**SMARTID PROJECT**

**Project Credentials**

Project Name: SMARTID  
Initiation Date: 1 Jan 2025  
Exp Launching Date: 1 Jan 2027  
Budget: RM150K

In-House Development Team:

1. Solution Architect: Wan Morhakim Bin Mokhtar
2. Project Manager: Idrul Fairuz Bin Idris
3. Lead Software Developer: Chong Soo Myong (Korean Expat)
4. System Administrator: Partiban Durai (Indian Expat)
5. DBA & Software Developer: Auni Farhana Binti Mat Yusoff
6. AI & Software Developer: Wan Farah Nadia Binti Wan Morhakim
7. UI Designer: Nurhamizah Binti Marzukhi
8. Test Engineer: Amirah Munirah Binti Mawardi

Software Modules:

1. Smartid TIME (Time Attendance Management System)
2. Smartid POS (Point of Sales)
3. Smartid PAY (e-Wallet)
4. Smartid HUB (Central Management System)

Software Development Platform:

1. Next.js (Web Application)
2. Flutter (Mobile Application)
3. Supabase (Database)

**Background**

The SMARTID project addresses ways of improving the management and quality of life in schools with current available technologies. The Project looks at two areas of interest, which is Time Attendance Management and Cafeteria & Retail Co-Op Management. While there are many of these type of management systems already being implemented, they are often obsolete and the justification to replace them is always undermined by the factor of Cost and Preferences. What if the improvement in the quality of life it brings can relatively be justified? What if the benefit it brings to the Teachers, Staff, Students and Parents outweighs the Cost for consideration? The SMARTID Project is not about assembling Hardware and Software Off-the-Shelf, it involves thorough consideration of implementation and customized solution with applications developed and supported in-house for continuous enhancement and support.

**What is SMARTID ?**

SMARTID is a Software-As-A-Service (SAAS) solution that helps schools to manage Time Attendance, Point of Sales and e-Wallet Transfers. The SMARTID suite consists of smartid TIME, SMARTID POS, smartid PAY and smartid HUB. These applications reside in a Cloud Mesh Server Environment to ensure the utmost availability, scalability and security. SMARTID promotes a Cashless and Cardless environment in Schools and Learning Institutions. Where Buddy Punching in Time Attendance maybe an issue, SMARTID TIME resolves this with Palm Verification. Where the usage of Mobile Phones in schools is prohibited for Students, SMARTID POS allows Users (Students, Teachers and Staff) to make purchases just by using their Palm. Where there is a need to Top Up Account Balance for Purchases in Cafeteria and School Retail Shops, Parents can use their Mobile Phone via the SMARTID PAY e-Wallet application. All transactions and activities are digitally tracked which makes convenient and transparent.

The SMARTID Application Suite includes the following integrated applications:

1. **Smartid TIME**

A Web Application used by School Administrators to manage Attendance of Teachers, Staff, and Students in the School. Attendance is recorded by a Palm Recognition Device, customized to meet the Attendance requirement in most Government and Public Schools. Smartid TIME also includes Leave Management for Teachers and Staff, making it one of the most useful applications for Human Resource Management in Schools.

1. **Smartid TIME Mobile**

A Mobile Application that complements Smartid TIME. It is intended for Teachers and Staff to Register Attendance while they are on Outside Duty (Events, Meeting, Training, etc.) The App records the location of Outside Duty via Geo-Location Services and registers their attendance with it. This feature avoids false attendance reporting when they are away. Smartid TIME is also used by Teachers and Staff to conveniently Apply and Track Leave balance and entitlement.

1. **Smartid POS**

A Point of Sale (POS) Tablet with customizable Cloud POS Software. Smartid POS can be used for Cafeteria and Retail operation. It promotes Cashless, Cardless and Mobile less environment via Palm Verification Technology to receive Payments using Palm. Palm Payment is not only Efficient and Secure but also Convenient for both the Purchaser and Merchant. All Transactions via smartid POS is Transparent and Recorded Online.

1. **Smartid PAY**

An e-Wallet application to facilitate mobile financial transactions. With smartid PAY, Parents, Teachers and Staff can Top Up their smartid PAY via Internet Banking. They can monitor usage and balance of their children’s smartid account and can transfer funds to it for use in their use in school Cafeterias and Retail Co-Op shops nationwide.

1. **Smartid HUB**

A Web Based Application used to centrally manage all smartid Users, Assets, Settings, Incidents and Administration.

* Users include registered Teachers, Staff, Students and Parents.
* Assets include POS Tablet, Palm Scanners, RFID Scanner and Accessories that
* Settings includes POS Save Sets (Operator, Categories, Items, Price, Tax Settings & Fees).
* Incidents include Online Inquiries, Request, Complains and Feedback.
* Administration includes Accounts & Registration, Subscription, Transactional Audit Trails and Authorization.

Smartid HUB is managed only by Authorised Pointgate Staff with strict Biometric Login credentials to ensure that only authorised personnel is allowed to operate the Portal. Multi-Level security authorization is implemented to ensure that only authorised personnel is given access according to their Roles in the smartid HUB Central Management System.

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SMARTID **TIME**TIME ATTENDANCE MANAGEMENT SYSTEM

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Features

* Cloud Attendance, Leave and User Management System
* Realtime Dashboard Display on Attendance and Leave Status
* Clock Attendance via Palm Verification.
* Clock Attendance via Mobile with Auto-Location.
* Palm and Anti-Clone NFC ID Card registration.
* Holiday Management (Public & Assigned Holidays and Weekends).
* Auto calculation for Leave Balance in various Leave Categories
* Apply and Check Leave Record via Mobile

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A diagram of a device

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SMARTPOS is a Point-of-Sale system that uses an Android Tablet and Palm Scanners to conduct Sales in the Cafeteria and Retail Co-Op Stores. It showcases the latest implementation technology by promoting cashless, cardless, and mobile-free payments. Palm Scanner technology is used for all payment activities in the cafeteria.

Buyers such as teachers, staff, and students no longer need to carry cash or payment cards to make purchases. All purchases are made through the SMARTPOS system, and payments are completed simply by scanning the palm. Transactions in the cafeteria are now *easier*, *faster*, and *more secure*.

**Common Features:**

Realtime Data Backup to Cloud Infrastructure  
If the POS is Faulty or Stolen, just continue a spare POS with current Operational Data from the Cloud.

POS is a Tablet with WIFI, 4G and Battery  
While the POS saves all transactional Data to the Cloud, no electricity, no problem. The POS can still operate with optional 4G Network, and the POS can still be powered by its internal Battery.

Online Purchase & Receipt Record  
To promote paperless environment, all purchase records are saved online. It can be retrieved at any time. Nevertheless, the Client still may request for a Hardcopy Printout which is printable via the POS Built-In printer.

Dual Screen  
Operator and Client have separate screens. Client can view their current Balance and Purchase Total before committing on any Purchase.

Multi-Language Support   
The POS can be set to display in the language of choice, e.g. English, Malay, Chinese, Tamil and Arab. More choice of language if required can be added through customization.

Day & Night Mode  
Users can quickly set UI display either in Day or Dark Mode by a click of a button base on the lighting condition and personal preference.

**Special Features:**

Palm Pay  
SMARTID POS supports Payment by using your Palm. Just put your Palm over the Palm Scanner to make fast and secure payment. This is the latest in payment technology for convenience of operations.

Anti-Clone Card Payment Support  
As an alternative to using Palm for Payment or Login, SMARTPOS also supports Anti-Clone NFC Card as an alternative if there is a problem using Palm Payment.

**Benefits**

For Merchants:

* Systematic Ordering & Payment process to expedite purchase in Cafeteria
* Better Control over who is authorised to operate the POS Device by Palm Login
* It’s now Paperless and Transparent when all Sales, Top Up and Cash Out transactions are recorded and saved Online
* Fast configurable Sales Set Menu to expedite Sale Transaction
* Easy to configure Item Price and Tax amount to suit immediate Sales Operations
* Easy to Temporarily Omit Items that is not available for Sale and Re-Instate back when it is available.

For Teachers, Staff and Student

* Faster moving Queue with an efficient Ordering system in place.
* No need to worry about receiving the correct change
* No need to carry Cash
* No need to check for the correct change
* Safer & more Secure method of Payment using Palm
* Now exist a convenient method to Top Up Account Balance via POS or Online Transfer

For School

* Transparency on what Items are being Sold at the Cafeteria and at what Price. Makes it easier to Audit the Operators whether they are abiding to Standards and Regulations.
* Cashless and Cardless environment for a smoother and secure operation in school Cafeteria
* A School Fund derived from the proceeds of Cash Top Up at the POS Terminal. RM0.50 will be automatically allocated to the School Account for every Cash Top. It can be used for purchasing Items in the Cafeteria or school Retail Stores

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A diagram of a smart phone

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**Features**

Phase 1: Immediate

* Top Up Students Account via e-Wallet Transfer
* Add various Account Favourites for easy e-Wallet Transfer
* View Self and Favourite’s Account Balance
* Top Up and Cash Out e-Wallet balance via Internet Banking
* Low Limit Account Balance Alert
* View Transaction Detail on Top Up, Cash Out and Purchase

Phase 2: Service Expansion

* Receive and Make Payments via QR Code from 12+ cross border participating countries
* Receive and Send Remittance to 50+ participating countries

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**A diagram of a smart phone payment system

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**Features**

Phase 1: Immediate

* Quick Search on Users, Assets, Transactions

**About Pointgate**

Pointgate Systems Sdn Bhd was incorporated in 1997 as an ICT company with Business Focus in Systems Integration, ICT Infrastructure and Software Development. Throughout the years, Pointgate has secured Government and Private Sector ICT Contracts worth over RM100M involving The National Security Council, The Royal Malaysian Air Force, Telekom Malaysia Berhad, Ministry of Education (PADU), G7 Aerospace and ATSC.

Pointgate has successfully developed customized applications which includes:

a. NDMS (National Disaster Management Information) for NSC

b. EDU (e-Didik Udara Training & Learning Management System) for RMAF

c. AMMS (Aircraft Maintenance Management System) for G7 Aerospace

d. ADIIS (Air Defence Integrated Information System for ATSC

e. PADU EIS (Power BI & Dashboard) for PADU, MOE

Within the Company we have dedicated Teams for Application Development, System Administration and Maintenance. We maintain our own Data Center in our Headquarters, which we use to Develop and Test all our applications before deploying to Customer Premises.

Effective 1st Jan 2025, Pointgate started on a Software As-A-Service (SAAS) project to improve the Management and Quality of Life in schools with particular interest in Time Attendance Management and Point of Sales in Cafeteria and Retail Co-Op Stores.

The initiative is branded as SMARTID, a Brand which Pointgate will market commercially with integrated Biometric technology for Time Attendance and Point of Sale in Government and Public Schools, locally and international.

The SMARTID Software Applications are all developed and supported In-House which includes the following commercial components:

* SMARTPOS (Point of Sale with Palm Verification)
* SMARTID TIME (Time Management System with Mobile Support)
* SMARTID PAY (e-Wallet)
* SMARTID HQ (Central Application Management System)

More information can be accessed from www.smartid.my