1-01, 05	SRS10 - SRS11	5.3 Security Requirements
TCR-L0-01, 02	TCR-L1-03, 04	SRS12 - SRS13	5.1 Performance Requirements
TCR-L0-03, 07, 08	TCR-L1-06	SRS14 - SRS16	5.4 Software Quality Attributes



72 Digital Hub Avenue, #09-14  
Singapore 018956  
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[contact@nextgensystems.com](mailto:contact@nextgensystems.com)  
[www.nextgensystems.com](http://www.nextgensystems.com)

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## 6 Account Manager

The Account Manager played a crucial enabling role during the vendor-side analysis phase, acting as a neutral intermediary between EduCore Learning Institute and NextGen Systems. This role ensured that communication remained constructive, expectations were managed, and ambiguities arising from the abstract Project Specification were addressed before they could evolve into contractual or implementation risks.

While the breakdown and clarifying activities were conducted by the analysis team, the Account Manager ensured that stakeholder engagement remained focused, productive, and consistent with the agreed project scope. They coordinated structured clarification discussions, presenting ambiguities neutrally and referencing specific requirement IDs, and guided discussions toward confirming requirement intent rather than debating technical solutions or implementation preferences.

Rather than performing analytical work directly, the Account Manager supported and coordinated the process by:

- Presenting identified incongruities in clear, stakeholder-friendly language
- Guiding discussions to focus on requirement intent
- Ensuring analytical findings were not misinterpreted as attempts to expand or challenge the agreed scope

Beyond supporting the clarifying activity, the Account Manager played a broader role in expectation management and early risk containment. They:

- Reminded stakeholders of the scope agreed in the PS
- Monitored discussions to catch any drift beyond agreed boundaries
- Ensured unresolved ambiguities were documented as open issues rather than assumed resolved
- Kept business expectations aligned with the analysis team's interpretations
- Prevented premature commitments that could cause issues in later contractual or implementation stages

Where clarification could not be fully resolved, the Account Manager ensured such matters were formally recorded for controlled progression into the interpret and categorize activities, thereby supporting regulated revision and reducing downstream uncertainty.

These engagement activities strengthened shared understanding between parties and ensured that the analysing phase concluded with deliberate recognition of remaining ambiguities rather than reliance on unverified assumptions.



## 7 Risk Analysis

Resulting Score: likelihood x severity = risk value

- Score 1-8 : Extreme Risk (red)
- Score 9-20 : High risk (orange)
- Score 21-40: Moderate risk (yellow)
- Score 41-64: Low risk (green)

		Severity							
L i k e  l i h o o d	L/S	Catastr ophic (1)	Severe (2)	Very major (3)	Major (4)	Moderat e (5)	Minor (6)	Very mino r (7)	Negligibl e (8)
	Certain (1)	1x1=1	1x2=2	1x3=3	1x4=4	1x5=5	1x6=6	1x7=7	1x8=8
	Almost certain (2)	2x1=2	2x2=4	2x3=6	2x4=8	2x5=10	2x6=12	2x7=14	2x8=16
	Very likely (3)	3x1=3	3x2=6	3x3=9	3x4=12	3x5=15	3x6=18	3x7=21	3x8=24
	Likely (4)	4x1=4	4x2=8	4x3=12	4x4=16	4x5=20	4x6=24	4x7=28	4x8=32
	Possibl y (5)	5x1=5	5x2=10	5x3=15	5x4=20	5x5=25	5x6=30	5x7=35	5x8=40
	Unlikel y (6)	6x1=6	6x2=12	6x3=18	6x4=24	6x5=30	6x6=36	6x7=42	6x8=48
	Very unlikely (7)	7x1=7	7x2=14	7x3=21	7x4=28	7x5=35	7x6=42	7x7=49	7x8=56
	Rare (8)	8x1=8	8x2=16	8x3=24	8x4=32	8x5=40	8x6=48	8x7=56	8x8=64

Risk	L	S	Risk Value
Requirement instability due to frequent change requests	3	2	6
Cross-platform functional inconsistency	4	3	12
QR attendance misuse or duplication	3	3	9



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contact@nextgensystems.com  
[www.nextgensystems.com](http://www.nextgensystems.com)

Customer lacks technical understanding	4	3	12
Loss of key customer elicitors / tacit knowledge	6	3	18
Session or attendance data loss during network disruption	4	4	16
Institution-provided server performance constraints	5	4	20
Tender team underestimated analysing effort	4	4	16

## 8 Project Repository

A project repository was set up to accommodate all identified requirements and supporting models using the stock template. The repository was also opened for team-wide review to allow sanity checking of the overall requirements set, ensuring readiness before progressing to the specification phase.

Repository URL: <https://github.com/Sode-No-shirayuki/EduFlow-Staff-Scheduling-App>

## 9 Sign-off

This Analysis Report is submitted by NextGen Systems Pte Ltd for review and consideration by EduCore Learning Institute Pte Ltd. The document reflects the vendor's analysis and interpretation of the Project Specification at the current stage of the project lifecycle.

Name	Role	Signature	Date
<b>Prepared By:</b>			
Samuel Mok Wei Sheng	Lead Analyst		10 Feb 2026
Tay Yu Xuan Jolene	Business Analyst		10 Feb 2026
Tee Zhi Ming	Systems Analyst		10 Feb 2026
Thian Yu Xuan Raynard	Business Analyst		10 Feb 2026
Timothy Jeremy Tay	Risk & Quality Lead		10 Feb 2026
<b>Reviewed By:</b>			
Andy Jones	Project Manager		
<b>Approved By:</b>			
Bobby Lim	Chief Technology Officer		