



BUSINESS REQUIREMENTS DOCUMENT FOR IOT INNOVATION LAB WEBSITE REVAMP & ENHANCEMENT

CSP Initiatives: Digital Inovation
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Requestor Directorate:
Requestor Sub-Dir:
Impacted Stakeholder: ☐ Sales ☐ Marketing ☐ B2B ☒ P&T
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Document History

Document Location

This is a snapshot of an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the currency of this document.

The source of the document will be found in: [Repository Information]

Revision History

| | |
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| Date of this revision: | Date of next revision: |
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| Revision Number | Revision Date | Summary of Changes | Changes marked |
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Approvals List

| Name | Title | Sign |
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1. INTRODUCTION

1.1 Overview

1.1.1 Background

Please describe the background / reasons / rationale to initiate the changes for Product / Service as per this Business Requirements as well as Product / Service roadmap (if any)

Telkomsel has developed IoT Lab website as an IoT educational platform and as a media for lending lab facilities to users from both educational institution and IoT startup/developers. However, currently it is difficult to track and monitor the lab facilities which borrowed by partners because the transactions are not recorded and stored in the system. Therefore, the enhancement of IoT Lab website is needed to add inventory management feature for the lab facilities as well as the UI/UX enhancement to improve the user experience. Along with the enhancement, we also propose to revamp the existing IoT Innovation Lab website to improve the quality and the technology used in the website so that the website can be more secure and reliable.

1.1.2 Business Alignment to Corporate Target

Please elaborate relevance of this Business Requirement to the achievement of Corporate Strategic Program/Corporate OKR/Business Directorate OKR

The website revamp & enhancement process is expected to accelerate the IoT ecosystem development in Telkomsel and Indonesia by providing high quality and accessible platform IoT educational platform and lab facilities lending media for various users.

1.1.3 Business Justifications (incl. Market Analysis & Relevant Historical Data when applicable)

Please provide business / market analysis with its supporting data, i.e. business trend, customer trend, product trend, current number of transaction hit / frequent of use – as business justification on why this Business Requirements is necessary to be implemented

If this Business Requirements are proposed to enhance existing Product / Service, please provide relevant historical data, trend, analysis, i.e. performance of current Product / Service (actual vs target MAU / Revenue – depending on each driver), etc

Telkomsel initiated to build IoT Innovation Hub which enables start-ups, developers and universities collaborate to develop IoT solution, bridging networking to Telkomsel IoT Partner, facilitate development process, and supporting on technical issues. In order to make this lab be more reachable and accessible, IoT Innovation Lab website was developed as a platform that can be used to support and provides several facilities which start-ups, developers and university can use on development process on IoT Lab or outside IoT Lab. This website helped the communities to access IoT lab facilities and IoT knowledge and currently being integrated to TINC website to support their activities.

Transaction history of IoT Innovation Lab Facilities: 2019

| Data Transaksi 2019 | | | | | | |
|---------------------|-----------|---------------|--------------------|------------------|-----|---|
| No. | Type Item | Nama Peminjam | Tanggal Peminjaman | Keperluan | Qty | Keterangan |
| 1 | Module | UNSYIAH | 12 Agustus 2019 | Testing Research | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 2 | Dev Kit | UNSYIAH | 12 Agustus 2019 | Testing Research | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 3 | Simcard | UNSYIAH | 12 Agustus 2019 | Testing Research | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 4 | Module | UGM | 12 Agustus 2019 | Testing Research | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 5 | Dev Kit | UGM | 12 Agustus 2019 | Testing Research | 2 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 6 | Simcard | UNSYIAH | 22 Oktober 2019 | Testing Research | 2 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 7 | Module | TEMANS | 13 Desember 2019 | Testing Product | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |
| 8 | Simcard | TEMANS | 13 Desember 2019 | Testing Product | 1 | transaksi manual (dikarenakan fitur peminjaman pada website belum tersedia) |

Summary:

Jumlah Module yang dipinjam ditahun 2019 sebanyak 3 pcs

Jumlah Dev Kit yang dipinjam ditahun 2019 sebanyak 3 pcs

Jumlah Simcard yang dipinjam ditahun 2019 sebanyak 4 pcs

2020

| Data Transaksi 2020 | | | | | | |
|---------------------|-----------|----------------------|--------------------|------------------|-----|-----------------------|
| No. | Type Item | Nama Peminjam | Tanggal Peminjaman | Keperluan | Qty | Keterangan |
| 1 | Simcard | PT. 3S INTERNATIONAL | 11 Mei 2020 | Testing Product | 1 | transaksi via website |
| 2 | Simcard | PT. FUSI | 11 Mei 2020 | Testing Product | 1 | transaksi via website |
| 3 | Simcard | LEASTRIC | 14 Oktober 2020 | Testing Product | 1 | transaksi via website |
| 4 | Module | LEASTRIC | 14 Oktober 2020 | Testing Product | 1 | transaksi via website |
| 5 | Simcard | SIAB | 14 Oktober 2020 | Testing Product | 1 | transaksi via website |
| 6 | Module | SIAB | 14 Oktober 2020 | Testing Product | 1 | transaksi via website |
| 7 | Simcard | UNS | 14 Oktober 2020 | Testing Research | 2 | transaksi manual |
| 8 | Module | UNS | 14 Oktober 2020 | Testing Research | 2 | transaksi manual |
| 9 | Simcard | TEMANS | 23 Oktober 2020 | Testing Product | 1 | transaksi via website |

Summary:

Jumlah Module yang dipinjam ditahun 2020 sebanyak 4 pcs

Jumlah Simcard yang dipinjam ditahun 2020 sebanyak 7 pcs

2021

| Data Transaksi 2021 | | | | | | |
|---------------------|-----------|---------------|--------------------|------------------|-----|------------------|
| No. | Type Item | Nama Peminjam | Tanggal Peminjaman | Keperluan | Qty | Keterangan |
| 1 | Module | UNS | 2 Agustus 2021 | Testing Research | 5 | transaksi manual |
| 2 | Simcard | UNS | 2 Agustus 2021 | Testing Research | 2 | transaksi manual |
| 3 | Module | ITB | 2 Agustus 2021 | Testing Research | 10 | transaksi manual |
| 4 | Simcard | ITB | 2 Agustus 2021 | Testing Research | 2 | transaksi manual |
| 5 | Module | TEL-U | 2 Agustus 2021 | Testing Research | 10 | transaksi manual |
| 6 | Simcard | TEL-U | 2 Agustus 2021 | Testing Research | 2 | transaksi manual |

Summary:

Jumlah Module yang dipinjam ditahun 2021 sebanyak 25 pcs

Jumlah Simcard yang dipinjam ditahun 2021 sebanyak 6 pcs

As currently Telkomsel collaborate with more universities and developers, therefore, the IoT Innovation Lab website should be enhanced for better service and security

1.2 Business Objective

Specify objective / goal intended to be achieved from this Business Requirements

Revamp and enhancing website in order to:

- ✓ Provide effective and efficient way to monitor lab facilities (inventory management) and more user friendly website by improving the UI/UX design of the website
- ✓ Smart inventory management saves required time and resources
- ✓ More secure and reliable website powered by latest and best technology

1.3 Purpose of this Business Requirement

Choose one or more of the appropriate statements and put brief description below

- ☒ Business requirements to enhance existing Services/Application/Process
- ☐ Business requirements to terminate existing Services/Application/Process
- ☐ Business requirements for new Services/Application/Process
- ☐ Business requirements to replace existing Services/Application/Process
- ☐ Others, please specify

Description

Provide detail explanation about necessary requirements to revamp, enhance existing services to support one of business process in Telkomsel

1.4 Program Type

Please choose program type below

If it's an IT-led program:

- | | |
|---|---|
| <input type="checkbox"/> Automation | <input type="checkbox"/> End of support |
| <input type="checkbox"/> Audit compliance | <input type="checkbox"/> Infrastructure |
| <input checked="" type="checkbox"/> Business engagement model | <input type="checkbox"/> License renewal |
| <input type="checkbox"/> Capacity expansion | <input checked="" type="checkbox"/> Integration / modernization |
| <input type="checkbox"/> Cloud | <input type="checkbox"/> Security compliance |
| <input checked="" type="checkbox"/> Digital ways of working | <input checked="" type="checkbox"/> Security enhancement |
| <input type="checkbox"/> End of life replacement | <input type="checkbox"/> Others, please specify: |

1.5 Business Risk

Risk level: Medium

Impact if not delivered:

1. Not able to deliver easier transaction (lending) process for both users and admins
2. Difficult to monitor lab facilities which are borrowed by partners

2 BENEFIT ANALYSIS

2.1 Summary

/1 Benefit 1

| | |
|-------------------------|--|
| Primary Benefit Owner | PT Technology Strategy |
| % Ownership | [100 %] |
| Secondary Benefit Owner | |
| % Ownership | [100 %] |
| High-level Outcome Area | Internal Capability |
| Type of Outcome | Technical Enhancement |
| Details of Outcome | Service Enhancement |
| Outcome driver | [Please specify] <i>New bussines process</i> |

Business OKR:

Benefit has to be filled in for 5 years

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Units |
|-------------------------------|------|------|------|------|------|------|-------|
| Baseline of Outcome Driver | | | | | | | |
| Incremental of Outcome Driver | | | | | | | |
| Target of Outcome Driver | | | | | | | |
| Value per Outcome Driver | | | | | | | |
| Overall Outcome Value | | | | | | | |

Evidence Source

Name of report / app and its detailed table / query:

PIC:

/2 Benefit 2

| | |
|-------------------------|--|
| Primary Benefit Owner | |
| % Ownership | [Input %] |
| Secondary Benefit Owner | |
| % Ownership | [Input %] |
| High-level Outcome Area | |
| Type of Outcome | |
| Details of Outcome | |
| Outcome driver | <i>Fill here if [Please specify] is selected</i> |

Business OKR:

Benefit has to be filled in for 5 years

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Units |
|-------------------------------|------|------|------|------|------|------|-------|
| Baseline of Outcome Driver | | | | | | | |
| Incremental of Outcome Driver | | | | | | | |
| Target of Outcome Driver | | | | | | | |

| | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|
| Value per Outcome Driver | | | | | | | |
| Overall Outcome Value | | | | | | | |

Evidence Source

Name of report / app and its detailed table / query:

PIC:

2.2 Assumption and Calculation

Clearly & accurately describe the relevant assumption and expected business outcome. Also, include calculation used to develop benefit projection

From the data obtained, Telkomsel can map and model information management, which can be used to improve the transaction & inventarization process, so that it is not only effective in accelerating the IoT ecosystem development but also provides more accurate data or information.

3 SERVICE DESCRIPTION

The services provided are:

- Lab facilities lending request form submission
- Lending request approval in the system by admin and approval notification sent by email
- Monitor stock availability of lab facilities
- IoT self learning, IoT forum and IoT news for general users

3.1 General Requirement

List and clearly describe requirements of the Product / Service that will be part of the scope, i.e. customer journey, features, mock up design, wireframe, use cases, etc. Description should include business functionalities / high level functional capabilities and/or non-functional requirements (i.e. legal & regulatory requirement, quality, performance, etc)

General requirement for website revamp:

- All features from existing website for general users:
 - Introduction menu about IoT Innovation Lab
 - Self learning menu
 - Lab facility menu
 - Solution menu
 - News menu
 - Help menu
 - Sign in (FaceBook & Google sign-in)
 - Join now menu
 - Transaction/order menu
 - Profile menu
- All features from existing website for super admin:
 - All general user menu
 - News management menu (CRUD)
 - Help management menu (CRUD)
 - Transaction management menu (RUD)
 - Product management menu (CRUD)
 - Mentoring management menu (CRUD)
 - Forum management menu (CRUD)
 - User management menu (CRUD)
 - Self learning management menu (CRUD)
 - Slider & all digital content management menu (CRUD)

General requirement for website enhancement:

- Transaction approval in admin side system (Inventory management)
- Stock monitoring (Inventory management)
- UI/UX design enhancement to be matched with TINC web design
- Reminder/notification features for user and admin when transaction has been approved/is

about to expire

- Nice-to-have: shipping track for transaction delivery

3.2 Product / Service Specification

This section shall specify target market, eligibility including limitation / restriction, and tariff plan of the Product / Service

| | |
|---|---|
| Target Market Segmentation <i>(Market segmentation consisting of group of customer being targeted by changes in Product / Service requested in this Business Requirements)</i> | <input type="checkbox"/> HVC <input type="checkbox"/> Non HVC <input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/> Corporate <input checked="" type="checkbox"/> Governance <input checked="" type="checkbox"/> Targeted segment, please specify: [Educational Institution] |
| Subscriber Eligibility | <input checked="" type="checkbox"/> Telkomsel Customer <input checked="" type="checkbox"/> Telkomsel Employee <input type="checkbox"/> Others, please specify: |
| Brand Eligibility | <input type="checkbox"/> SimPATI <input type="checkbox"/> AS <input type="checkbox"/> Loop <input type="checkbox"/> HALO <input type="checkbox"/> ByU <input checked="" type="checkbox"/> Others, please specify: IoT Simcard |

| | |
|--|--|
| Channel Eligibility | <input type="checkbox"/> Self service channel <input type="checkbox"/> Assisted channel <input type="checkbox"/> UMB, please specify ADN <input type="checkbox"/> SMS, please specify ADN <input checked="" type="checkbox"/> Web, please specify <input type="checkbox"/> Walk-in, please specify <input type="checkbox"/> Call-in, please specify <input type="checkbox"/> Mobile Apps, please specify <input type="checkbox"/> 3rd Party Channel, please specify |
| Partner Eligibility | <input type="checkbox"/> Authorized Dealer <input type="checkbox"/> Sales Force <input type="checkbox"/> Outlet & Reseller <input type="checkbox"/> Modern Channel <input checked="" type="checkbox"/> Others, please specify: Telkomsel IT and Business Development |
| Area Coverage | <input checked="" type="checkbox"/> National-wide <input type="checkbox"/> Selected Area, please specify: |
| Product / Service Terms and Conditions | Customer restriction / limitation to purchase / register this product / service (if any): max. 2 devices (for each transaction) Eligible time period for customer to purchase / register this Product / Service (if any): max. 2 months (for each transaction) Product / Service compability and correlation with other Product / Service (if any): |
| Tariff Plan <i>Tariff Plan may cover, but not limited to:</i> - <i>Product Initiation Charges – one time charges that can be taken from the customer as a part of installation, activation, service or initiating a connection</i> | <input type="checkbox"/> Initiation Charges <input type="checkbox"/> Periodic Charges <input type="checkbox"/> Termination Charges <input type="checkbox"/> Usage Charges <input checked="" type="checkbox"/> Others, please specify: no charge Please also describe tariff plan before and after changes Before: After: |
| Product / Service Expire Period | simcard expire period after activated is 1 month |

3.3 Business Process

3.3.1 Business process impact

- ☐ New business process
- ☒ Existing business process, please specify impact: Fundamental Change

3.3.2 Description

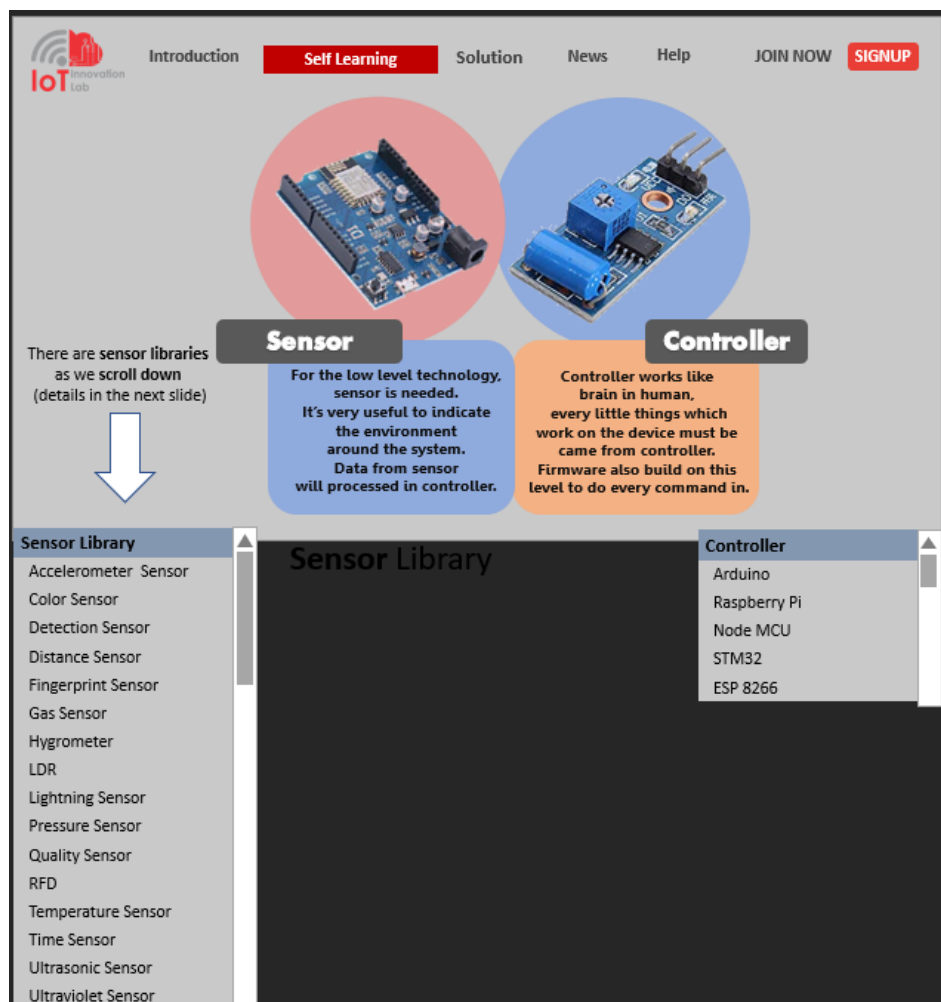
Describe the Business Process (including linkage of activities and resources involved) resulted by the changes to Product / Service using flowchart / service flow / other business process model. If existing business process is changing, please include before and after process

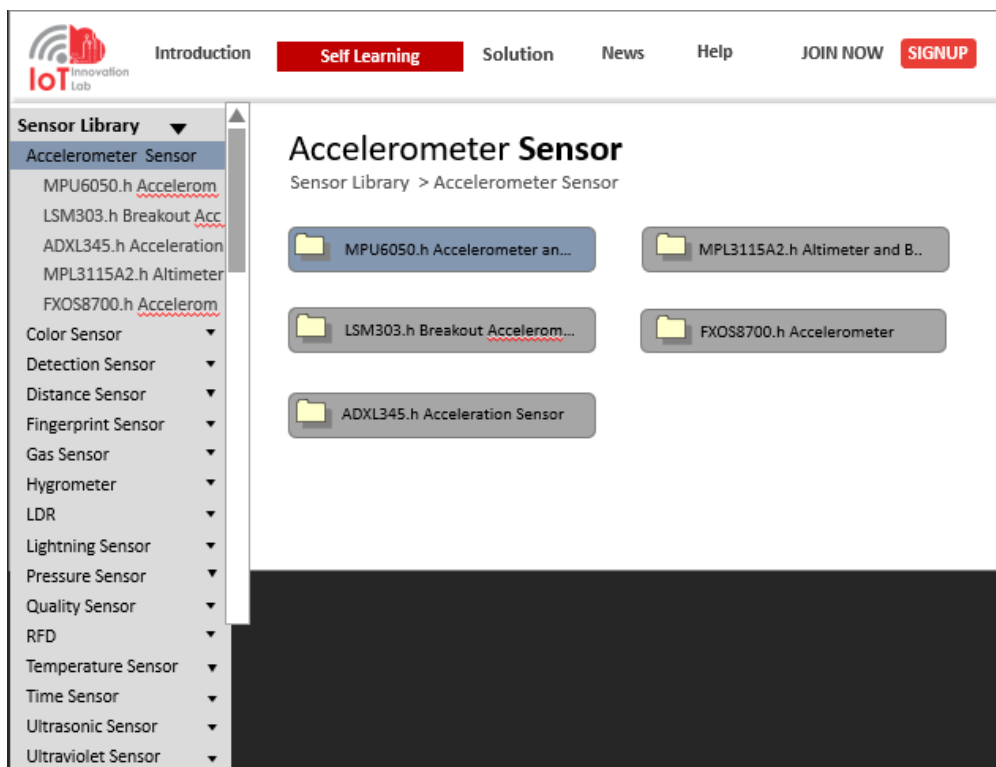
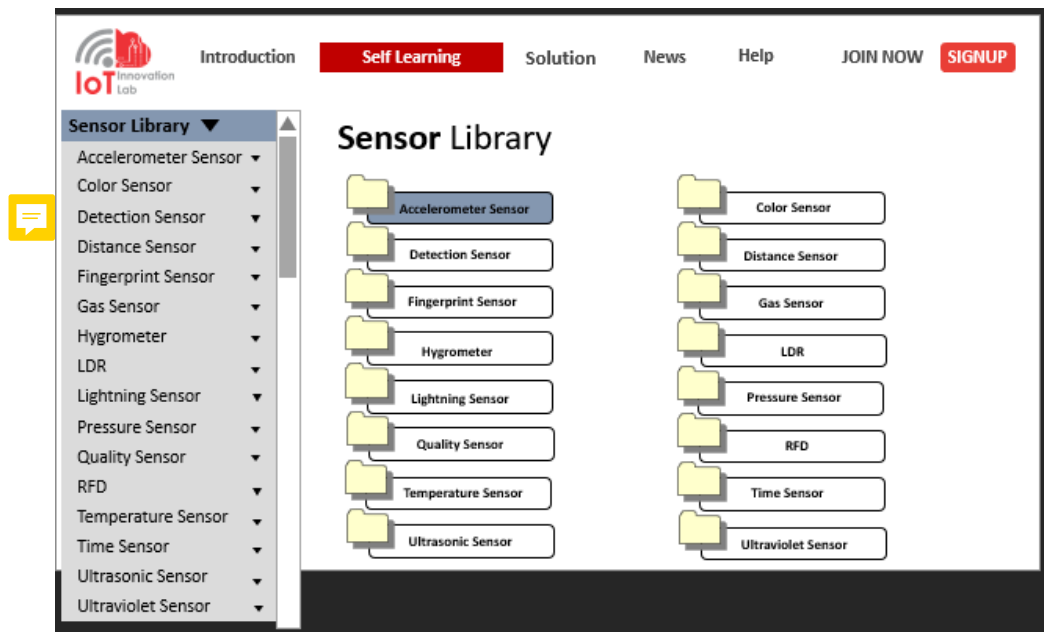
REVAMP WEBSITE IOT INNOVATION LAB

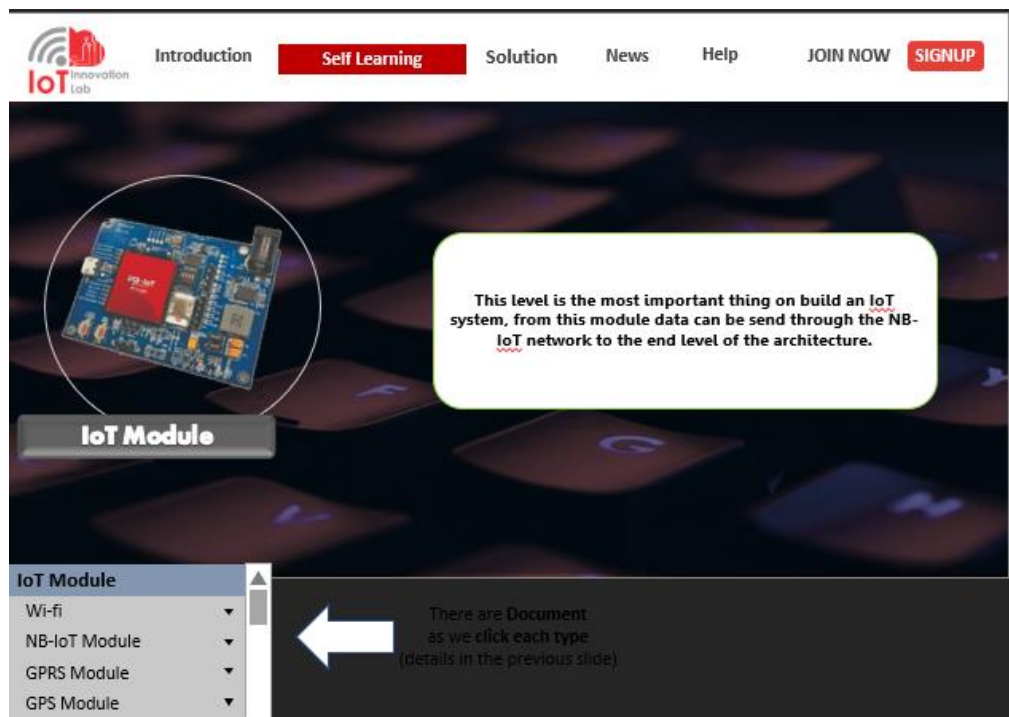
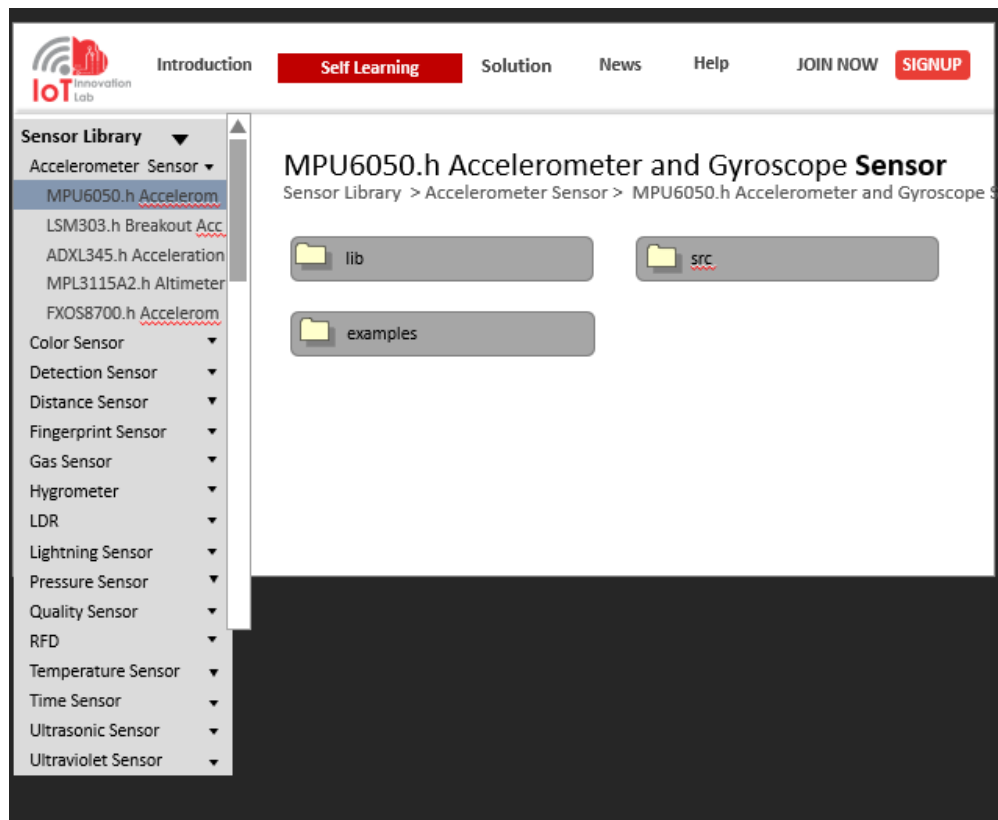
General User



- Introduction menu
This menu provides general information about IoT Innovation Lab, LPWA and NB-IoT
- Self learning menu
This menu provides all information about IoT so users can access this feature to learn more about IoT Technology. Content can be updated regularly and not limited to text, images and videos.









This following advance module is being provided by Telkomset, to help you focus on one device. Built firmware, data processing & sending data with this device.

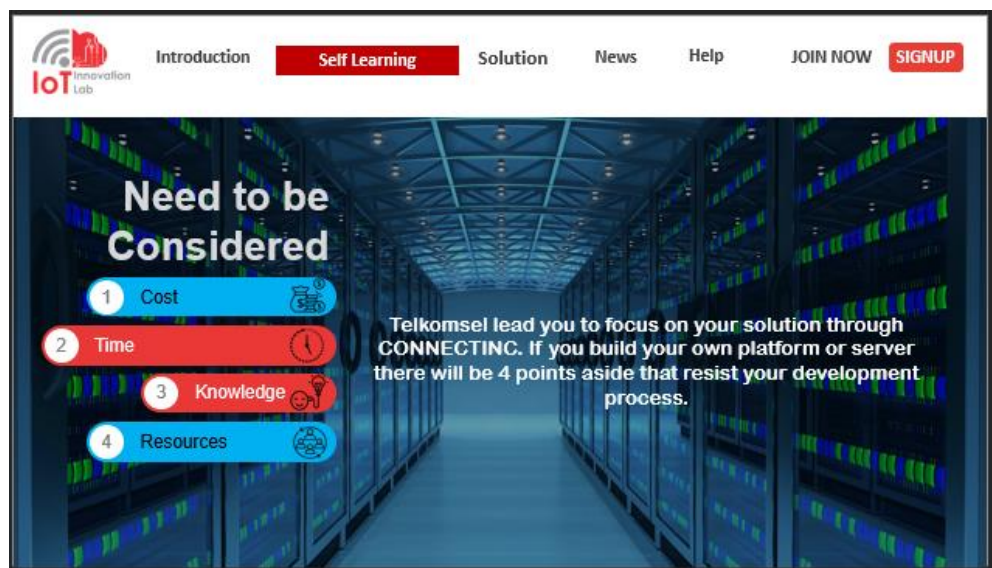
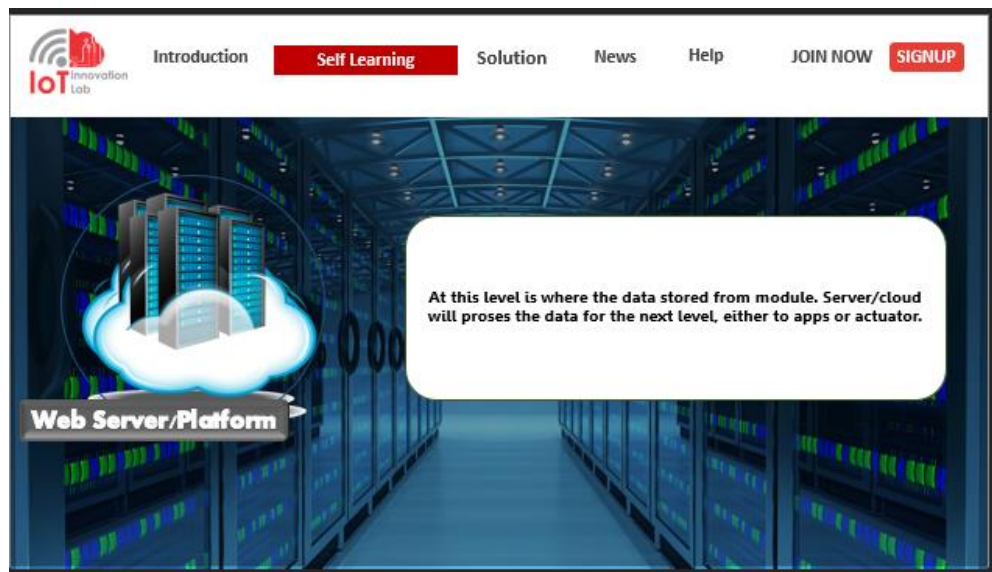
| PROTOCOL | CHIPSET | NETWORK SUPPORT | STORAGE | INTERFACE | DRIVER |
|--|---|---|--|--|---|
| <ul style="list-style-type: none">TCPHTTP/HTTPSMQTTCoAPUDP | <ul style="list-style-type: none">Qualcomm MDM 9206 | <ul style="list-style-type: none">NB-IoTLTE-M4G/LTEGPS | <ul style="list-style-type: none">RAM 64 MB DDRROM 128 MB | <ul style="list-style-type: none">UART/2C/SPI/SIMGPIO | <ul style="list-style-type: none">WindowsLinux |

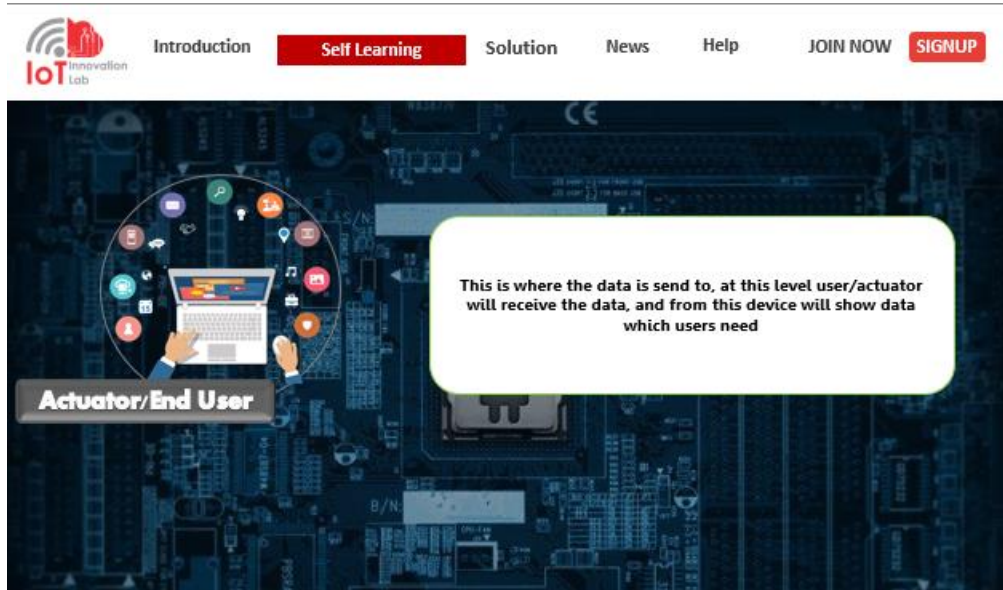
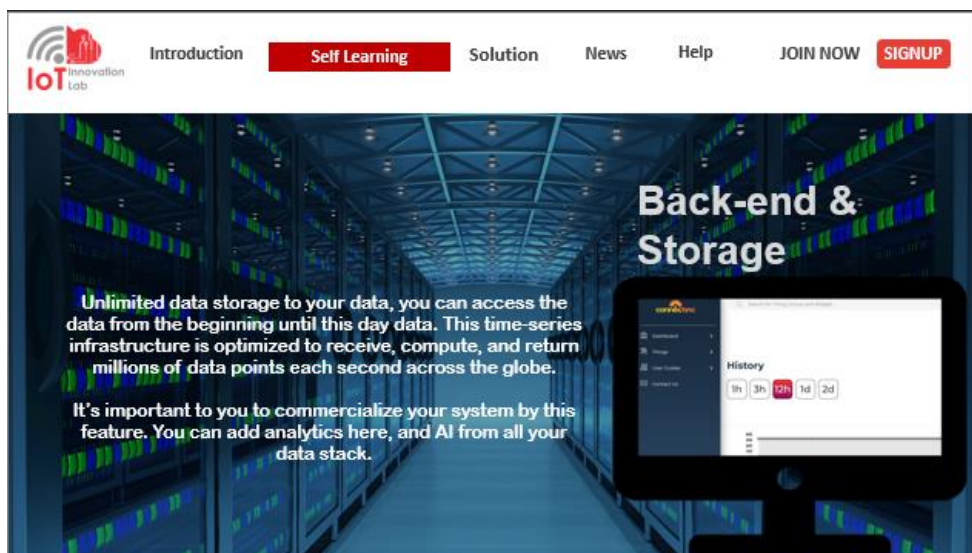
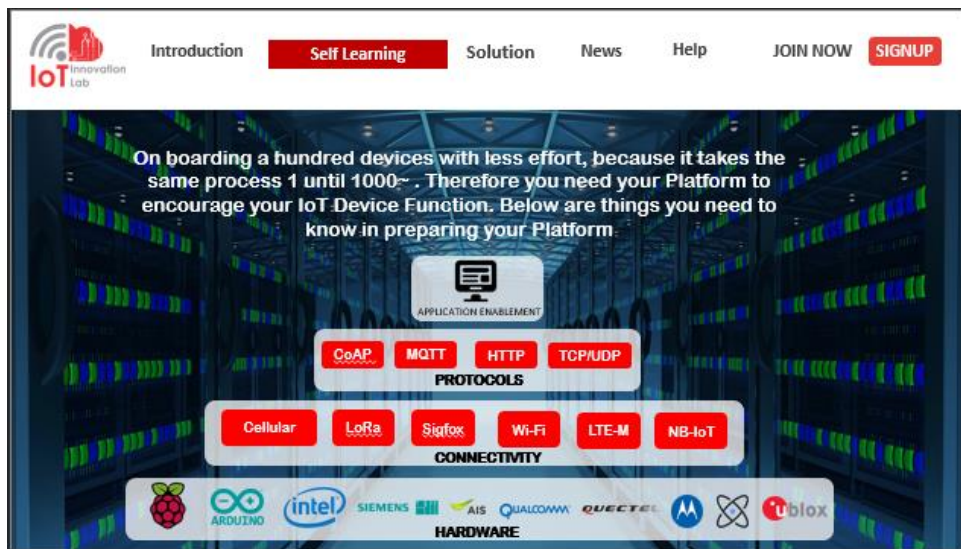
You also can try tested module

Need to be Considered

- 1 Protocol support
- 2 Interface
- 3 Band Support
- 4 Antenna Coverage

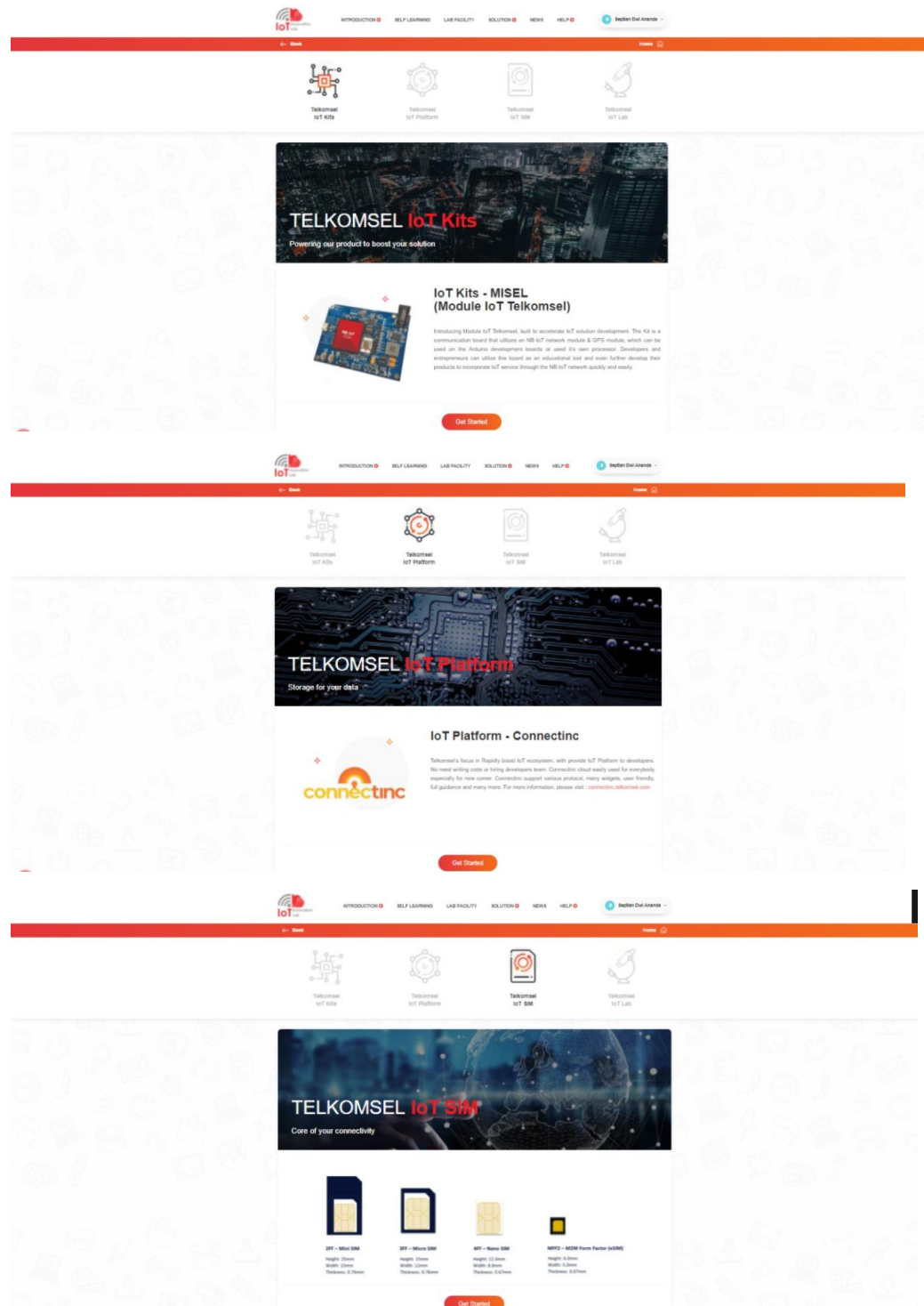
Logos for Telit, SIM Com, Qualcomm, u-blox, and Quectel are displayed.





- Lab Facility menu

This menu provides information about lab facility that can be borrowed by users





- Solution menu

This menu provides information about:

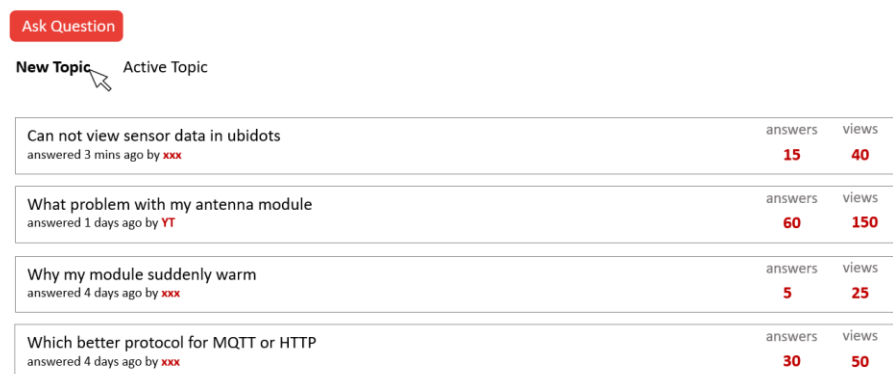
- Mentoring menu

This feature allows users to get mentorship related to IoT technology

- Forum menu

This feature allows users to discuss in a forum.

1. User can access this feature from home by clicking **Forum** menu
2. User can create a topic to be discussed with other users and chat with other users in the forum



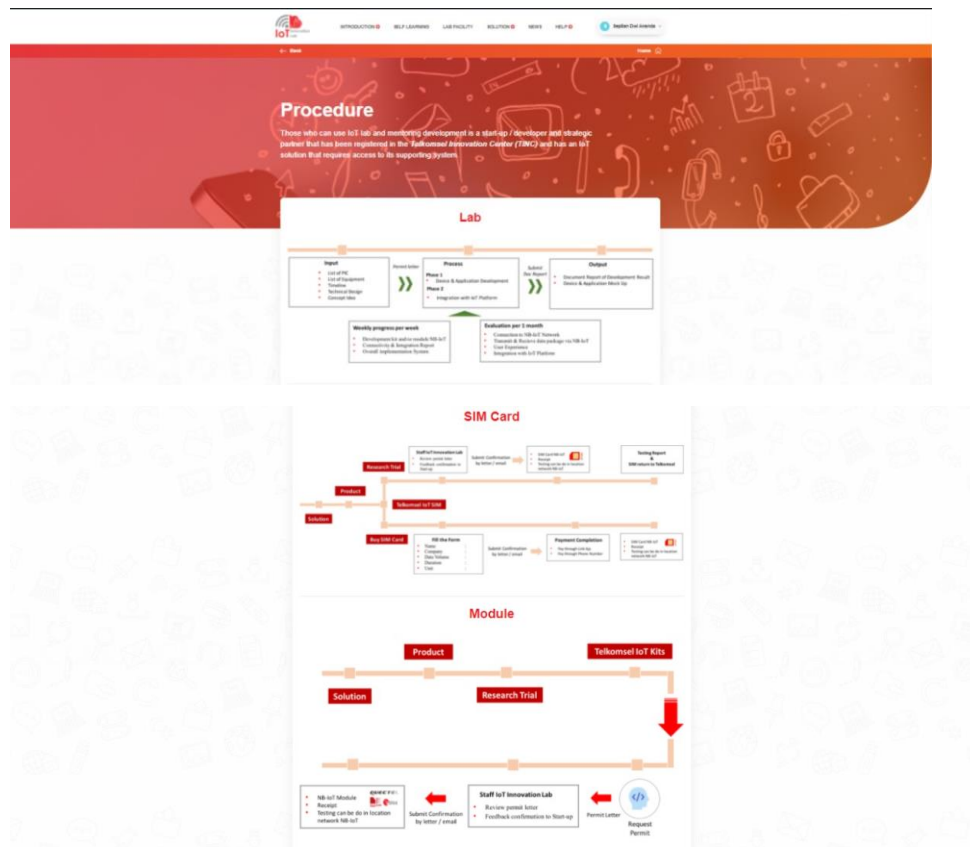
- News menu

This menu provides information about IoT lab update activities & news

- Help menu

This menu provides general information needed by users such as FAQ and procedures to borrow IoT lab facility. The sub menus are:

- Procedure



- FAQ
- Feedback
- Sign In menu
This menu allows user to access all user features in the website. The sign in methods are by registering account, signing in using google and signing in using facebook.
- Join Now (Register) menu

The screenshot shows the registration form for the IoT Innovation Lab. The form is titled 'Sign up for your IoT Innovation Lab Account' and includes the following fields: First Name, Last Name, User Name, Email, Password, Confirmation, Company, and Phone. There is a 'Create' button at the bottom right of the form. Below the form, there is a link that says 'Already have an IoT Innovation Lab account? Login here'.

This menu allows user to register account to access all user features in the website including but not limited to borrowing IoT lab facility.

1. User can access this feature by clicking **Register** menu
2. User need to fill in this form to register an account
3. After submitting the form, user will be notified to verify the email
4. After verifying the email, user can log in to the account

- First Name (String)
- Last Name (String)
- Email (String)
- Phone number (String)
- Company (String)
- Primary Address (String)
- Secondary Address (String)

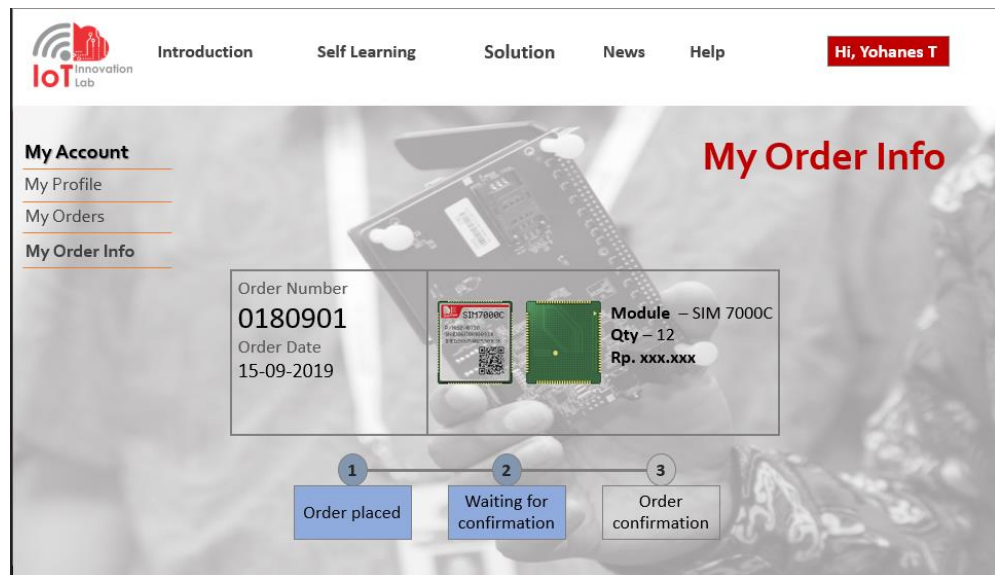
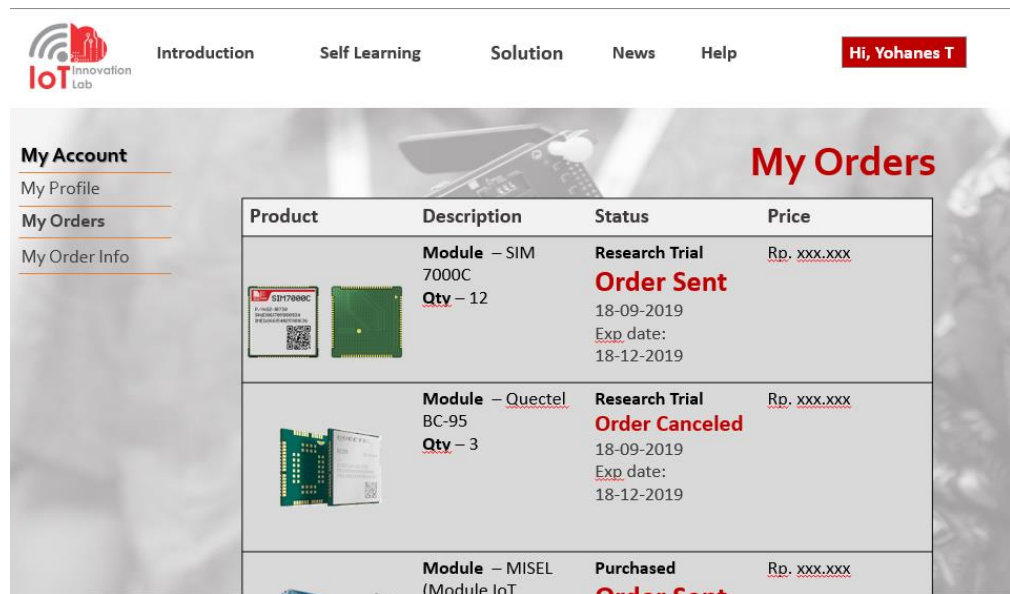
- Transaction/order menu

Rental form:

- Name (String)
- Email (String)

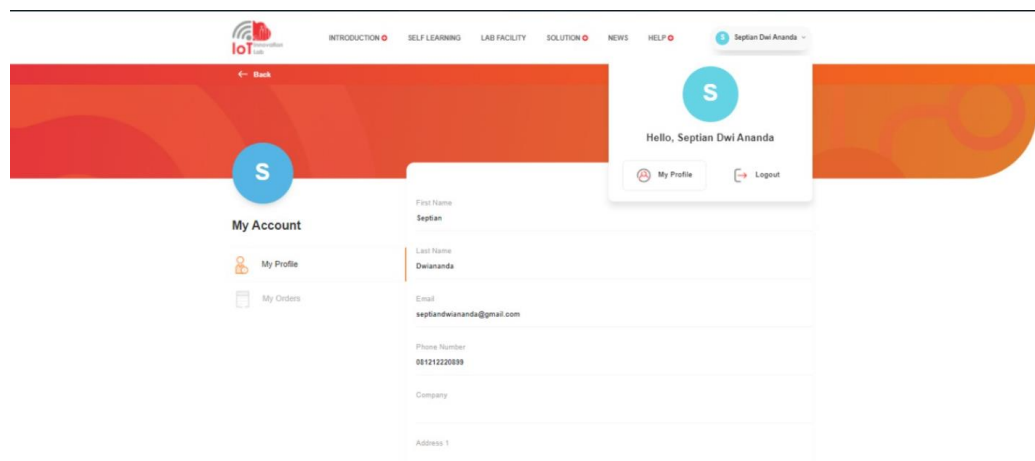
- Phone number (String)
- Company (String)
- IoT Lab Facility to be borrowed
- Duration
- Unit (int)
- Use case (String)
- SIM Card order process flow:
 - User accesses menu Solution --> Product --> Research Trial --> Request Permit, then user fill out the order form
 - Staff IoT innovation Lab will review permit letter and then send confirmation to user by email
 - If the order is approved, then Staff IoT innovation lab will print and send the order receipt
- Lab facility rental process flow:
 - User fill out the form (list pic; list of equipment; timeline; technical design; concept idea)
 - Staff IoT innovation Lab will send the Permit letter
 - Process (phase 1 device & application development; phase 2 integration with IoT Platform)
 - Submit document report (weekly progress, evaluation per month)
 - Output (document report of development result; device & application mock up)
- IoT Module order process flow:
 - User accesses menu Solution --> Product --> Research Trial --> Telkomsel IoT Kits --> Request Permit, then user fill out the order form
 - Staff IoT innovation Lab will review permit letter and then send confirmation to user by email
 - If the order is approved, then Staff IoT innovation lab will print and send the order receipt

In this menu, user can also track their orders.



- Profile menu

In this menu, user can read and update their data.



Super Admin

- News management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all content from news menu

Form:

- ID (int)
- News Title (String)
- News Slug (String)
- News Content (String)
- Featured Image (String)
- Published Date (Date)
- Meta Title (String)
- Meta Keywords (String)
- Meta Description (String)
- Is status (Binary, 0 = published, 1 = drafted)
- Is deleted (Binary, 0 = active, 1 = deleted)

- Help management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all content from help menu

FAQ form:

- ID (int)
- Question (String)
- Answer (String)
- Position order (int)
- Is status (Binary, 0 = published, 1 = drafted)
- Is deleted (Binary, 0 = active, 1 = deleted)

Feedback form:

- ID (int)
- Feedback Name (String)
- Feedback Email (String)
- Feedback Question (String)
- Feedback Date (Date)

- Is status (Binary, 0 = published, 1 = drafted)
- Is deleted (Binary, 0 = active, 1 = deleted)

- Transaction management menu (RUD)

This menu allows admin to manage (Read, Update, Delete) all transactions created by users

Transaction Form:

- ID (int)
- User id (int)
- Transaction user name (String)
- Transaction user email (String)
- Transaction user phone (String)
- Transaction user company (String)
- Grand total (int)
- Quantity order (int)
- Transaction date
- Return date
- Type (int, 1 = pembelian, 2 = peminjaman)
- Product type (int, 1 = iotkits, 2 = iotsim, 3 = iotfacility)
- Description (String)
- Is status
- Is deleted
- Stock id (id stock based on product)
- Facility id (from facility table)
- Quantity (int)
- Price (int)
- Use case (String)
- Data volume (char)
- Duration (char)
- Unit (int)

- Product management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all products of IoT Innovation Lab

Facility Form:

- ID (int)
- Facility name (String)
- Description (String)
- Attachment (String)
- Is status
- Is deleted

Product Form:

- ID (int)
- Product name (String)
- Product type (int, 1 = iotkits, 2 = iotsim)
- Description (String)
- Price buy (int)
- Price rent (int)
- Stock (int)
- Attachment (String)
- Is status
- Is deleted

- Mentoring management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all contents from mentoring menu

Form:

- Connect ID (int)
- User ID (int)
- Email (String)
- Subject (String)
- Message (String)
- Created date (Date)
- Is status (Binary, 0 = published, 1 = drafted)
- Is deleted (Binary, 0 = active, 1 = deleted)

- Forum management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all contents from forum menu

Forum Post Form:

- ID (int)
- Topic ID (ref topic table)
- Post content (String)
- Post date
- Post by (refer to user id)
- Is deleted

Forum Topic From:

- ID (int)
- Topic Subject (String)
- Topic Slug (String)
- Topic date
- Topic views
- Topic votes
- Topic by (ref to user id)
- Topic active (binary, set by admin)
- Is deleted

Forum Topic View From:

- ID (int)
- Topic ID (int)
- IP address (String)
- Viewer at
- Created at

Forum Topic Vote From:

- ID (int)
- Topic id (int)
- Vote up (int)
- Vote down (int)
- Vote by (ref to user id)
- Created date
- Is deleted

Forum Replies From:

- ID (int)

- Topic id
- Reply content (String)
- Reply date
- Reply vote
- Reply by
- Is deleted

Forum Replies Voting From:

- ID (int)
- Reply id
- Reply vote up
- Reply vote down
- Reply vote by
- Created
- Is deleted

- User management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all users data

Form:

- ID (int)
- User name (String)
- User password (String)
- User email (String)
- Last change password (Date)
- Last logon (Date)
- Register date (Date)
- User type (int, 1 = personal, 2 = company, 3 = developer/startup)
- Is verify (binary)
- Code verify (char)
- Is status
- Is deleted
- Oauth id (String)
- Oauth provider (facebook/google/-)
- First name (String)

- Last name (String)
- Company name (String)
- Phone number (String)
- Address (String)
- Secondary Address (String)
- Self learning management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all contents from self learning menu. Content can be submitted in the form of text, images and videos.

Category Form:

- ID (int)
- Parent id
- Name category (String)
- Introduction (string)
- Slug (String)
- Image category (String)
- Description (String)
- Is status
- Is deleted

Item Form:

- ID (int)
- Menu id (int)
- Category id (int)
- Title (string)
- Description (string)
- Url (String)
- Path file (string)
- Is status
- Is deleted

Menu Form:

- ID (int)
- Category id
- Title (String)
- Slug (String)

- Is status
- Is deleted
- Slider & all digital content management menu (CRUD)

This menu allows admin to manage (Create, Read, Update, Delete) all other digital contents such as content in slider, banner, etc. Content can be submitted in the form of text, images and videos.

Slider Form:

- ID (int)
- Title (String)
- Description (String)
- Image (String)
- URL (String)
- Is published
- Sequence (int)
- Date created

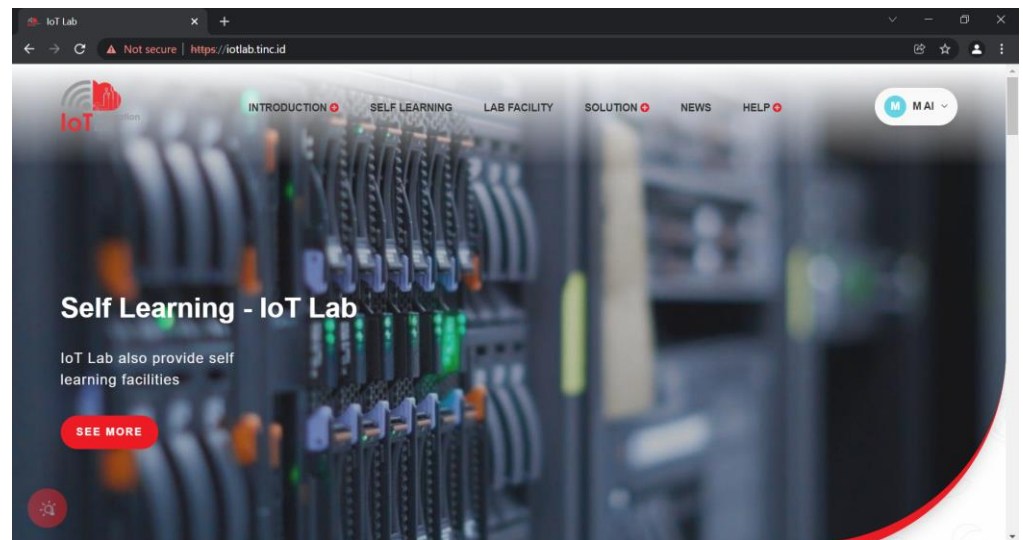
ENHANCEMENT WEBSITE IOT INNOVATION LAB

- a. Business process for transaction approval

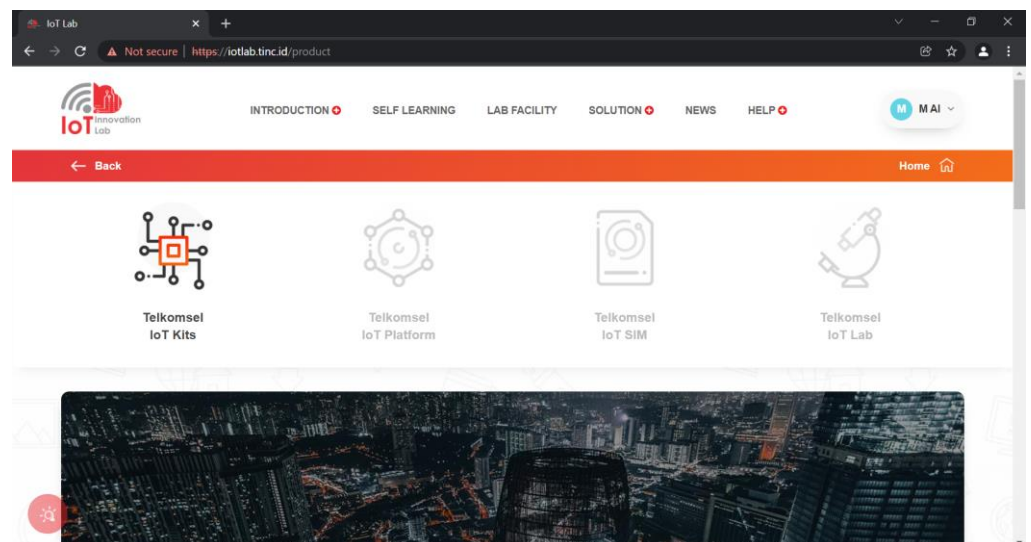
Note: This enhancement **will not** change the procedure/policy of borrowing process to be fully automated. The approval for the request will still be evaluated by related team, but the approval status and the approved quantity will be stored in the system.

Before

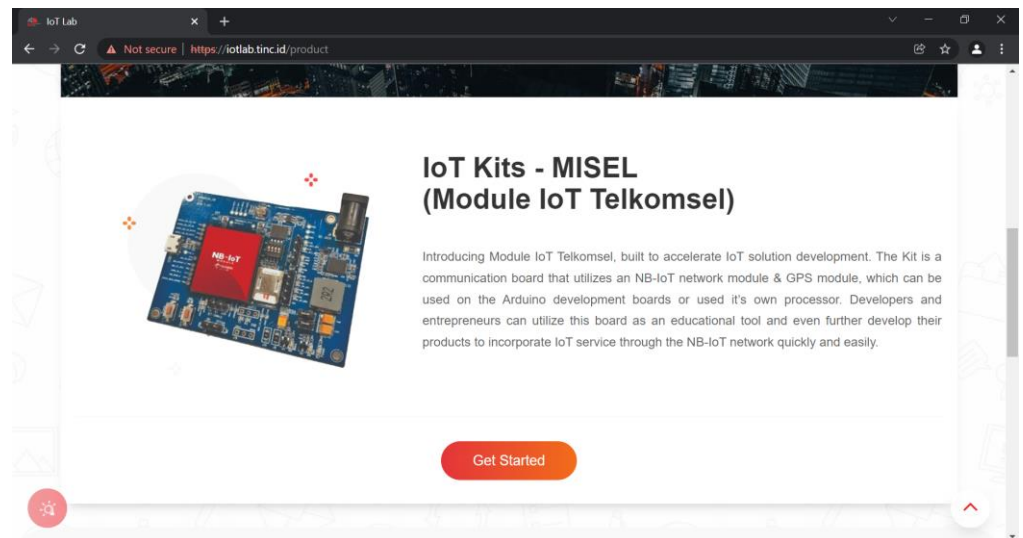
1. Users log in to their account in <https://iotlab.tinc.id/login> (user need to register first before being able to access the transaction menu in the application)
2. After logged in, user can go to LAB FACILITY to borrow any kind of lab facilities



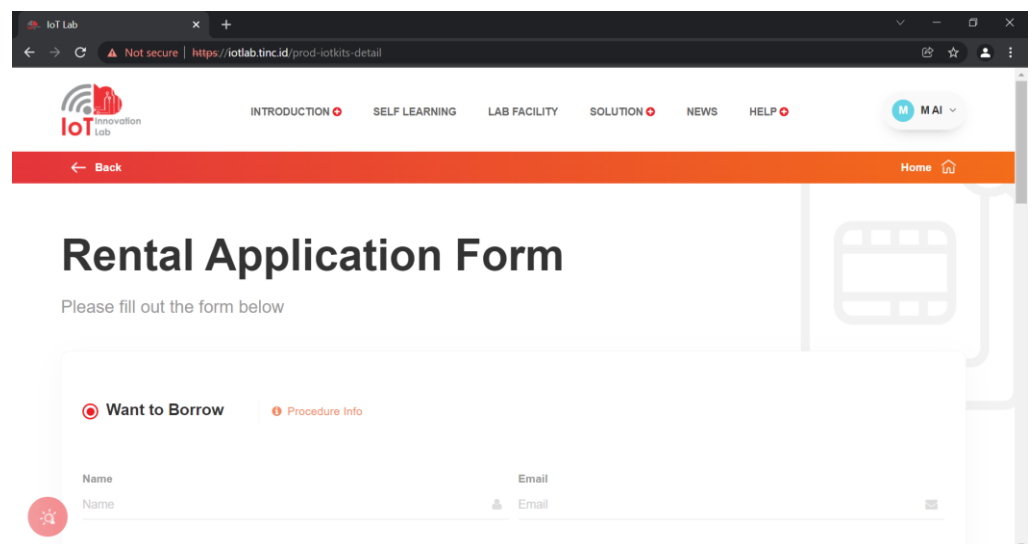
3. Then, user can choose which facilities they want to borrow. There are 4 options: Telkomsel IoT kits, Telkomsel IoT platform, Telkomsel IoT SIM and Telkomsel IoT lab



4. After choosing one of the facilities, user can scroll down and click on GET STARTED button



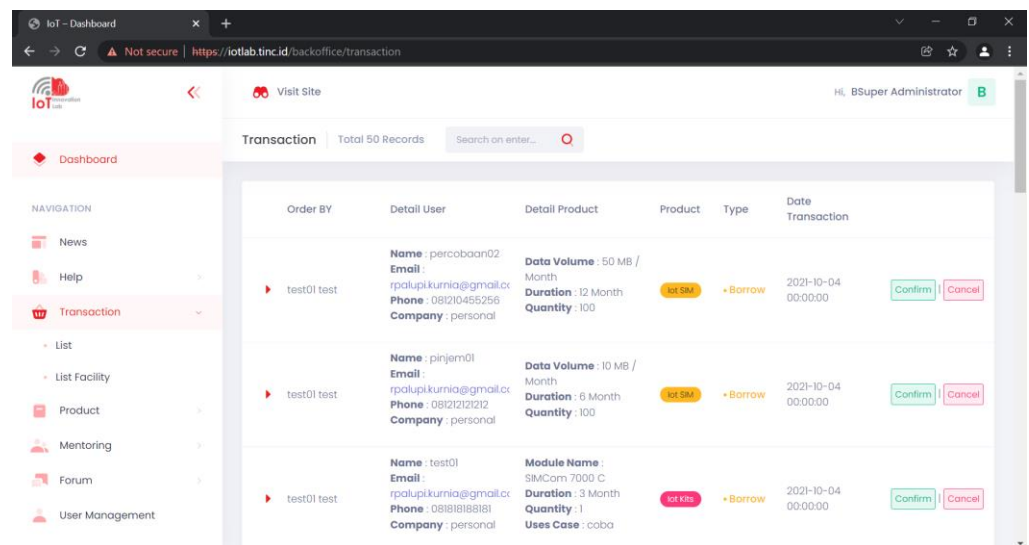
5. User need to fill in the request form based on the kind of facilities they want to borrow



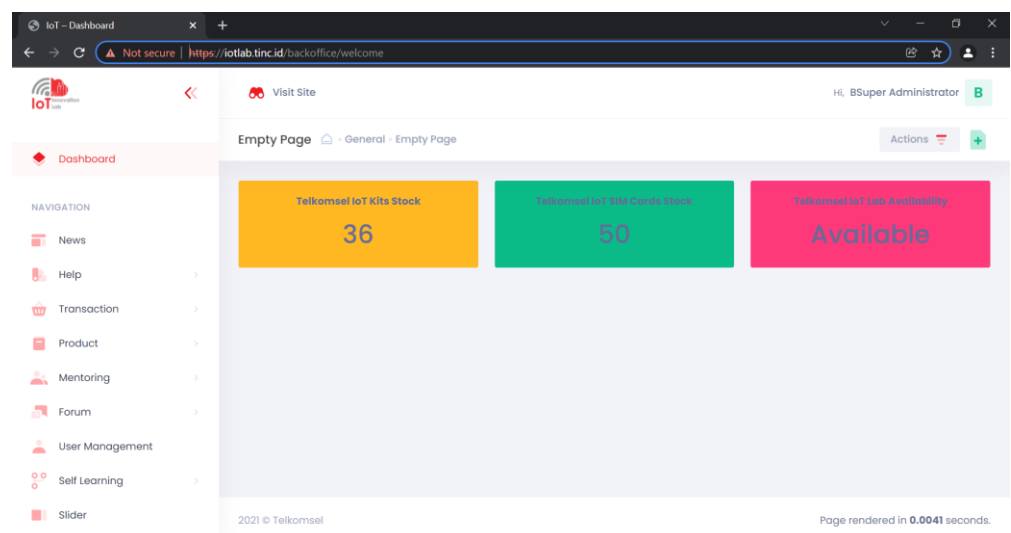
6. After submitting the form, user will be notified by email from IoT Innovation Lab related to the approval of their transaction. In this version, the approval is not done using the application (manual process).

After

1. The transaction request process is same as above
2. Admin can check the transaction requests by accessing backoffice application in Transaction sub menu

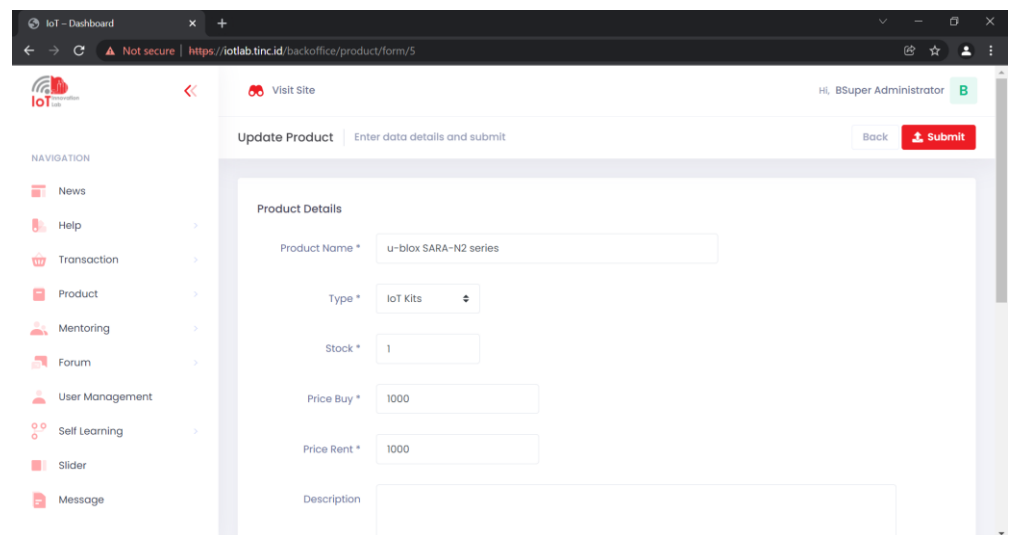
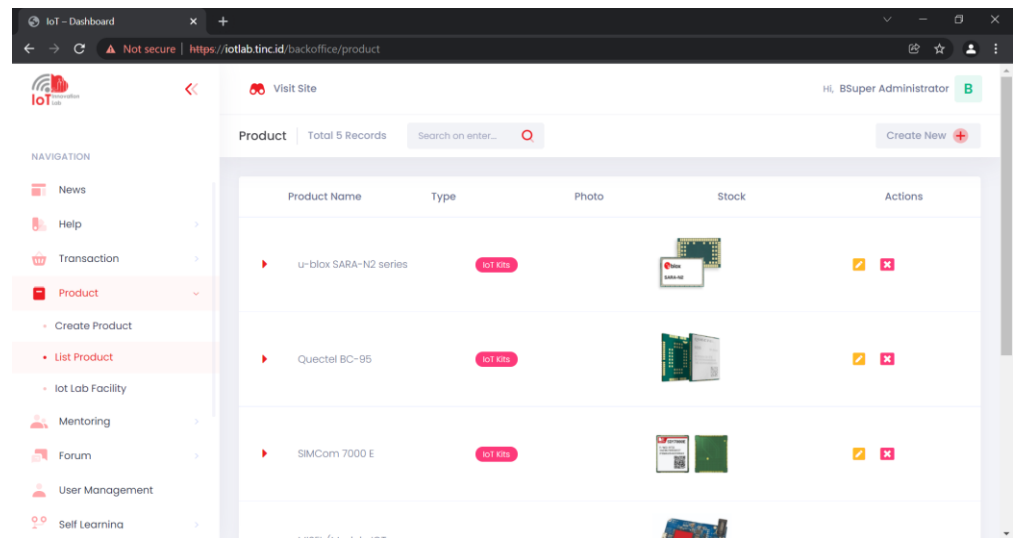


- Admin can approve or cancel the transaction by clicking the listed button after evaluate the request
- The system will automatically notify the users about their transaction status by email or phone number
- This process will also update the stock of lab facilities in the system which can be accessed in Dashboard
- User and admin can track the shipping delivery process from the website (nice-to-have feature)
- In any case when user still has unfinished transaction (the items borrowed not yet returned to Telkomsel), user can still request to borrow IoT Lab facilities but the transaction needs to be equipped with remarks which stated that the user still not yet return the items borrowed from previous transactions.

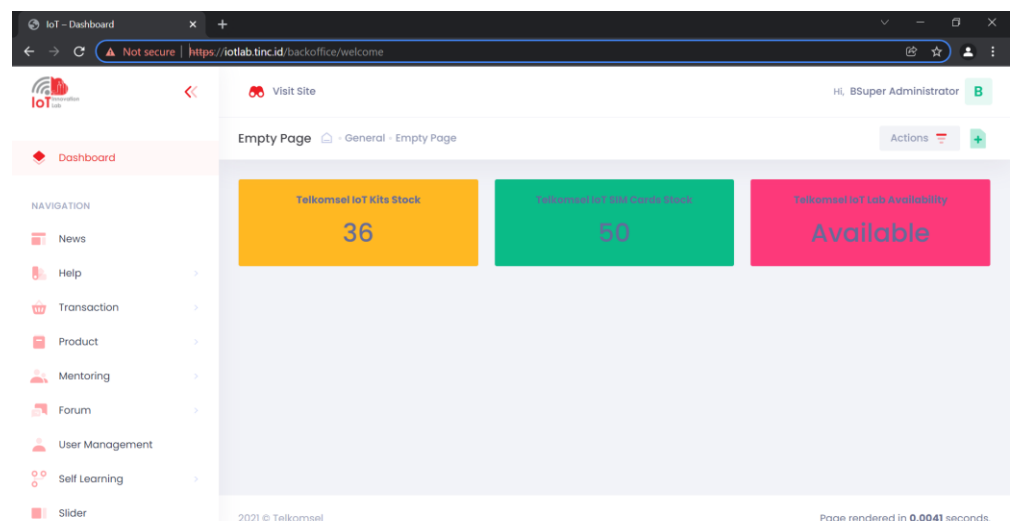


b. Business process for stock monitoring

- Admin can update regularly the stock of each lab facilities using sub menu PRODUCT -> LIST PRODUCT -> Pilih icon pencil di kolom Actions



2. Current stock will also be displayed in Dashboard menu



3.3.3 Security

Define identified risk of changes and general protection security model (Access Matrix) to protect the Product / Service (from business point of view)

The webportal app can be accessed by internal and external stakeholders.

Access Matrix:

| Content Management (News, article, self learning, etc.) | | | | |
|---|--------|------|--------|--------|
| | Create | Read | Update | Delete |
| Admin | v | v | v | v |
| User | | v | | |

| Order Transaction (Lab Facility) | | | | |
|----------------------------------|--------|------|--------|--------|
| | Create | Read | Update | Delete |
| Admin | | v | v | v |
| User | v | v | | |

| User Registration | | | | |
|-------------------|--------|------|--------|--------|
| | Create | Read | Update | Delete |
| Admin | v | v | v | v |
| User | v | v | v | v |

3.3.4 Organization and policy

Describe organization and policy impacted as a result of changes in business process / Standard Operating Procedure (SOP)

User level access management :

Super admin

Common User

3.3.5 Service Delivery Plan (for new application)

Describe Service Delivery Plan as defined in SLA for each Product / Service

Q2 2022

3.4 Complain Handling

3.5 Reporting

This section defines revenue reporting requirements (level, format, aggregation) associated with changes to Product / Service

| Attribute | Description |
|--|---|
| Productline (Usage) | L1: L2: L3: L4: Vascode: Content ID: Apps ID: CP Name: |
| Abonemen based Offer (Recurring/One Time) | Offer ID: |
| Bonus | Bonus ID: |

| | |
|------------------------|--|
| Expected Frequency | Daily – Weekly – Monthly |
| Expected Retency | Month/Year |
| Expected Field | |
| Format Output | <ul style="list-style-type: none"> - Visualization (TOIP/BPerform/Spotfire): - Text File: - Table: - Event Based Trigger: - Data Source: - If condition: |
| Other Criteria/Concern | Click or tap here to enter text. |

3.6 Monitoring (if required)

Please specify required monitoring metrics

| Item | Option | |
|---|---|--|
| Business Parameter to be monitored by IT (ITOC) | <input type="checkbox"/> Product/Service Response Time | Formula: |
| | <input type="checkbox"/> Traffic/ Transaction | Formula: |
| | <input type="checkbox"/> Data Integrity and Completeness | Formula: |
| | <input type="checkbox"/> Number of input processed (trx) | Formula: |
| | <input type="checkbox"/> Number of output processed (trx) | Formula: |
| | <input type="checkbox"/> Success Rate | Formula: |
| | <input type="checkbox"/> Failure Rate | Formula: |
| | <input type="checkbox"/> Service/ Product Expiry | Formula: |
| | <input type="checkbox"/> Other, please specify | Formula: |
| Alert to be provided (per event) | <input type="checkbox"/> Response Time | Threshold: |
| | <input checked="" type="checkbox"/> Traffic/ Transaction | Threshold: |
| | <input type="checkbox"/> Success Rate | Threshold: |
| | <input type="checkbox"/> Failure Rate | Threshold: |
| | <input type="checkbox"/> Service/ Product Expiry | Threshold: |
| | <input type="checkbox"/> Other, please specify | Threshold: |
| Alert and Notification Method | <input type="checkbox"/> SMS | <input checked="" type="checkbox"/> Email |
| Alert Content | SMS Content : Click or tap here to enter text. | Email Content: Click or tap here to enter text. |

| | | | | |
|-------------------------|----------------------------------|--------------|---------------|-------|
| Alert Recipient | Name | Phone Number | Email Account | Title |
| | | | | |
| | | | | |
| Others (please specify) | Click or tap here to enter text. | | | |

3.7 Settlement Plan (if applicable)

Please define the settlement plan involving Telkomsel internal / third parties, reference, and key factors referred to in the settlement process

| | |
|----------------------------|---|
| Sharing Model | <input type="checkbox"/> Flat <input type="checkbox"/> Tier <input type="checkbox"/> Progressive <input type="checkbox"/> Multiparty |
| Parameter Basis | <input type="checkbox"/> Revenue <input type="checkbox"/> MSISDN <input type="checkbox"/> Traffic <input type="checkbox"/> Class <input type="checkbox"/> Group |
| Settlement Scheme/ Formula | Click or tap here to enter text. |
| Invoice Generation | <input type="checkbox"/> Daily <input type="checkbox"/> Monthly : Every day(s) Starting on (date): (dd/mm/yyyy) |
| Others, please specify | Click or tap here to enter text. |

3.8 Assumptions and Dependencies

List all assumptions used for the Business Requirements and its dependencies

| |
|--|
| |
|--|

4 RELEASE PLAN

4.1 Target Ready for Service

Target date and time when Product / Service must be ready for service

July 2022

4.2 Commercial Launch

Date and time of new Product / Service to be introduced / launched to market for initial sale

FUT Schedule

Q3 2022

RFC Schedule

Q3 2022

4.3 Internal Socialization Plan (if applicable)

Describe socialization plan to related internal Telkomsel, covering but not limited to target unit to be socialized, schedule, complaint handling mechanism, etc.

Q2 2022,

Socialization to internal related business unit in Telkomsel.

4.4 Rollout Scenario (if any)

Scenario of Product / Service launch to market

5 PRODUCT/SERVICE RETIREMENT PLAN

This section shall describe the criteria and/or condition in which Product / Service as a result of the changes should be considered for retirement / termination

| Attribute | Description |
|---|--|
| Target Parameter | <input type="checkbox"/> Revenue <input type="checkbox"/> Transaction <input checked="" type="checkbox"/> Subscriber <input checked="" type="checkbox"/> User <input type="checkbox"/> Others, please specify: |
| Evaluation Period | <input type="checkbox"/> 2 Years since the Commercial RFS <input type="checkbox"/> Less than 2 Years, please specify: |
| Threshold and Measurement Method to be used to consider retirement of Product / Service | Click or tap here to enter text. |
| Others, please specify | Click or tap here to enter text. |

- If during the Evaluation Period, the product / service does not achieve the threshold, it might be considered to be retired/terminated.
- Notwithstanding the retirement conditions as above, the initiation to retire / terminate Product / Service during Evaluation Period or after the Evaluation Period might take place upon further agreement between the stakeholders.

DOCUMENT SIGNOFF

This document has been approved as the official Business Requirements Document, and accurately reflects the current understanding of business requirements. Following approval of this document, requirements changes will be governed by the project's change management process, including impact analysis, appropriate reviews and approvals, under the general control of the Project Plan and according to company policy.

☒ Any changes / addition of / to Product / Service requested in this document comply to corporate and/or government regulation.

BUSINESS REQUIREMENTS (BR) DOCUMENT FEASIBILITY CHECK LIST

Feasibility Check will be assessed by IT Business Partner upon BR Document submission

| | | Scale | Pass | Score |
|--------------|--|-------|--------------------------|-------|
| 1 | Business Requirement Document Approval is complete (mandatory) <ul style="list-style-type: none">Business requirement has been reviewed and approved by requestor supervisorExpected approval level is Vice President or as per agreed with respective IT Business Partner | 0-1 | <input type="checkbox"/> | |
| 2 | Business Requirement Document is complete (mandatory) <ul style="list-style-type: none">Business requirement has a clear background, objective and use cases, complete with expected User Journey and UI Mockup if necessaryAll relevant information in BR Document Template is filled with required information | 0-1 | <input type="checkbox"/> | |
| 3 | Technology is viable <ul style="list-style-type: none">Technology required for solution is viable | 0-1 | <input type="checkbox"/> | |
| 4 | Expected Release Date is viable <ul style="list-style-type: none">Business has consider complexity of requirement against expected release dateBusiness has ensured enough time is given between request submission and expected release date through proper planning in Business side | 0-1 | <input type="checkbox"/> | |
| 5 | Benefit Calculation supports Business Requirement <ul style="list-style-type: none">Business requirement include Benefit Projection following given templateBusiness Benefit vs Implementation Cost is sufficient (financial and/or non-financial impact) as per benefit analysis performed by IT Business Partner together with IT Team and Finance Business Partner if necessary | 0-3 | <input type="checkbox"/> | |
| 6 | Aligned with Corporate Strategic Plan (CSP) and business Objective Key Result (OKR) <ul style="list-style-type: none">Business requirement inline with Corporate Strategic Plan and/or OKRBusiness requirement mention which OKR is supported from requested products/services | 0-1 | <input type="checkbox"/> | |
| 7 | Aligned with Join Planning Process (JPP) Programs and IT RKAP <ul style="list-style-type: none">Business requirement is planned during Join Planning Process (JPP)Business requirement is budgeted in IT RKAP | 0-1 | <input type="checkbox"/> | |
| 8 | Business Requirement is somewhat mandatory <ul style="list-style-type: none">Business requirement is Top Down Request from managementBusiness requirement is necessary for ComplianceBusiness requirement is necessary to improve User Experience or overall service quality | 0-1 | <input type="checkbox"/> | |
| Total | | | <input type="checkbox"/> | |

Passing Criteria

0 – 3
4 – 6
7 – 8
9 – 10

Poor
Sufficient
Good
Excellent