



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

**SYSTEM ANALYSIS AND DESIGN
(SECP2613)
SECTION 01**

**PHASE 2:
SYSTEM REQUIREMENTS**

**SUBMITTED TO:
Dr Muhammad Iqbal Tariq Bin Idris**

**GROUP NAME:
PIXEL INC**

NAME	MATRIC NO.
RISHMA FATHIMA BINTI BASHER	A20EC0137
MADINA SURAYA BINTI ZHARIN	A20EC0203
TERENCE LOORTHANATHAN	A20EC0165
NAYLI NABIHAH BINTI JASNI	A20EC0105

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Phase 1 - Proposal

1) Overview of Project

Technocom Systems Sdn Bhd, an organization founded as a member of Venture Group which was established in 1984 as a start-up company to provide contract manufacturing services. Technocom specialises in manufacturing and assembling electrical and electronics, computer, and medical products. This organization is in Kempas Johor which is approximately in the middle of Johor Bahru.

With a company size of 501 to 1000 employees, Technocom is rapidly making ground towards becoming a successful company. Technocom offers so many benefits to attract professionals into their organisation such as Dental, Medical, Gym, Parking, Bonus in pay, and Profit-Sharing benefits. Not to mention, their reputable mark in the production and manufacturing industry also attracts fresh and senior specialists in the field to join Technocom.

With such benefits and a reputation to attract specialists into joining them, it is obvious a reliable e-recruitment system is in need. Therefore, this proposal is to upgrade and digitalise the current recruiting system in place at Technocom. A E-Recruitment system is a system which is online based, with a purpose of centralising all processes relating to recruiting within it. Thus, it requires less manpower and hours to operate the system.

2) List of Abbreviations

Abbreviation	Explanation
SAP	Systems Applications and Products
HR	Human Resources

3) Problem Statement

- a) Difficult to trace any entry or changes to applications.
- b) Difficult to ensure data compliance.
- c) A great amount of time is required to operate the traditional recruitment system.
- d) A great amount of workforce is required to operate the traditional recruitment system.
- e) Difficult to conduct analysis and studies on HR team effectiveness and efficiencies.

4) Proposed Solutions

Mission Statement:

To solve all issues with traditional system, the new system should :

- Have traceability compatibility and also an audit trail to ensure compliance.
- Reduce man hours for administration jobs.
- Able to let the existing man force to invest their time and effort into other tasks with the implementation of said system.
- Be an aid in analysing recruiting team efficiency.

Log in / Sign up:

- 1) Every actor who is intending to use the system has to sign up to acquire a unique username and password to log in to the system in the future.
 - a) Details such as name, Email address, phone number, IC number, username, password will be asked in the sign up page.

- 2) Every actor who used the system and has signed up, has to log in with their credentials.
 - a) Username and password which was fixed by the actors will be used as identification to enter the system.

Manage Candidate:

- 1) System is responsible to show job applicants whether their resume is shortlisted by HR-Talent Acquisition or not.
 - a) System could have a window which shows estimated time to get a response from HR-Talent Acquisition.
 - b) The window also should clearly inform job applicants if their application is shortlisted.

- 2) Proposed system will be responsible to obtain some job application forms from candidates which were previously submitted via pdf to HR-Talent Acquisition.
 - a) System could have an online form which can be filled up by a job applicant. On submission of said online form, HR-Talent Acquisition can start verification processes for said candidate.
 - b) Hardcopy Documents that must be submitted in softcopy form could be submitted by job applicants via a submission link that is obtainable from the system.

- 3) After documents were submitted by a job applicant, HR-Talent Acquisition should have immediate access to said application for verification process.
 - a) HR-Talent Acquisition should have access to the database of the system.

Manage interview:

- 1) System responsible to arrange the date and time of the interview after documents are verified by the HR-Talent Acquisition.
 - a) Date and time will be selected by the hiring panels based on their availability.

- 2) Interview date and time will be notified on the system.
 - a) The job applicant will be reminded to check the system in a few days and keep tracking the job application status while uploading the documents to manage candidate use cases.
 - b) The interview date and time will be viewed by the job applicant on the system.

- 3) Job applicant agree to attend the interview on the date and time fixed by the control panel
 - a) Job applicants will click the 'agree' as confirmation for the interview session.

- 4) Job applicants attend the interview session with the hiring panel(s).
 - a) Job applicants might need to attend another few interview sessions based on the hiring panel(s) preference.
 - b) Job applicants will need to repeat process 2. and 3. if they have to attend another few sessions of interview with the hiring panel(s).

- 5) The hiring panel(s) will sort the job applicants based on the interview session
 - a) The shortlisted job applicants details will be updated in the system as 'Shortlisted to hire'.
 - b) Non shortlisted job applicants will be updated in the system as 'Rejected job applicants'.

Manage Salary:

1. After the interview session(s), the system should allow the hiring panel(s) to directly send the passed candidates information and their proposed salary for the candidates to the HR Management team.
 - a) The HR Management should be able to access and use the system to see the candidates' information.
 - b) The hiring panel(s) can also attach their salary proposal for each candidate straight to the HR Management team for their approval.

2. The HR Management team can accept or reject the proposed salary by the HR-Talent Acquisition in the system directly.
 - a) There should be some buttons below the salary proposal sent by the HR-Talent Acquisition to accept or reject it.
 - b) If the proposal is accepted, the system will automatically generate the notification for the candidates regarding the salary offered by them.
 - c) If it is rejected, the HR-Talent Acquisition team will be notified and they must send a new salary proposal to the HR Management team.

3. When the HR Management has approved the proposed salary, the candidates will be notified formally with the salary offered by the company
 - a) The approved salary proposal will be automatically generated in the system and be notified to the candidates.

- b) The candidates can either accept or reject the offer. If they reject the offer then the process will be stopped. If they accept the offer an employment offer letter will be generated and sent automatically to the candidates.

Manage Staff:

- 1) System should be able to generate an offer letter, prepared by HR-Talent Acquisition according to the applicant's details.
 - a) Applicants who accept the job will be able to view and download the offer letter after HR-Talent Acquisition validates it.
- 2) Applicants sign and return an offer letter back into the system.
 - a) Below the offer letter displayed, there will be a draw area for them to scribble their signature.
 - b) The applicants should tick a checkbox, confirming that they had read the offer letter carefully before signing.
 - c) An option will be displayed, asking for applicant's confirmation before submitting the offer letter back, along with the signature.
- 3) HR-Talent Acquisition views the signed offer letter and verifies it for record keeping.
 - a) The record will store new staff details according to SAP requirements.
- 4) HR Payroll could view the record and make it accessible in SAP.

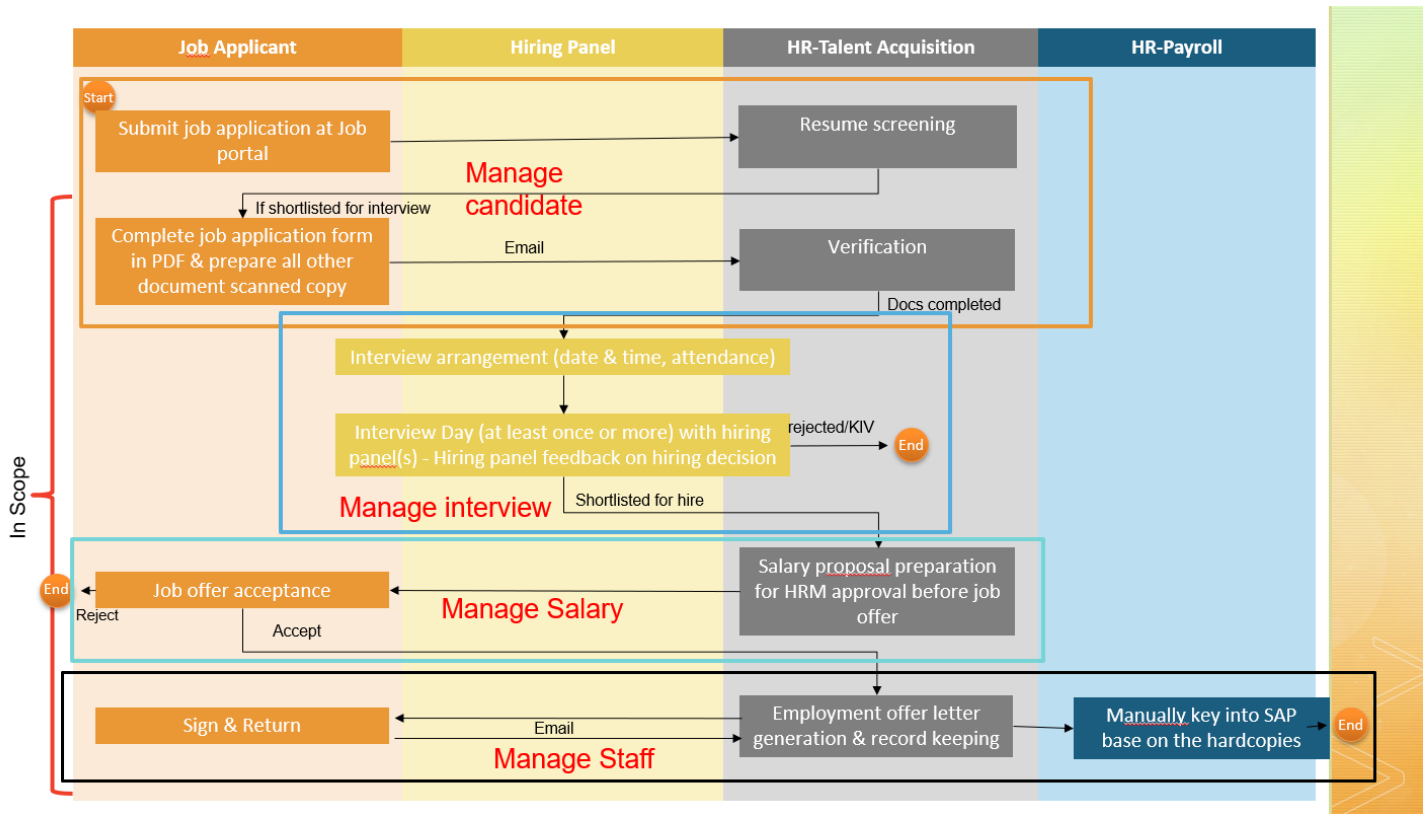
5) Methods for information gathering

- Interviewing
Interview sessions are conducted during industry day 1 on 15th November 2021. The session begins with requirements shared by the industry and ends with Q&A sessions. The questions that are asked include open-ended, closed and probe questions.
- Questionnaires

We contact our client via email whenever we have any queries regarding the systems, particularly those involving business rules. There are both open-ended and closed-ended questions.

1. How many interview sessions a job applicant will attend in total?
2. What are the reasons to have more than one interview?
3. Will the job applicant get another date and time of interview if the job applicant couldn't attend the interview in the first place?
4. Is the signing process mandatory after the employment offer letter is generated or can it be replaced with an option from the system?
5. Are the hiring panel personnel from the client the same as personnel from HR-Talent Acquisition?
6. What is SAP? Is it a general term for something?
7. Are you expecting our system to connect to your SAP base system?

6) Current business process or workflow



7) Functional and non-functional requirement

Login/Signup

Functional Requirements	Non-functional Requirements
<ul style="list-style-type: none"> • New user need to sign up before being able to login into the system • The system is separate into two type of user which are applicants and admins 	<ul style="list-style-type: none"> • Require an active email address and phone number • Username and password should be unique between each user • IC number must be valid and contains only 12 digits.

Manage candidate

Functional Requirements	Non-functional Requirements
<ul style="list-style-type: none">● Job Application Status should be updated in the candidate dashboard if he/she is shortlisted.● Candidates should be able to submit required documents for verification.● Admin can mark a discrepancy and ask the candidate for a correction in application if needed.● If verification failed, the candidate should be notified of the discrepancy and be allowed to correct it.	<ul style="list-style-type: none">● Admin should be able see the progress of the candidate's job application.● Submitted job application documents should be in pdf format.

Manage interview

Functional Requirements	Non-functional Requirements
<ul style="list-style-type: none">● Date and time of the interview set by the HR-Talent Acquisition● Date and time of the interview viewed and approved by the candidate● Changes in date and time of the interview made by the candidate if necessary.● Interview results will be uploaded in the system by the HR-Talent Acquisition.● Interview results will be viewed by the candidate in candidate status option● Another interview session date and time set by the HR-Talent	<ul style="list-style-type: none">● Approval or changes in date and time of the interview need to be done in 5 working days after the date and time of the interview session received.● Candidate interview results will be uploaded in the system in 24 hours after the interview session by the HR-Talent Acquisition● Interview results will be available in the system after 2 working days

Acquisition if necessary.	
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Manage Salary

Functional Requirements	Non-functional Requirements
<ul style="list-style-type: none"> ● Display the information of the passed candidates ● Proposed salary prepared by HR Talent-Acquisition team ● Authentication of the proposed salary by HR Management team ● Job acceptance offer letter should be issued to the candidates. 	<ul style="list-style-type: none"> ● All information including candidates' name, IC and job title applied will be displayed to distinguish each candidates ● The processing of proposing salary should be done only by the HR Talent-Acquisition team and HR Management team. Such attempts from any other employees should be reported to the security administrator ● Job acceptance offer letter should be issued within 24 hours after the authentication of proposed salary is done

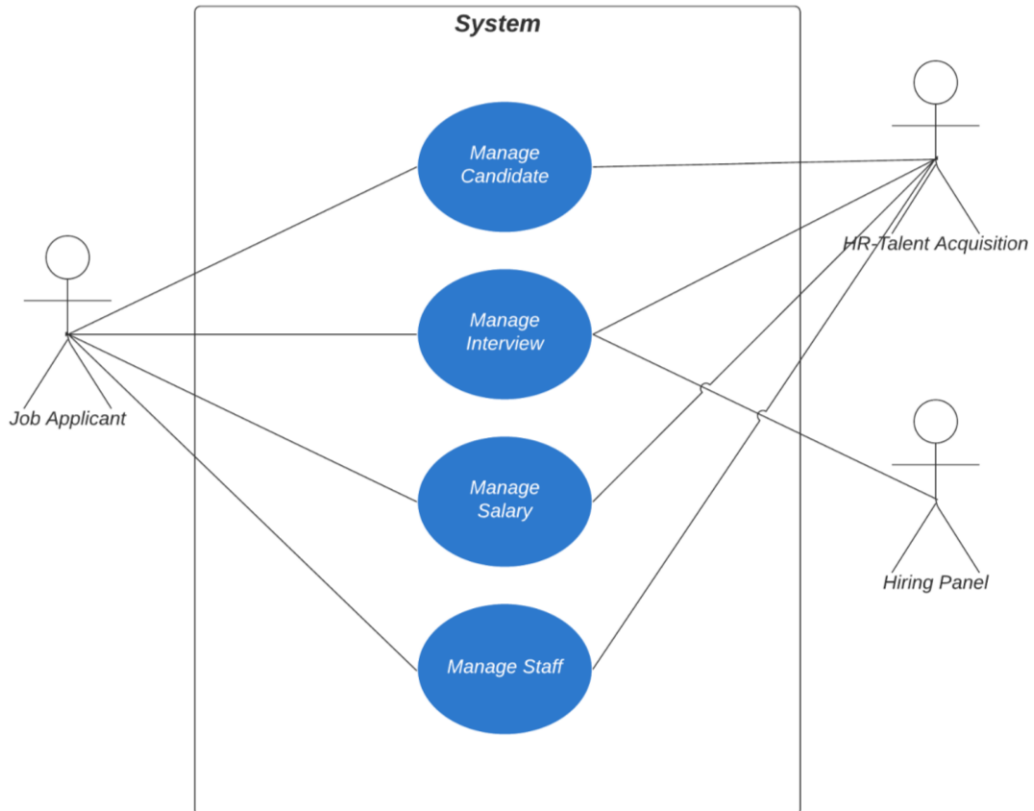
Manage staff

Functional Requirements	Non-functional Requirements
<ul style="list-style-type: none"> ● Offer letters generated only when the applicants approve the proposed salary ● Offer letters can be viewed by the applicants only when the admin sets a commencement date. ● Popup boxes are displayed to make sure the agreement is filled with the correct information. 	<ul style="list-style-type: none"> ● Offer letter will be generated within 5 working days after salary approval ● IC number needed in the agreement must be valid and contains 12 numbers

8) Use case diagram

Traditional Use case diagram

Pixel.Inc | January 1, 2022



9) Requirement analysis

General Requirement:

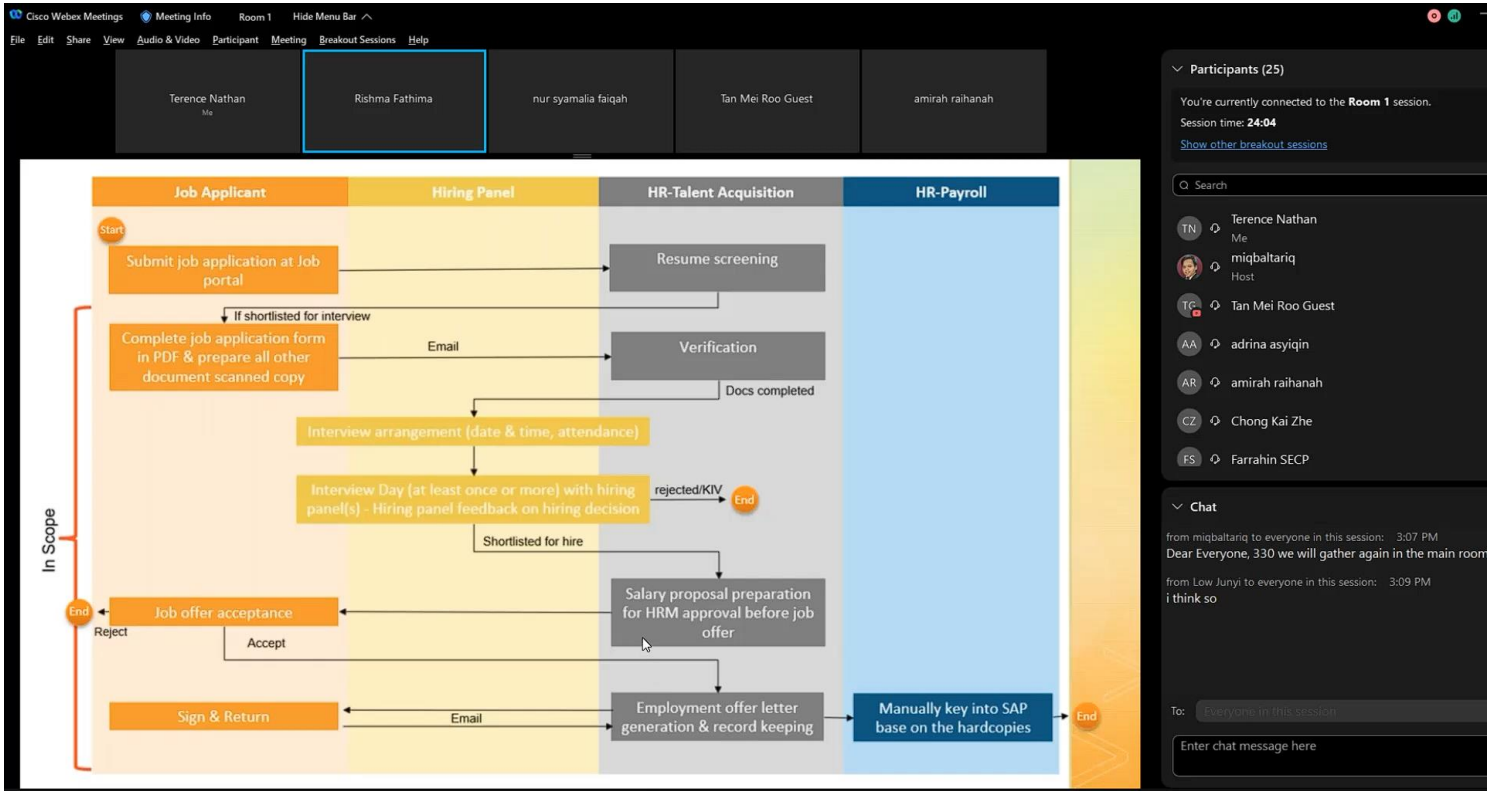
- Any changes made by admins to data should be logged.
- Changes can be traced by authorities.

Use Case Needed	Requirement Analysis
Log in / Sign up	<ul style="list-style-type: none">● Every user who uses the system should log in to the system everytime they use the system
Manage candidate	<ul style="list-style-type: none">● Shortlisted candidate's email id, telephone number and name will be uploaded by the HR-Talent Acquisition manually● Notify the candidate if they are selected to the interview session● Notify the candidate if they are not selected to the interview session● Notify the candidate to fill in their personal information to the system for interview purposes● Job candidate have to fill in the personal information in maximum of 1 week time
Manage interview	<ul style="list-style-type: none">● Job applicant will get to reschedule the interview session date and time with a valid reason● Job applicant rescheduled interview session should be able to be viewed by the HR-Talent Acquisition and hiring panel● Candidate might need to attend two to three interview session if there is any need which will be confirmed by the HR-Talent Acquisition● Hiring panel should be able to upload candidate's interview results, comments and attendance to the system
Manage salary	<ul style="list-style-type: none">● HR-Talent Acquisition team sets the proposed salary for each advanced candidates● HR Management team will approve or reject the proposed salary● Candidates will accept or reject the job offer acceptance letter

Manage staff	<ul style="list-style-type: none">● Candidates will receive an offer letter after accepting the job offer acceptance letter.● If a candidate accepts a job offer, data of said candidate should be accessible to the HR-Payroll department to be keyed into the Systems Applications and Products (SAP) system .
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10) Appendix

Industrial Day 1



On the 15th of November 2020, industrial day 1 was held where clients were requested to brief us on how the system should work. Thus, delivering the functional requirements of the system on that day. During the program, there was a segment where clients had a private session with the groups delivering the system for them. In that session, the groups cleared any confusion and asked any necessary questions to the representative of Technocom Systems, Miss Marion.

Email

Thanks & Kindest Regards,
Marion Tan | Human Resources



Venture Kawasan Perindustrian Tebrau 1 | Plo 5, Jalan Firma 1 | 81100 Johor Bahru, Johor | DID 07-3552621, Ext 216 | Fax 07-3560021 | URL www.venture.com.sg

Please consider the environment before printing this e-mail

From: TERENCE A/L LOORTHANATHAN A20EC0165 <terence@graduate.utm.my>
Sent: Thursday, 25 November, 2021 10:05 PM
To: Marion Tan Mel Roo <meiroo.tan@venture.com.sg>
Subject: Questions For Proposed System

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Miss Marion, I have pasted some of the questions we have for the system.
Please take your time answering them, we don't need answers tonight.

1. Will the job applicant get another date and time of interview if the job applicant couldn't attend the interview in the 1st place [Marion: Yes, candidate shall revert in advance via portal and a reason shall be given; HR personnel shall be able to view the status and reschedule accordingly, a new schedule is then shared to the hiring panels; HR-TA shall also be allowed to update candidate's attendance in the portal – attended, absent without notification, or reschedule]
2. Is the signing process mandatory after the employment offer letter generated or can it be replaced with a (yes, i accept the offer letter) option from the system [Marion: We require candidates to sign on the softcopy and revert with attachment.]
3. HR payroll will only get the information regarding newly joined staff right. [Marion: Yes, and only on the newbie's actual reporting day]
4. How many interview sessions a job applicant will attend in total? or is it depends on each candidate. can one candidate attend one interview session and get selected and another job applicant have to attend 2-3 interview sessions. [Marion: at least once or might be more, depends on the hiring panels especially when the higher approver unable to attend the 1st interview session. A 2nd interview might be scheduled if he/she passed the 1st interview]
5. Are the hiring panel personnel from the client the same as personnel from HR-Talent Acquisition? [Marion: HR-TA mainly plays a role as facilitator as well able to share opinion from HR's perspective; Hiring panel are mainly the Hiring Manager whom with vacancy available and he/she are mostly the superior to the shortlisted candidate]

On industrial day 1, Miss Marion did advise all groups to contact her via email as it was her preferred method of communication. Therefore, our group contacted her via email asking her questions regarding the proposed system. The attached image above shows one of the emails sent by Miss Marion as a response to our questions, which was sent via email.