



**CSE 6224 Software Requirements Engineering**  
**Trimester 2510**  
**Kano Model**

**Project title:**

**Student Club Management System with Budget and Venue Integration**

**Tutorial Section: TT5L**

**Group Name: TT5L\_G1**

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## 1 Introduction

Task 4 transforms the elicitation blueprint designed in Task 3 into verifiable outcomes. The team executed four complementary techniques—(T1) observation of benchmark systems, (T2) an online Kano survey, (T3) a structured brainstorming session, and (T4) document analysis of institutional policies—to surface, validate, and classify requirements for the Student Club Management System with Budget & Venue Integration (SCMS).

Each technique produced artefacts (videos, transcripts, CSV exports, annotated PDFs) that were committed to the GitHub repository and indexed in Section 3. The resulting evidence base enabled every discovered requirement to be mapped to one of the three Kano categories: Dissatisfiers (must-have compliance or baseline capabilities), Satisfiers (performance features that drive user satisfaction), and Delighters (innovative “wow” factors). The remainder of this report details the execution records, the raw artefacts, and the consolidated Kano matrix that will seed the forthcoming Software Requirements Specification (SRS).

## 2 Summary of Elicitation Techniques Executed

ID	Technique	Week	Stakeholder(s) / Artefact	Evidence File(s)	Primary Kano Focus
T1	Observation of Existing Systems	W5	Project Team	<a href="#">Elicitation/Raw/Observation</a>	Dissatisfier, Satisfier
T1	Observation of Existing Systems	W5	Project Team	<a href="#">Elicitation/Raw/Observation/ObservationTranscripts</a>	Dissatisfier, Satisfier
T2	Online Survey	W5	Club Members & Prospecti	<a href="#">/Elicitation/Raw/Survey/SurveyResponses.csv</a>	Satisfier

	(Google Form)		ve Members	<a href="#">/Elicitation/Raw/Survey/SurveySummary.xlsx</a>	
T3	Brainstorming (Team Meeting)	W6	Project Team	<a href="#">/Elicitation/Raw/Brainstorm/brainstorm session.mp4</a> <a href="#">/Elicitation/Raw/Brainstorm/Brainstorm_log.docx</a>	Dissatisfier, Satisfier, Delighter
T4	Document Analysis	W6	Institutional Policies	<a href="#">/Elicitation/Docs/ManualPelaksanaanV5_highlighted.pdf</a> <a href="#">/Elicitation/Docs/Panduan_Tuntutan_Notes.pdf</a>	Dissatisfier

### 3 Evidence Index

Artefact	File(s) Name	Relative Path in Repo	Notes
Observation Recordings	CampusCheckInObservation.mp4 CornellCampusGroupsObservation.mp4 EventbriteSystemObservation.mp4 PutraPressenceObservation.mp4 ST Putra Facility Booking SystemObservation.mp4	<a href="#">Elicitation/Raw/Observation</a>	Screen-share walk-through
Observation Logs	CampusCheckInObs_log.md CornwellCampusObs_log.md EventbriteSystemObs_log.md PutraPressenceObs_log.md ST Putra Facility Booking System Obs_log .md	<a href="#">Elicitation/Raw/Observation/ObservationTranscripts</a>	Time-stamped insights

Survey CSV	SurveyResponses.csv	<a href="#">/Elicitation/Raw/Survey/</a>	50 responses, anonymised
Survey Charts	SurveySummary.xlsx	<a href="#">/Elicitation/Raw/Survey/</a>	Stacked-bar & Kano matrix
Brainstorm Recording	brainstorm session.mp4	<a href="#">/Elicitation/Raw/Brainstorm/</a>	Screen Recording
Brainstorm Log	Brainstorm_log.md	<a href="#">/Elicitation/Raw/Brainstorm/</a>	Time-stamped insights
Annotated Manual Pelaksanaan	ManualPelaksanaanV5_highlighted.pdf	<a href="#">/Elicitation/Docs/</a>	Key clauses highlighted
Annotated Panduan Tuntutan	PanduanTuntutan_highlighted.pdf	<a href="#">/Elicitation/Docs/</a>	Key clauses highlighted

## 4 Detailed Execution Records

### 4.1 Observation of Existing Systems (T1)

Field	Information
<b>Objective</b>	Discover baseline workflows & pain-points in benchmark systems.
<b>Observed Systems</b>	ST Putra Facility Booking, PUTRA Presence, Cornell CampusGroups , Campus Labs Check-In, Eventbrite
<b>Evidence Files</b>	<a href="#">ST Putra Facility Booking SystemObservation.mp4</a> , <a href="#">PutraPresenceObservation.mp4</a> , <a href="#">CornellCampusGroupsObservation.mp4</a> , <a href="#">CampusCheckInObservation.mp4</a> , <a href="#">EventbriteSystemObservation.mp4</a> , <a href="https://github.com/taizhixuan/TT5L_G1_Requirements_Project/tree/main/ObservationTranscripts">https://github.com/taizhixuan/TT5L_G1_Requirements_Project/tree/main/ObservationTranscripts</a>

#### 4.1.1 Observed System Summaries

ID	Source	Access Method
X1	ST Putra Facility Booking System	<a href="#">ST Putra</a>
X2	PUTRA Presence	<a href="#">PUTRAPresence</a>
X3	Cornell CampusGroups	<a href="#">CornellUniversity</a>
X4	Campus Labs Event Check-In	<a href="#">Google Play</a>
X5	Eventbrite	<a href="#">Eventbrite</a>

**X1 – ST Putra Facility Booking System**

The university's official venue reservation portal exposes a comprehensive catalogue of lecture halls, seminar rooms, and outdoor spaces. Users can filter by venue type or purpose of the event; The system performs Realtime clash detection before confirming a booking. For SCMS, this establishes the gold standard for Req 12 – Searchable venue database: millisecond level search, filter combinability, and a hard stop on double bookings. Integrating (or at least mirroring) this dataset ensures clubs avoid manual venue conflicts and comply with campus scheduling rules.

**X2 – PUTRA Presence**

PUTRA Presence is a campus wide attendance platform that authenticates students via UPMID, then logs event entry through QRcode scan or Bluetooth beacon. In live tests the scan to record latency averaged < 2 seconds, and offline caching handled poor connectivity gracefully. These observations validate the feasibility of Req 14 – QR / Bluetooth attendance capture and define a performance target: sub2second feedback plus offline queuing.

**X3 – Cornell CampusGroups**

CampusGroups offers an integrated experience where club officers submit budget requests, manage rosters, and publish events with RSVP—all under one dashboard. Approval workflows include commenting threads and status badges (Pending → Approved → Funded). Its polished UI illustrates how Req 11 (Realtime budget updates), Req 13 (Online RSVP), and Req 16 (Online membership application) can coexist seamlessly, suggesting navigation patterns and permission models for SCMS.

**X4 – Campus Labs Event CheckIn**

This mobile app emphasises robustness: it works fully offline, stores hundreds of checkins locally, and bulk exports CSV files for analytics. Multidevice scanning lets several volunteers process attendees in parallel. These capabilities inspire enhancements for Req 14 (offline fallback) and Req 15 – Bulk CSV export of attendance, ensuring SCMS functions even in poor signal venues and supports post event analysis.

**X5 – Eventbrite**

Eventbrite dominates public event management with user-friendly RSVP flows, automatic e-tickets containing QR codes, and reminder emails dispatched 24 hours before go time.

Observing its funnel—from ‘Register’ click to inbox confirmation—clarifies UX expectations for Req 13 and sets the cadence for Req 18 – Automated reminders. Copying its single-click RSVP and calendar invite attachments could significantly boost club event turnout.

**4.1.2 Meeting Recording Link****X1 – ST Putra Facility Booking System -**

[ST Putra Facility Booking SystemObservation.mp4](#)

**X2 – PUTRA Presence**

[PutraPressenceObservation.mp4](#)

**X3 – Cornell CampusGroups**

[CornellCampusGroupsObservation.mp4](#)

**X4 – Campus Labs Event CheckIn**

[CampusCheckInObservation.mp4](#)

**X5- Eventbrite**

[EventbriteSystemObservation.mp4](#)

### **4.1.3 Meeting Transcript**

[https://github.com/taizhixuan/TT5L\\_G1\\_Requirements\\_Project/tree/main/ObservationTranscripts](https://github.com/taizhixuan/TT5L_G1_Requirements_Project/tree/main/ObservationTranscripts)



#### 4.1.4 Observation-Derived Requirements.

Req ID	Requirement Statement	Kano Category
11	Realtime budget spending updates	Satisfier
12	Searchable venue database with capacity & clash detection	Satisfier
13	Online RSVP with QR ticket generation	Satisfier
14	QR/Bluetooth attendance capture	Satisfier
15	Bulk CSV export of attendance records	Satisfier
16	Interested students can apply to join a club online	Satisfier
17	Personal dashboard with upcoming events, budget graphs, reminders	Satisfier
18	Automatic email reminder 24 h before event	Satisfier

## 4.2 Online Survey (Google Form) (T2)

Field	Information
Responses Collected	50
Target Population	Club Members & Prospective Members
Evidence Files	<a href="#">SurveyResponses.csv</a> , <a href="#">SurveySummary.xlsx</a>

### 4.2.1 Question by Question Results & Interpretation

#### Q01 – Guided Event-Creation Wizard

Q01-F If the system offers a step-by-step wizard that helps club leaders create events quickly and correctly, how do you feel?

50 responses

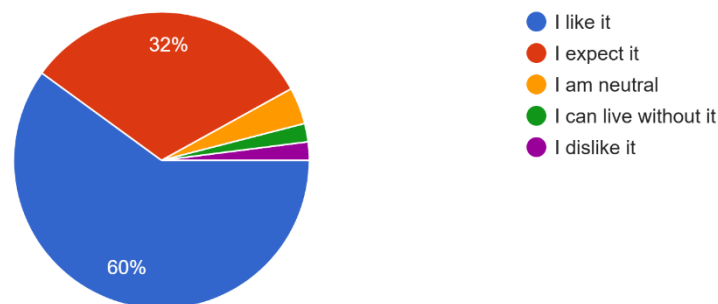


Figure 4.2.1.1

In figure 4.2.1.1 The majority (92%) responded positively (either liking or expecting the feature), suggesting the step-by-step wizard is both welcomed and expected by users. Very few were indifferent or negative about it.

Q01-D If the system does NOT provide a step-by-step event-creation wizard and leaders must enter all details manually, how do you feel?

50 responses

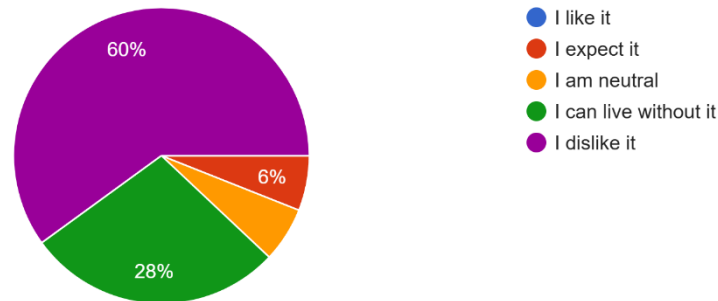


Figure 4.2.1.2

In figure 4.2.1.2 a significant majority (60%) dislike the idea of manual entry without wizard support, reinforcing the preference for a guided event-creation process. This aligns with the findings from Q01-F, where the majority liked or expected a step-by-step wizard.

## Q02 – Realtime Budget Balances

Q02-F If club treasurers can see budget balances update instantly after each transaction, how do you feel?

50 responses

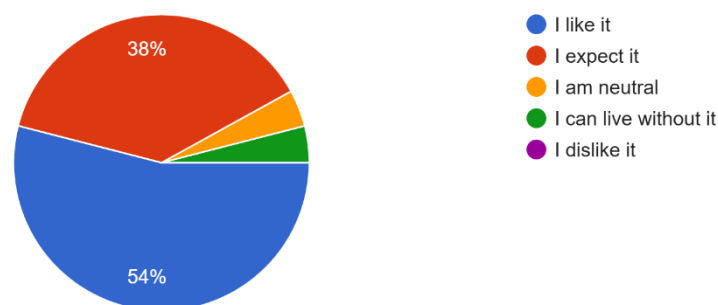


Figure 4.2.1.3

In figure 4.2.1.3 the majority (54%) responded positively (either liking or expecting the feature), demonstrating a clear user preference for real-time budget tracking. This suggests that implementing this feature would likely enhance user satisfaction and meet user expectations effectively.

Q02-D If budget balances update only after several hours or days, how do you feel?

50 responses

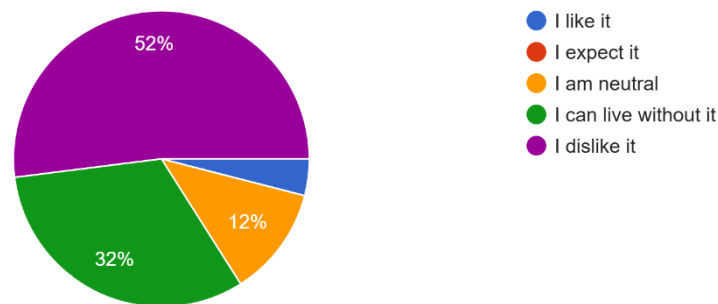


Figure 4.2.1.4

In Figure 4.2.1.4, the majority (52%) responded negatively (disliking it or tolerating it), with 32% stating they can live without it. This indicates a strong user preference for real-time budget tracking. Implementing timely balance updates would likely enhance user satisfaction and better align with user expectations.

### Q03 – Venue Search & Filter

Q03-F If you can search and filter campus venues by capacity, location, and available dates, how do you feel?

50 responses

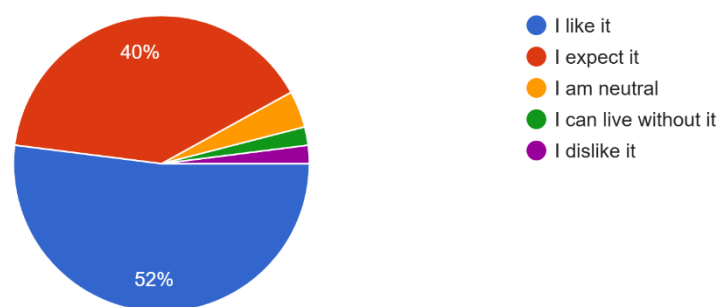


Figure 4.2.1.5

In Figure 4.2.1.5, the overwhelming majority (92%) responded positively, either liking or expecting the venue filtering feature. This demonstrates a strong user demand for advanced search capabilities. Implementing this feature would likely enhance usability and significantly improve user experience by aligning closely with user needs and expectations.

Q03-D If there is no searchable venue database and venue details must be found manually, how do you feel?

50 responses

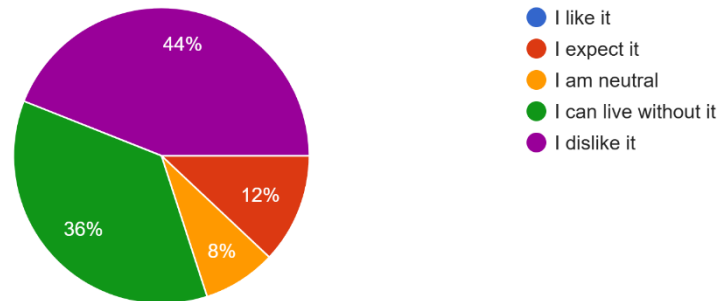


Figure 4.2.1.6

In Figure 4.2.1.6, the majority of users (80%) responded negatively to the lack of a searchable venue database. This suggests that manual searching significantly hinders user experience. Introducing a searchable system would likely improve usability and better meet user expectations for efficiency and convenience.

#### Q04 – Online RSVP

Q04-F If members can RSVP for club events online with one click, how do you feel?

50 responses

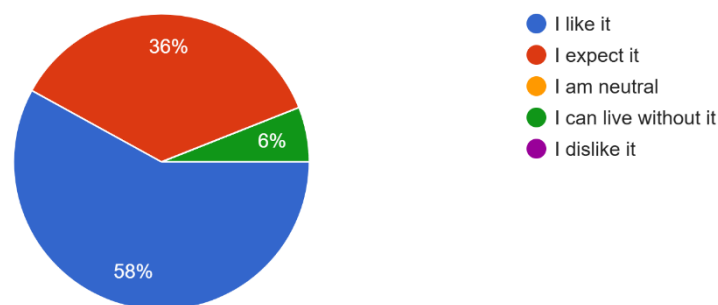


Figure 4.2.1.7

In Figure 4.2.1.7, an overwhelming 94% of users reacted positively to the one-click online RSVP feature, either liking or expecting it. This clearly reflects a strong demand for streamlined, user-friendly event registration. Implementing this feature would likely enhance engagement and overall satisfaction with club event management.

Q04-D If there is no online RSVP function and members must sign up through other means, how do you feel?

50 responses

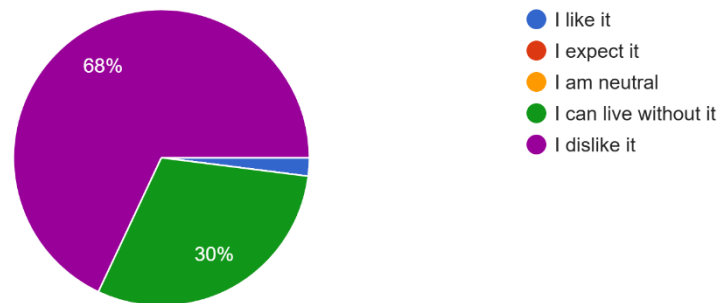


Figure 4.2.1.8

In Figure 4.2.1.8, nearly all respondents (98%) reacted unfavourably to the lack of an online RSVP feature. This indicates a strong user expectation for streamlined digital event registration. Implementing an online RSVP function would likely address user frustrations and greatly enhance the event sign-up experience.

## Q05 – QR / NFC Attendance Capture

Q05-F If event attendance can be recorded instantly by scanning a QR code or tapping NFC, how do you feel?

50 responses

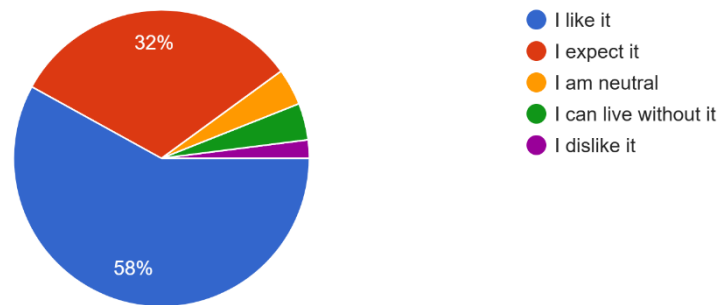


Figure 4.2.1.9

In Figure 4.2.1.9, a strong majority (90%) responded positively to instant attendance recording through QR codes or NFC, either liking or expecting the feature. This reflects a clear user preference for efficient, contactless attendance tracking methods. Implementing this technology would likely enhance event management and user satisfaction.

Q05-D If attendance is recorded using paper lists or manual entry only, how do you feel?

50 responses

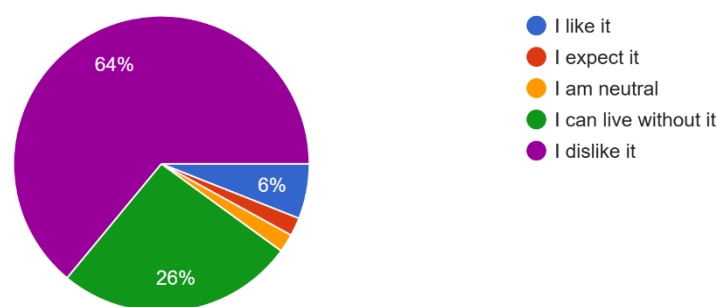


Figure 4.2.1.10

In Figure 4.2.1.10, most users (90%) responded unfavorably toward manual attendance recording methods. This indicates a strong preference for more efficient, automated systems. Moving away from manual processes to digital attendance recording would likely improve user satisfaction and streamline event management.

## Q06 – Export Financial Data to CSV

Q06-F If treasurers can export all financial records to CSV for analysis, how do you feel?

50 responses

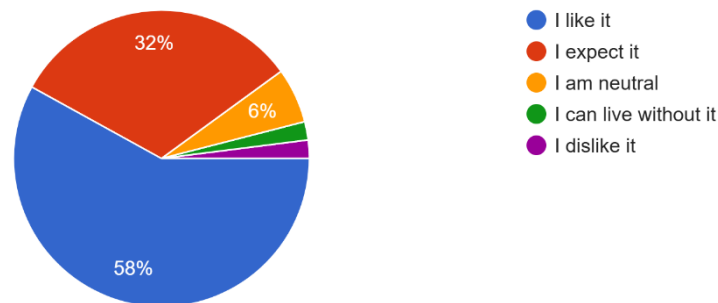


Figure 4.2.1.11

In Figure 4.2.1.11, **90%** of respondents reacted positively, either liking or expecting the CSV export feature. This indicates a strong user demand for easy access to financial data for analysis. Implementing this feature would likely enhance financial transparency and support better decision-making.

Q06-D If financial data cannot be exported and must be copied manually, how do you feel?

50 responses

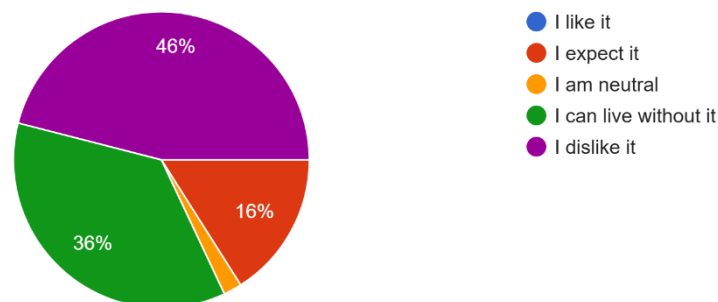


Figure 4.2.1.12

In Figure 4.2.1.12, the majority (82%) of users expressed dissatisfaction or indifference toward the lack of export functionality for financial data. This highlights a clear user preference for streamlined, automated data export options. Providing an export feature would likely improve efficiency and better meet user expectations.



## Q07 – Online Membership Application

Q07-F If prospective members can submit a membership request online, how do you feel?

50 responses

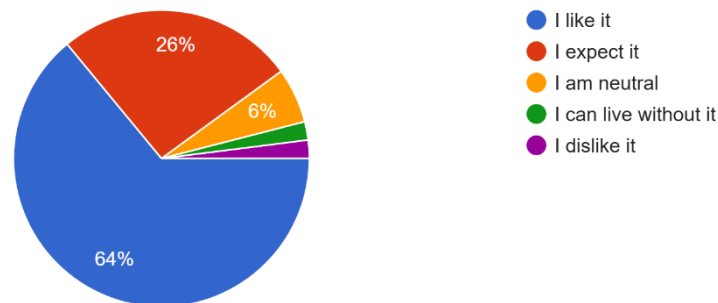


Figure 4.2.1.13

In Figure 4.2.1.13, an overwhelming **90%** of users responded positively to online membership requests, either liking or expecting the feature. This highlights a clear demand for convenient and accessible membership application processes. Implementing this feature would likely increase engagement and streamline member onboarding.

Q07-D If prospective members have to apply in person or by email only, how do you feel?

50 responses

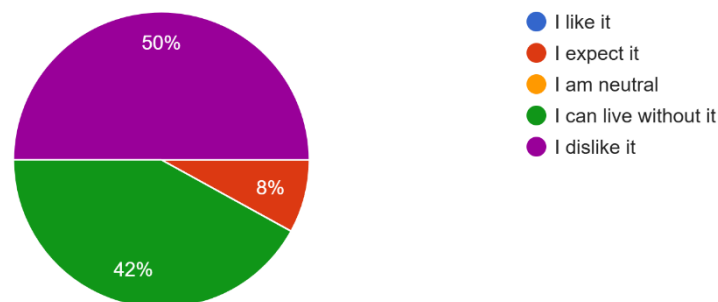


Figure 4.2.1.14

In Figure 4.2.1.14, most users (92%) reacted negatively or indifferently to the lack of an online membership application option. This suggests a strong preference for more convenient, digital application methods. Introducing an online membership request feature would likely improve user satisfaction and accessibility.

## Q08 – Personal Dashboard

Q08-F If each user sees a personalised dashboard with upcoming events, role tasks, and budget graphs, how do you feel?

50 responses

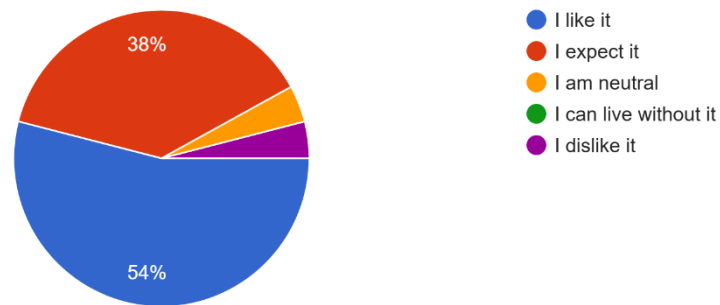


Figure 4.2.1.15

In Figure 4.2.1.15, a strong **92%** of users responded positively to the idea of personalized dashboards. This demonstrates a clear demand for tailored, informative interfaces that enhance user engagement and organization. Implementing personalized dashboards would likely improve overall user satisfaction and productivity.

Q08-D If the system has no personal dashboard and users must navigate multiple pages for this information, how do you feel?

50 responses

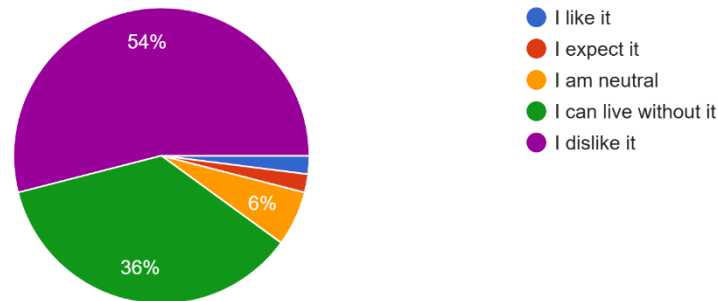


Figure 4.2.1.16

In Figure 4.2.1.16, most users (90%) responded negatively or indifferently to the lack of a personalized dashboard. This indicates a strong preference for consolidated, easy-to-access information. Implementing a personal dashboard would likely enhance user experience by simplifying navigation and improving accessibility.

### Q09 – Event Reminder Alerts

Q09-F If the system sends you reminders for events you marked as “Interested”, how do you feel?

50 responses

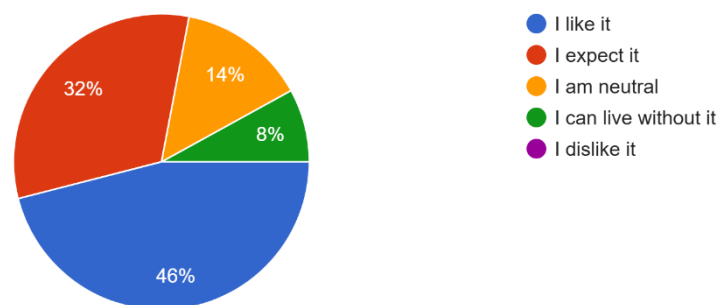


Figure 4.2.1.17

In Figure 4.2.1.17, the majority of users (78%) showed a positive preference for receiving event reminders. This indicates that implementing reminder notifications could effectively increase engagement and help users stay informed about events of interest.

Q09-D If the system does not send reminders for your “Interested” events, how do you feel?

50 responses

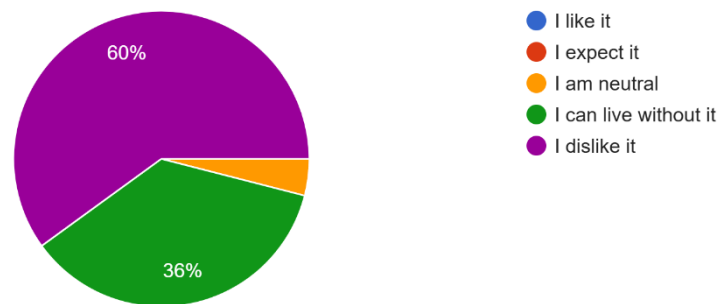


Figure 4.2.1.18

In Figure 4.2.1.18, most users (96%) reacted negatively or indifferently to not receiving reminders for events they are interested in. This highlights a clear preference for reminder notifications as a feature to keep users engaged and informed.

## Q10 – In-System Messaging

Q10-F If members can message each other within the system, how do you feel?

50 responses

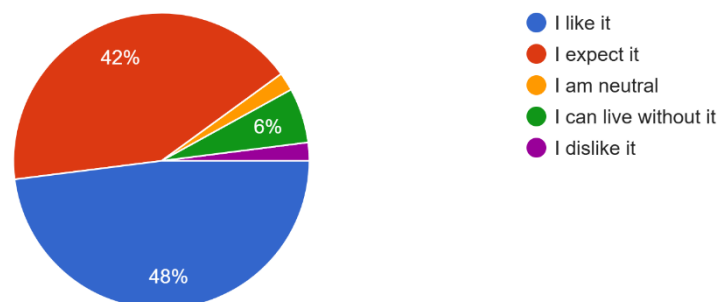


Figure 4.2.1.19

In Figure 4.2.1.19, a strong majority (90%) of users expressed positive sentiments towards an internal messaging feature. This indicates a clear user expectation for integrated communication tools. Implementing member messaging would likely enhance connectivity and collaboration within the system.

Q10-D If there is no internal messaging and members must use external apps, how do you feel?

50 responses

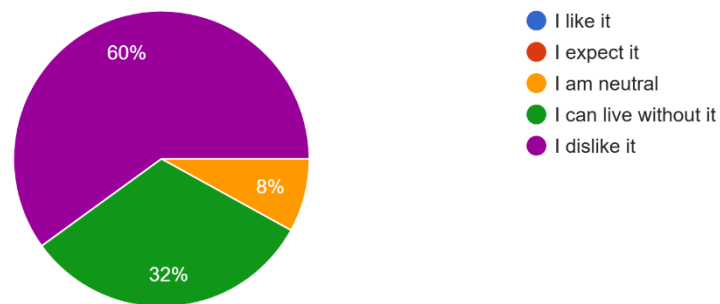


Figure 4.2.1.20

In Figure 4.2.1.20, most users (92%) responded negatively or indifferently to the lack of internal messaging. This suggests a strong preference for integrated communication within the system to improve convenience and user experience.

### 4.2.2 Survey-Derived Requirements

Req ID	Requirement Statement	Kano Category	Evidence (Survey Q#)
10	Efficient, guided event creation wizard	Satisfier	Q01
11	Realtime budget spending updates	Satisfier	Q02
12	Searchable venue database	Satisfier	Q03
13	Online RSVP for events	Satisfier	Q04
14	QR / NFC attendance capture	Satisfier	Q05
15	Export financial data to CSV	Satisfier	Q06
16	Online membership application	Satisfier	Q07
17	Personal dashboard with events & budget graphs	Satisfier	Q08
18	Reminder alerts before “interested” events	Satisfier	Q09
19	Internal messaging between members	Satisfier	Q10

### 4.3 Brainstorming Session (T3)

Field	Information
Objective	Discover baseline workflows & pain-points in benchmark systems.
Participants	Project Team
Evidence Files	<a href="#">brainstorm session.mp4</a> , <a href="#">Brainstorm_log.docx</a>

#### 4.3.1 Brainstorm Flow Summary

The team completed three uninterrupted verbal rounds:

- Round 1 – Dissatisfiers: each participant voiced must-have pain points.
- Round 2 – Satisfiers: performance features that improve satisfaction with quality.
- Round 3 – Delighters: surprise “wow” ideas.

After each round, the facilitator read back a spoken summary to confirm agreement. Final requirement wording was derived offline by replaying the recording and transcribing key statements verbatim.

#### 4.3.2 Meeting Recording Link

Meeting Recording link: [brainstorm session.mp4](#)

### 4.3.3 Meeting Transcript

[Brainstorm\\_log.docx](#)

0:06

Hi everyone.

0:07

Both today is to surface every key requirement for our student club management system and take each one as dissatisfier, satisfier or the lighter.

0:18

So let's start with the must have requirement for the dissatisfier.

0:25

I believe the system should include a secure online club registration process that automatically route the submission to the student affair for approval.

0:33

So when the student tried to apply for a for a club, they will get like they will be able to upload file and have the ability for status tracking too.

0:45

I see in my opinion right.

0:47

I think implement implement the multi factor auto auto applications for secure login also is important for the system.

0:59

With you one I agree with you.

1:03

I also think that the system has that club officers assign rules such as president, treasurer and secretary without relying on external spreadsheets.

1:15

If that is the case, oh continue continue on.

1:22

Sorry for cutting it off.

1:25

We also need clear role based assess so members officer and I mean and I mean you see only the data I mean for them.



1:37

If that is the case, then automatic notification must be sent for on must be sent on every approval rejection or updates through e-mail and in app and in app banners.

1:50

I also think that provide provide the accessibility features like high, high contrast mode, adjustable font size and full keyboard navigation is important.

2:04

It is also the key importance for our system.

2:13

Full summary of dissatisfier are secure in secure club registration, secure in authentication, role assignment, role based access operation, automatic notification and accessibility feature.

2:28

Next we move on to the satisfier OK for what I think for the satisfiers right, I think also a personal dashboard that shows up top events by direct graphs and action.

2:47

We might we might just scope good choice for our system.

2:59

We should also deliver reminder alerts such as push or emails and 24 hours before any events and member mark as interested.

3:11

Another idea is to enable member to member messaging.

3:14

So within within each club, the members can message each other and that will ease a lot of like centralized it will centralized the communication.

3:25

See now let me summarise it.

3:27

So the some summary of the satisfier personal dashboard reminder alerts for interested event and in app member messaging.

3:37

Now let's move on to the director for the delighters.

3:42

I believe the system should also suggest the best menu based on the event type and the expected attendance and the availability date.

3:52

That's a good idea.

3:53

I also think that introduce a gaming situations, budgets and points to reward active participations and developments is important.

4:09

No, I like the idea.

4:10

I think on my part I want to suggest to provide cloud leader analytics that visualize attendance and budget trends over time.

4:19

Other than that we also need to send mobile push notification for critical update especially for officer and event organiser.

4:28

We could also recommend similar clubs to users based on their like stated stated interests and joint activities.

4:41

That's a good idea.

4:42

Also.

4:43

I think we also can add the add the functions like allow QR code sign in from mobile to web sessions similar to WhatsApp web.

4:56

OK, through the summary of the later venue auto suggestion unification budget of point cloud leader analyst fix mobile push notification, similar cloud recommendation and QR code sign in.

5:19

OK, that's all recording will stop now.

5:25

OK, then going to.

### 4.3.4 Brainstorming Derived Requirements

Req ID	Requirement Statement	Kano Category
1	Secure online club registration	Dissatisfiers
2	Secure login authentication	Dissatisfiers
3	Club officers can assign roles (President, Treasurer, etc.)	Dissatisfiers
4	User roles clearly separated (member / officer / admin)	Dissatisfiers
8	System sends automatic notifications on approvals / rejections / updates	Dissatisfiers
9	Accessibility features (colour contrast, font change, etc)	Dissatisfiers
17	Personal dashboard with upcoming events, budget graphs, reminders	Satisfiers
18	Reminder alerts before “interested” events	Satisfiers
19	Ability for Club Members to message each other	Satisfiers
20	Auto suggest optimal venue based on event type & expected attendance	Delighters
21	Gamification (badges / points) for active participation	Delighters
22	Club leader analytics (attendance & budget trends)	Delighters
23	Mobile push notifications for critical updates	Delighters
24	Recommendation of similar clubs based on interests	Delighters
25	QRcode sign in to web account via mobile app	Delighters

## 4.4 Document Analysis (T4)

Field	Information
Objective	Derive non-negotiable, policy-driven requirements from official university documents.
Documents Analysed	Manual Pelaksanaan Aktiviti Pelajar (V5) • Panduan Tuntutan Kewangan Aktiviti Pelajar
Evidence Files	Annotated PDFs ( <a href="#">ManualPelaksanaanV5_highlighted.pdf</a> , <a href="#">PanduanTuntutan_highlighted.pdf</a> ), Highlight screenshots in <a href="#">/Docs/Screenshots/</a>

### 4.4.1 Traceability Table

Req ID	Requirement Statement	Source Doc	Section / Page	Verbatim Text (Malay)	Screenshot File
3	Club officers can assign roles (President, Treasurer, ...)	Manual Pelaksanaan V5	§ 2 “Penyediaan Kertas Kerja” p. 4	<ul style="list-style-type: none"> <li>• “Jawatankuasa Aktiviti”</li> <li>• “Anggaran Perbelanjaan &amp; Pendapatan”</li> <li>• “Senarai jawatankuasa pelaksana aktiviti. (format .doc)”</li> </ul>	<a href="#">roles_p4.png</a>
5	Leader can create new events	Manual Pelaksanaan V5	Flowchart “Carta Alir Pengurusan Aktiviti Pelajar” p. 13	“Hantar permohonan kelulusan aktiviti melalui borang atas talian”	<a href="#">carta_alir_create_event_p13.png</a>

6	Leader can view & track club budget balance	Manual Pelaksanaan V5	§ 1(c) “Panduan Pengurusan Kewangan dan Perbelanjaan” p. 3	“...peruntukan/dana serta kos perbelanjaan aktiviti perlu dibincangkan...”	<a href="#">budget_tracking_p3.png</a>
7	Admin can approve or reject budget requests	Panduan Tuntutan Kewangan	§ 1 “Maklumat Am” p. 1	“Perbelanjaan/ Pembayaran untuk aktiviti pelajar yang telah diluluskan layak dituntut.”	<a href="#">approval_clause_p1.png</a>
7 (cont.)	—	Panduan Tuntutan Kewangan	§ 3 “Tuntutan Bayaran Perkhidmatan/Bekalan” p. 3	“Pembayaran ... mengikut jumlah tuntutan yang diluluskan...”	<a href="#">approval_clause_p3.png</a>

#### 4.4.2 Detailed Policy-to-Requirement Explanation

Req ID	Why the Clause Forces This Requirement	System Implications
3	Any activity proposal must list its Jawatankuasa Aktiviti and attach a role file. Without built-in role assignment, club officers would have to manage roles offline and re-enter them in forms—violating the single source of truth principle and increasing audit risk.	Back-office module for officers to assign/reassign roles; roles auto-populate proposal PDFs; validation prevents submission if required positions are empty.
5	The flowchart explicitly starts with online submission of an activity-approval form. Leaders therefore need an in-system “Create Event” workflow that mirrors every flowchart step (draft, submit, status tracking).	Wizard-style event-creation UI with progress bar; autogenerated reference number; real-time status page that maps 1-to-1 to flowchart stages, ensuring leaders never bypass mandatory approvals.
6	Clause 1(c) requires ongoing discussion, preparation, and presentation of current funding and expenditure. Static spreadsheets fail to satisfy “ongoing” monitoring.	Dashboard widget that shows live balance, committed spend, and variance; role-based access so Treasurer sees edit rights; export to PDF/CSV for submission meetings.
7	Both clauses repeat that only approved amounts are payable. The system must therefore include a definitive approve / reject gate controlled by BHEP/Bursar; otherwise finance staff have no authoritative source to verify approval.	Admin panel with approval queue; immutable audit trail (timestamp, approver ID, status history); automated email notices to requestor on decision; downstream lock—transactions unfunded unless status == “Approved”.

### 4.4.3 Document-Derived Requirements

Req ID	Requirement Statement	Kano Category	Evidence File(s)
3	Club officers can assign roles	Dissatisfier	<a href="#">roles_p4.png</a>
5	Leader can create new events (policy-compliant steps)	Dissatisfier	<a href="#">carta_alir_create_event_p13.png</a>
6	Leader can view & track club budget balance	Dissatisfier	<a href="#">budget_tracking_p3.png</a>
7	Admin can approve or reject budget requests	Dissatisfier	<a href="#">approval_clause_p1.png</a> , <a href="#">approval_clause_p3.png</a>

## 5 Kano Model Summary

Req ID	Requirement Statement	Source (S = Survey, B = Brainstorming, D = Document analysis, O = Observation)	Kano Category	Evidence Placeholder
Dissatisfiers (Musthave)				
1	Secure online club registration	B	Dissatisfiers	brainstorm_log.md
2	Secure login authentication	B	Dissatisfiers	brainstorm_log.md ;
3	Club officers can assign roles (President, Treasurer, etc.)	B, D	Dissatisfiers	brainstorm_log.md ;  Manual Pelaksanaan Aktiviti Pelajar (V5) – § 2 “Penyediaan Kertas Kerja” & § 2 “Dokumen Sokongan yang Diperlukan”: <a href="https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf">https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf</a>
4	User roles clearly separated (member / officer / admin)	B	Dissatisfiers	brainstorm_log.md



5	Leader can create new events	D	Dissatisfiers	Manual Pelaksanaan Aktiviti Pelajar (V5) – § “CARTA ALIR PENGURUSAN AKTIVITI PELAJAR”: <a href="https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf">https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf</a>
6	Leader can view & track club budget balance	D	Dissatisfiers	Manual Pelaksanaan Aktiviti Pelajar (V5) – § 2 “Penyediaan Kertas Kerja” & § 1(c) “Panduan Pengurusan Kewangan dan Perbelanjaan”: <a href="https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf">https://hep.upm.edu.my/upload/dokumen/20221202162707Manual_Pelaksanaan_Aktiviti_Pelajar_%28V5%29.pdf</a>
7	Admin can approve or reject budget requests	D	Dissatisfiers	Panduan Tuntutan Kewangan Aktiviti Pelajar – § 1 “Maklumat Am” & § 3 “Tuntutan Bayaran Perkhidmatan/Bekalan”: <a href="https://hep.upm.edu.my/upload/dokumen/20210704210921PANDUAN_TUNTUTAN_KEWANGAN_AKTIVITI_PELAJAR">https://hep.upm.edu.my/upload/dokumen/20210704210921PANDUAN_TUNTUTAN_KEWANGAN_AKTIVITI_PELAJAR</a>

				<a href="#">AR_%28FINAL2%29.pdf</a>
8	System sends automatic notifications on approvals / rejections / updates	B	Dissatisfiers	brainstorm_log.md
9	Accessibility features (colour contrast, font change, etc)	B	Dissatisfiers	brainstorm_log.md
Satisfiers (Performance needs)				
10	Efficient, guided event creation wizard	S	Satisfiers	Survey Q01 – 92% Positive: "I like it" (60%) + "I expect it" (32%); 88% Negative/Tolerate: "I dislike it" (60%) + "I can live without it" (28%)
11	Realtime budget spending updates	S, O	Satisfiers	Survey Q02 – 92% Positive: "I like it" (54%) + "I expect it" (38%); 84% Negative/Tolerate: "I dislike it" (52%) + "I can live without it" (32%) ;  Observation of existing system – Cornell

				CampusGroups: <a href="#">CornellUniversity</a>
12	Searchable venue database (location, size, availability)	S, O	Satisfiers	<p>Survey Q03 – 92% Positive: "I like it" (52%) + "I expect it" (40%); 80% Negative/Tolerate: "I dislike it" (44%) + "I can live without it" (36%) ;</p> <p>Observation of existing system – ST Putra Facility Booking System (live system): <a href="#">SISTEM TEMPAHAN</a></p>
13	RSVP system for members to register for events	S, O	Satisfiers	<p>Survey Q04 – 94% Positive: "I like it" (58%) + "I expect it" (36%); 98% Negative/Tolerate: "I dislike it" (68%) + "I can live without it" (30%);</p> <p>Observation of existing system – Eventbrite online event-management platform <a href="#">Eventbrite</a></p>
14	Attendance tracking via	S, O	Satisfiers	<p>Survey Q05 – 90% Positive: "I like it" (58%) + "I expect it"</p>

	QR / NFC at events			<p>(32%); 90%</p> <p>Negative/Tolerate: "I dislike it" (64%) + "I can live without it" (26%) ;</p> <p>Observation of existing system – Campus Labs Event Check-in app: scan event-pass QR codes to check in.</p> <p><a href="#">Google Play</a></p>
15	Ability to export financial data to CSV	S , O	Satisfiers	<p>Survey Q06 – 90%</p> <p>Positive: "I like it" (58%) + "I expect it" (32%); 82%</p> <p>Negative/Tolerate: "I dislike it" (46%) + "I can live without it" (36%)</p> <p>Observation of existing system – Campus Labs Event Check-in app: scan event-pass QR codes to check in.</p> <p><a href="#">Google Play</a></p>
16	Interested students can apply to join a club online	S, O	Satisfiers	<p>Survey Q07 – 90%</p> <p>Positive: "I like it" (64%) + "I expect it" (26%); 92%</p> <p>Negative/Tolerate: "I dislike it" (50%) + "I can live without it" (42%) ;</p>

				Observation of existing system – Cornell CampusGroups: <a href="#">CornellUniversity</a>
17	Personal dashboard with upcoming events, budget graphs, reminders	S, B, O	Satisfiers	<p>Survey Q08 – 92% Positive: "I like it" (54%) + "I expect it" (38%); 90% Negative/Tolerate: "I dislike it" (54%) + "I can live without it" (36%) ;</p> <p>brainstorm_log.md ;</p> <p>Observation of existing system – PUTRA Presence event-attendance platform (existing mobile/web system): <a href="#">PUTRAPresence</a></p>
18	Reminder alerts before “interested” events	S, B, O	Satisfiers	<p>Survey Q9 – 78% Positive: "I like it" (46%) + "I expect it" (32%); 96% Negative/Tolerate: "I dislike it" (60%) + "I can live without it" (36%) ;</p> <p>brainstorm_log.md ;</p> <p>Observation of existing system – Eventbrite</p>

				online event-management platform <a href="#">Eventbrite</a>
19	Ability for Club Members to message each other	S, B	Satisfiers	Survey Q10 – 90% Positive: "I like it" (48%) + "I expect it" (42%); 92% Negative/Tolerate: "I dislike it" (60%) + "I can live without it" (32%) ;  brainstorm_log.md
Delighters (Exciters)				
20	Auto-suggest optimal venue based on event type & expected attendance	B	Delighter	brainstorm_log.md
21	Gamification (badges / poin ts) for active participation	B	Delighter	brainstorm_log.md
22	Club leader analytics (attendance & budget trends)	B	Delighter	brainstorm_log.md
23	Mobile push notifications for critical updates	B	Delighter	brainstorm_log.md

24	Recommendation of similar clubs based on interests	B	Delighter	brainstorm_log.md
25	QRcode -sign in- to web account via mobile app	B	Delighter	brainstorm_log.md

## 7 Conclusion

The elicitation campaign met its objectives in full. Across the four techniques we captured 25 distinct functional requirements: 9 Dissatisfiers, 10 Satisfiers, and 6 Delighters (Section 5). Triangulating policy clauses, real-world system observations, quantitative survey data ( $n = 50$  responses), and team ideation provided high confidence in both completeness and accuracy:

- Compliance assurance — Document analysis guarantees that mandatory university rules (e.g., finance approval gates) are embedded as Dissatisfiers.
- User-centred validity — Survey responses and observation logs align, confirming strong demand for features such as real-time budget views and one-click RSVP.
- Innovation potential — Brainstorming surfaced aspirational ideas (e.g., venue auto-suggest, gamification) that can differentiate the SCMS without jeopardising core scope.

With an evidence-backed Kano matrix in place, the next steps are to:

1. Transfer the classified requirements into the ISO/IEC/IEEE 29148-compliant SRS draft, adding precise statements, acceptance criteria, and priority tags.
2. Establish a bidirectional traceability matrix linking each requirement to its proof artefact and future design / test cases.
3. Engage stakeholders for validation workshops to close any residual gaps before freezing the baseline for design.

By grounding all future design and planning activities in this validated requirement set, the project is well-positioned to deliver a system that is compliant by default, satisfying to everyday users, and capable of delighting its most active club communities.



## Appendix A – Survey Instrument

### Student Club Management System (SCMS)

#### Introduction

We're designing a new Student Club Management System (SCMS).

For every feature below, you will answer two short questions:

- Functional (F): how you feel if the feature IS present
- Dysfunctional (D): how you feel if the feature is NOT present

Use the same 5-point scale each time:

1. I like it
2. I expect it
3. I am neutral
4. I can live without it
5. I dislike it

The survey takes  $\approx 7$  minutes. Your answers are confidential and will only be used for course research.

#### Questionnaire Items

#	Item	Question text
Q01-F	Guided event wizard	If the system offers a step-by-step wizard that helps club leaders create events quickly and correctly, how do you feel?
Q01-D	—	If the system does NOT provide a step-by-step event-creation wizard and leaders must enter all details manually, how do you feel?

Q02-F	Real-time budget balances	If club treasurers can see budget balances update instantly after each transaction, how do you feel?
Q02-D	—	If budget balances update only after several hours or days, how do you feel?
Q03-F	Venue search & filter	If you can search and filter campus venues by capacity, location, and available dates, how do you feel?
Q03-D	—	If there is no searchable venue database and venue details must be found manually, how do you feel?
Q04-F	Online RSVP	If members can RSVP for club events online with one click, how do you feel?
Q04-D	—	If there is no online RSVP function and members must sign up through other means, how do you feel?
Q05-F	QR / NFC attendance	If event attendance can be recorded instantly by scanning a QR code or tapping NFC, how do you feel?
Q05-D	—	If attendance is recorded using paper lists or manual entry only, how do you feel?
Q06-F	Export financial data	If treasurers can export all financial records to CSV for analysis, how do you feel?
Q06-D	—	If financial data cannot be exported and must be copied manually, how do you feel?
Q07-F	Online membership request	If prospective members can submit a membership request online, how do you feel?
Q07-D	—	If prospective members have to apply in person or by email only, how do you feel?
Q08-F	Personal dashboard	If each user sees a personalised dashboard with upcoming events, role tasks, and budget graphs, how do you feel?

Q08-D	—	If the system has no personal dashboard and users must navigate multiple pages for this information, how do you feel?
Q09-F	Event reminders	If the system sends you reminders for events you marked as “Interested”, how do you feel?
Q09-D	—	If the system does not send reminders for your “Interested” events, how do you feel?
Q10-F	In-system messaging	If members can message each other within the system, how do you feel?
Q10-D	—	If there is no internal messaging and members must use external apps, how do you feel?