February 23rd, 2023

Nevada County Transit

Contactless Payment Solution Proposal

KUBA

Mr. Robin Van Valkenburgh
Transit Services Division Manager
Nevada County Transit
12350 La Barr Meadows Rd
Suite 3 Grass Valley
CA 95949

February 23rd, 2023

Dear Mr. Robin Van Valkenburgh,

AGREEMENT NO 5-21-70-28-02
CONTACTLESS PAYMENT SOLUTIONS PROPOSAL

Kuba, Inc. (Kuba) is delighted to provide our proposal and pricing to Nevada County Transit (NCT) for Category A: Payment Acceptance Devices (PADs) Scope of Work. We are committed to assisting NCT in achieving its mission and transit goals and objectives.

Our transit networks help build the future. They connect home, healthcare, education and employment. Kuba delivers cutting-edge technology designed to help you optimize the efficiency of your network, built on a proven platform that won't disappoint you. Our transit system simplifies journeys, maximizes operational efficiency and prioritizes commuter experience.

At Kuba, we offer Clever-as-a-Service. Clever is an experienced team who understands operators and riders' needs, create innovative solutions and uses cutting-edge technology to meet those needs in the most effective way.

We are committed to a successful working relationship with NCT. Please reach out to me if you have any questions. My contact details are provided below.

Sincerely,

DocuSigned by:
Brian Frank
53EA2CDD36104E8...

Brian Frank
General Manager North America
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Introduction

Kuba is thrilled to provide the Nevada County Transit (NCT) with a proposal about our contactless fare collection system.

A contactless fare payment system can streamline the ticket purchase process for NCT, providing you with a modern, scalable payment solution onboard your buses. Thus enabling riders to buy passes and multiple single-ride tickets in addition to single-ride tickets.

We believe in Clever public transit. From cutting emissions, boosting the local economy to removing barriers to education, employment, and services, efficient public transportation is key to delivering sustainable long-term change.

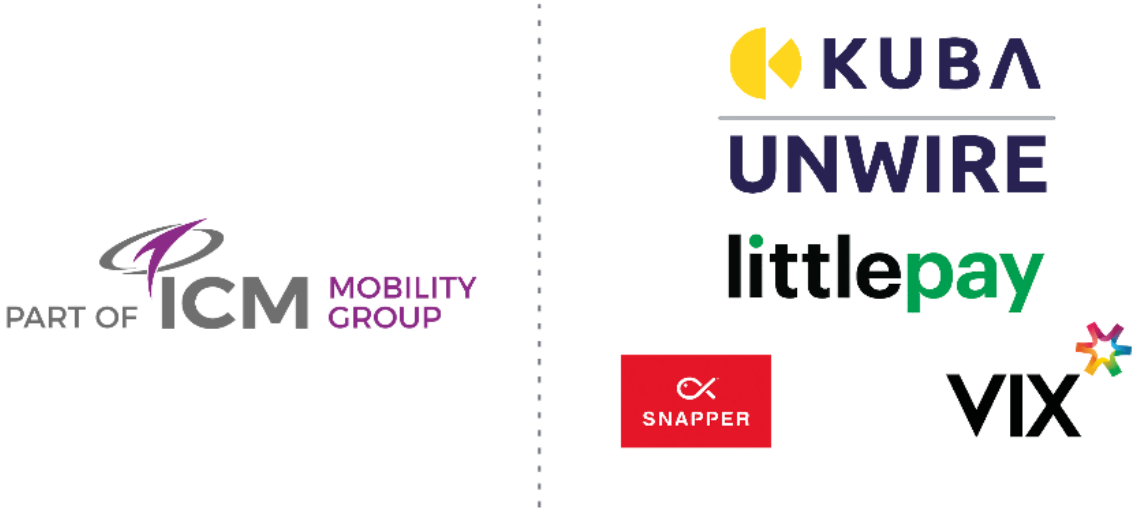
About Kuba

The Kuba Group was founded in 2019 with the vision of removing the burden of ticketing and set about transforming the way riders pay for their transit.

Headquartered in the UK, the Kuba Group was launched to market on July 1, 2020, as a member of the ICM Mobility Group. Today, the Kuba team has over 250 direct employees, based in five regional offices across three continents, with annual revenue of $25.6M.

Kuba is a member of the ICM Mobility Group of companies (refer to **Figure 1: ICM Mobility Group Overview** below). The ICM Mobility Group is focused on the mobility sector for private and public transit.

Figure 1: ICM Mobility Group Overview



The Kuba-Difference

Our industry experience sets Kuba apart from other Vendors. For the past 30+ years, we've solved complex industry challenges by firstly understanding the core needs of our customers to inform how we use our technology. . We apply our extensive transit experience to deliver 'clever-as-a-service,' ensuring that the right technology is applied in the right way to get the right results. As part of our ongoing efforts to upgrade and prepare our platform for the future, we also use our Clever Technology to predict the difficulties the transit sector will encounter in the coming years.

Littlepay, a sister company in the ICM Mobility Group, was awarded an MSA for the Cal-ITP project in Category B: Transit Processor services. Kuba and Littlepay work hand in glove to deliver an EMV solution within the CAL-ITP framework. Littlepay and our validators are integrated, and taps accepted by the validators are processed using Littlepay or any other MSA Transit Processor. Kuba is collaborating with Quality Mobile Installation (QMI), a reputable service and installation business, and is our installation and field support partner in the US. QMI are specialists in the installation and mounting of hardware specifically for the transit sector, with a track record going back 16 years.

The ABT3000 validator is manufactured and serviced in the USA.

Why Choose Kuba

Kuba uses Clever to empower change, improve lives and create opportunities.

Our solutions support the delivery of seamless journeys in over 500 cities and regions worldwide. Combining our leading-edge contactless ticketing platform with over 30 years of transit know-how, our Clever approach minimizes costs, speeds up boarding, and boosts passenger numbers.

We provide a turnkey transit solution and have successfully completed Cal-ITP pilot projects that we are in the process of transitioning to projects. For more information, please refer to the sections below called Successful Cal-ITP Pilots and Payment Devices Projects and Successful Installations below.

Benefits to NCT

At Kuba, we know that technology alone doesn't create a great transit system. That's why we combine 30+ years of transit experience with cutting-edge ticketing technology to deliver Clever-as-a-Service. Our ticketing platform provides you with the benefits as shown in **Figure 2** below, as a member of our constantly expanding global family of clients that depend on and trust us.

Figure 2: Ticketing platform benefits

Our Understanding of the Requirements

NCT wishes to introduce an open-loop payment system that will be accepted as part of a pilot project and to enhance customer experience. To do so, NCT requires sixteen (16) validators for its fleet of buses.

The current NCT fleet consists of 12 vehicles:

- 11 32ft cutaways
- 1 Ford V350 XL transit van
- 14 Validators to be installed
- 2 Spares

Kuba supports NCT's objective and can assist to implement a contactless payment system as a pilot project on it 12 vehicles used in Grass Valley and Nevada City, with 2 zone routes.

Kuba supports NCT's core objectives by assisting with implementing updates to the contactless payments system. We believe in Clever public transit. From cutting emissions and boosting the local economy to removing barriers to education, employment, and human services, efficient public transportation is key to delivering long-term change.

Kuba, as part of the ICM Mobility Group, has been managing Automated Fare Collection (AFC) systems for over 30 years. We make these projects fun, exciting and successful. All of us at Kuba live, eat and breathe every day as a minimum the following principles:

- Customer Obsession - Customers are everything
- Personal Accountability - The job isn't done until it's done
- Raising the bar - Aim for great rather than good
- Community - Business should strengthen local communities

NCT's Existing System

The base fare structure includes:

Fare for fixed route service for Zones 1 and 2:

- Adults Zone 1 - $1.60 Zone 2 - $3.00
- Discount for seniors (65+) Zone 1 - $0.75 and zone 2 $1.50
- Disabled/youth (6-17) Zone 1 $0.75 and Zone 2 $1.50
- Children under 5 ride for free.

One day passes (not transferable) (unlimited rides):

- Adults (18+) Zone 1 - $45.00 and Zone 2 - $90.00
- Discount for seniors (65+) Zone 1 - $2.25 and zone 2 - $3.75
- Disabled/youth (6-17) Zone 1 - $2.25 and Zone 2 - $3.75

Monthly passes (not transferable) (unlimited rides):

- Adults Zone 1 - $4.50 and Zone 2 - $7.50
- Discount for seniors (65+) Zone 1 - $22.50 and zone 2 - $45.00
- Disabled/youth (6-17) Zone 1 - $22.50 and Zone 2 - $45.00

Bus Drivers will only accept fares in exact cash payments. Debit and credit cards are used for purchasing a monthly pass.

After a 6-month trial, NCT will determine the fare capping for daily, weekly and monthly fare cap amounts.

NCT wishes to add bank cards to deny list ONLY after 3 failed attempts of reclaiming outstanding debt of riders. Riders should have the opportunity to settle their debt and remove card from deny list.

The existing system consists of NCT provides the GTFS schedule, which can be found at this link: https://www.transit.land/feeds/f-9qcy-nevadacountygoldcountrystage

Successful Cal-ITP Pilots and Payment Devices Projects

Kuba is delivering a contactless Europay, Mastercard, Visa (cEMV) based fare payment system for CAL-ITP, Santa Barbara County Association of Governments (SBCAG), and public transport operator Clean Air Express. The solution is based on Kuba being the payment systems integrator and providing the Payment Acceptance Devices (PAD)/validators. Kuba is supporting the transfer of the validators for Clean Air Express from pilot to a production environment. The Clean Air Express pilot service has been in operation since December 2020.

Kuba is proud to have been awarded the Capitol Corridor Joint Powers Authority (CCJPA) User Agreement from the start date of April 29, 2022, until the end date of April 28, 2025, for the following products and services:

- 308 validators (ABT3000 validators)
- Device Management Platform
- Support and maintenance

Kuba is proud to have been awarded the Coast RTA User Agreement from July 1, 2022, until the end date June 30, 2027. On September 26, 2022. the project was ready to Go-Live. For this project, we are providing the following products and services:

- 44 validators (ABT3000 validators)
- Device Management Platform
- Support and maintenance

We strongly encourage you to contact any of our ongoing projects or pilots in California to discuss the Kuba experience. Reference details are available upon written request thereof.

Successful Implementations

Our installation partner, QMI, has successfully implemented projects and have the quality, speed, and efficiency which are critical for a smooth installation. We provided an extract below of successful California transit installations done by QMI.

- OmniTrans in San Bernardino, CA, where TSI-video initiatives have been successfully implemented over several phases for the past 12 years.
- San Joaquin RTD (SJRTD) in San Joaquin/Stockton, CA, where they successfully implemented:
  - Voice and Data Radio and
  - Validators
- Long Beach Transit (LBT) in Long Beach, CA, where they successfully implemented Sierra Wireless AirLink® MG90 advanced cellular routers with passenger WiFi.
- Foothills Transit in San Gabriel and Pomona Valleys, where TSI-video installation initiatives were successfully carried out throughout several phases over the course of the last 12 years.

Customer Obsession

Customers are everything. They are the cornerstone of success, and the trust they place in us is hard-won, but easily lost. At Kuba, we don't consider projects as lists of requirements but rather opportunities to deliver a product and service that delights our clients. With great customers who trust and rely on us, we have the foundations of a booming business.

Our Solution

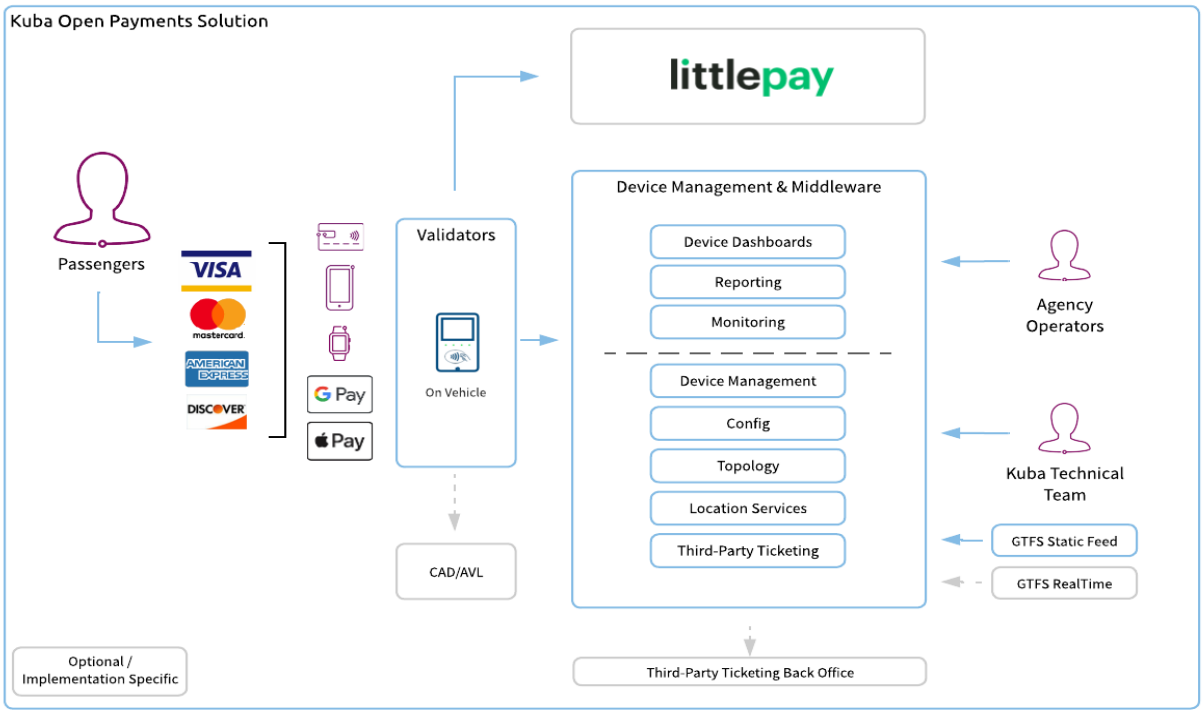
In this section, Kuba has provided a summarized version of our solution in the Executive Summary. Please refer to the Solution section in our Proposal below for detailed information.

Open Loop Payments

Our solution empowers NCT to offer riders contactless fare payment methods using bank cards and mobile tickets.

Figure 3 below shows our recommended solution architecture. The Kuba platform consists of our Software-as-a-Service (SaaS) solution - all Back Office services are cloud-hosted. Kuba's cloud-native platform supports fare policy management. Our Device Management supports the validators and is integrated with the Littlepay transit payment gateway, enabling NCT to acquire and settle fares.

Figure 3: Solution Architecture



The key to describe the diagram above is as follows:

- Open Payments implementation to allow passengers to travel using their contactless payment cards or devices, such as Google Pay, Apple Pay.
- Communication from the validators onboard to the Kuba Back Office used for reporting of transactions, download of lists, maintenance of configuration and operating data and general device management.

- GTFS-Realtime and Static Feeds are used to maintain the configuration data provided to the validators and the inclusion of route/direction information in the open payment transactions.
- Device Management Portal is available for use by NCT, such as for operations in identifying issues with validators, or for reporting on validations by vehicle or stop.

Kuba provides NCT with the ongoing support and warranty for the devices, along with the Device Management and Middleware Platform that is used for the management of validators.

Validator

Our proposed validator is the ABT3000. It is fully certified for use as an EMV card reader and certified for the major card brands such as Mastercard, Visa, American Express and Discover. It is PCI-PTS 5.1 certified.

Our current integration is with Littlepay as the transit processor, with payments processed via Littlepay through the payment processor and settled into Operator's bank account.

Validators installed on NCT vehicles maintain a connection to the Kuba cloud-hosted platform. This is used to provide both management of devices but also used to manage data required for validation, generation of reports and management of interfaces such as those used for GTFS and third-party ticketing systems.

During implementation, Kuba will work closely with the NCT to get the required information to commission the validators and set up the device configuration, managed through the Device Management Platform. Kuba is responsible for the configuration of the operating data used by the validators to define the flat fares used, stops and locations.

NCT is provided with access to our web-based platform which is accessible from any PC/mobile browser and is used for device management, as well as reporting on validation events.

QMI will install the validators onboard the buses near the current locations of the Fare Boxes and, as part of the installation, provide the:

- Supporting mounts
- Electrical harnessing, and
- Hardware

Optional Value Added Service(s): The Mobile Experience

As an option, Kuba also offers a Mobile Ticketing solution that empowers end-users to purchase and activate tickets from their mobile phones and have them validated via QR codes on Kuba validators or via visual validation. More information can be found in the Solution section of our Proposal.

Program Timeline Overview

Our program below is based on a fusion of PRINCE II and PMBOK, which gives it the flexibility to match any deployment size. A program summary is reflected below in **Figure 4**.

Figure 4: Program Timeline Overview

To move on to the next stage, the project manager and team will undertake gate reviews for the project deliverables. The scheduled operations are controlled and observed to assure good approval and ongoing quality.

Optional Value-Add

The enablement of the barcode reader and integration with a mobile application, existing paper or card based tickets or passes could be presented as digital fare media should this become a requirement in the future.

Conclusion

Kuba is excited by the opportunity to embark on potential partnerships with NCT. Our transit system is deployed in weeks and seamlessly grows with the NCT's needs.

The information reflected in this document provides a low risk, open payments' solution.

Our Clever transit system simplifies journeys, prioritizes commuter experience, and enables NCT's mission and transit objectives to be met.

Team Kuba

KUBA

Team Kuba

The Kuba Family

Kuba is a part of the ICM Mobility Group of companies, a global ensemble of innovative technology companies focused on Clever mobility worldwide. ICM manages over US$3.0 billion in funds.

From the beginning, we have been passionate about improving riders' daily commute. We have spearheaded the evolution of transport ticketing and as the industry embraces open-loop payment and account-based mobility, we continue to innovate and lead the design, implementation, and operation of these advanced solutions.

Our Mission is to Banish the Burden of Ticketing.

At Kuba, we believe ticketing should be safe, simple, and secure.

For too long, ticketing systems have been complex, inefficient, and expensive. Transport Operators have spent years and millions installing, upgrading, and maintaining ineffective systems that riders didn't understand. Well, no longer.

Kuba's lean, efficient and scalable platform provides a modern solution to a traditional problem. Our range of plug-in-and-play systems are deployed in a matter of weeks and seamlessly grow with Operators' changing needs.

With clients worldwide and offices in London, Johannesburg, Rome, Besançon, and Las Vegas, we are a global company with a truly global vision: to banish the burden of ticketing.

About QMI - Our Installation Partner

QMI is an industry professional installation and field support service company, highly respected in the Public Transit industry. For more than 16 years, QMI has been installing highly complex electrical components and systems on a wide range of transit, rail, and servicing transit authorities.

QUALITY MOBILE INSTALLATIONS

QMI's commitment to quality is demonstrated by its strategy of employing only highly experienced, full-time professional technicians and supervisors - a difference that distinguishes them from many competitors.

When implementing AFC systems, QMI's quality, speed, and efficiency are crucial differentiators because they know that most fleets cannot resume full service until every vehicle is outfitted to accept payment. From the 1930s street cars to the latest smart buses and rail carriages, QMI's installation teams have installed both traditional and "tap-to-pay" systems on every make, model, and design vehicle.

QMI has mastered the process of wiring, programming, and connecting complex AFC systems in a wide range of transit vehicles. With QMI as part of our team, NCT can be assured of a clean, correct, and trouble-free and significant reduced risk installation that meets Original Equipment Manufacturer (OEM) specifications every time.

Littlepay - Our Transit Payment Service Processor Partner

Littlepay was founded in January 2016 to address the growing demand for a more affordable EMV solution by the transit industry. For any operator in any country, Littlepay has created a dedicated transit payments solution that can handle all end-to-end cEMV payment requirements. As a result, operators in any country won't need to build infrastructure, release software, or be concerned about PCI compliance. Processing EMV in transit is Littlepay's core business. Their continued success relies on continuous innovation in the EMV transit environment. Littlepay provides a low cost, tried and tested solution.

Since deploying their first pilot in June 2017, Littlepay now processes $500M annually for over 250 transit merchants on over 20,000 vehicles. Littlepay has led the UK bus industry into contactless acceptance, rolling out to 75% of the regional UK market in a few short years. In the first half of 2021 Littlepay expanded their operations with national scale systems in Finland, pilot launches in the USA, Portugal, Spain and a national scale tender win in Costa Rica.

Littlepay is one of four transit processor vendors providing services for the Cal DGS MSA. Littlepay is already active in California, having been a key partner in the initial Cal-ITP pilot projects in MST, SAC-RT, SBCAE and SBMTD where they have proven their capability in the field.

In addition, Littlepay already processes MTT/PAYG transactions in the US, and has a growing roster of acquirers and gateway partners connected to their payment processing platform. Littlepay has more devices pre-integrated to their transit payments processing system (17) than any other PSP.

Solution

KUBA

Solution

Solution Overview

Our proposed solution will enable NCT to offer riders contactless credit card payment methods with Visa, MasterCard, American Express, and Discover using the rider's chosen payment card, including Apple Pay and Google Pay on mobile or wearable devices.

The Kuba solution consists of validators, fully integrated with Littlepay as the transit processor, enabling NCT to acquire and settle fares. Our cloud-hosted platform in the current scope provides device management and middleware services.

Our platform is provided as a Software-as-a-Service (SaaS) solution, meaning there is nothing to be installed apart from the validators. As part of the offering, NCT is provided access to the platform to allow the agency's operators to view device information and access various reports and dashboards which will be used in normal day-to-day operations. The validators accept MasterCard and Visa with the payments collected via the Littlepay transit payments gateway, and funds settled through to the chosen Operator's bank account.

Kuba will provide the following services:

- Configuring the business rules, routes, vehicles, and stops required to accept open payment transactions
- Transmit the tap transactions, which include the location where tap transactions occur (expressed, at minimum, as stop points, but which may also be expressed as GPS locations) to the Transit Processor.
- Download the "allow and deny" lists to PADs.

Our professional installation partner QMI is responsible for the safe and efficient installation onboard NCT buses. Prior to installation, QMI will execute a vehicle discovery phase, on-site at the location specified by NCT. The aim of this phase is to complete surveys on all in-scope vehicle types and produce a survey report which can then be signed off by NCT.

Site Survey/Mounting

Prior to installation, QMI will execute a vehicle discovery phase, on-site NCT. The aim of this phase is to complete surveys on all in-scope vehicle types and produce a survey report which can then be signed off by NCT.

The survey will identify the following:

- Siting of the validators, as agreed with all stakeholders within the agency and comply with relevant acts and regulations.
- Any specific mounting brackets, stanchions, or plates needed to securely mount the validators which might need to be supplied or manufactured.

- Location of wiring cabinets, power sources, and other onboard equipment needed to complete the installation.
- Installation guidelines to be followed when installing on specific vehicles or vehicle types.
- Design of the wiring loom/cabling kits required for each vehicle type.

The vehicle discovery will need to be supported by NCT by providing access to vehicles as well as to the stakeholders with responsibility for sign-off for any onboard installations.

On commencement of installation, QMI completes a pre-installation inspection to ensure that any issues are highlighted prior to installation taking place. On completion, a Vehicle Acceptance Test process is followed with the results being filed electronically for future reference and this is signed off by both the installation engineer and NCT.

Kuba provides NCT with ongoing support and warranty for the devices, along with the Device Management and middleware platform that is used for the management of validators.

Mounting Option

Kuba will also complete an analysis of the mounting approach and the development of a proposal for a robust mounting solution suitable for the specific environment and achieving the same positioning/orientation of the validator.

QMI has completed many installations on various vehicles in the past. They are ell versed in the challenges involved in achieving a quality installation and can produce any required mounting hardware or stanchions in their US-based manufacturing facility in Tennessee.

We have included renderings to show the potential mounting options that we have identified so far. Please refer to Exhibit A for the different mounting options.

Once NCT is comfortable with a permanent mounting solution, QMI will customize it for the bus type, with powder coating or a metal finish to suit.

The survey will identify the following:

- Siting of the validators, as agreed with all stakeholders within the agency and to comply with relevant acts and regulations.
- Any specific mounting brackets, stanchions, or plates needed to securely mount the validators which might need to be supplied or manufactured.
- Location of wiring cabinets, power sources, and other onboard equipment needed to complete the installation.
- Installation guidelines to be followed when installing on specific vehicles or vehicle types.
- Design of the wiring loom/cabling kits required for each vehicle type.

The vehicle discovery will need to be supported by NCT by providing access to vehicles and to the stakeholders with responsibility for sign-off for any onboard installations.

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process is followed with the results being filed electronically for future reference and this is signed off by both the installation engineer and NCT.

Kuba provides NCT with the ongoing support and warranty for the devices, along with the Device Management and middleware platform that is used for the management of validators.

Once installed, the PADs will register with the device manager and obtain NCT' specific operating data as configured in the back end system. This will allow the PADs to begin accepting contactless payments from your commuters.

Commuters can use their Visa or MasterCard branded cards to travel on NCT's buses when traveling. In the future, this will be expanded to include American Express and Discover branded cards.

Speed of boarding is maintained as all validations occur offline, using a deny list to prevent usage of cards which have previously been declined. The result of the tap is provided both visually and audibly so that the customer and the driver are informed of the result.

Taps accepted by the validators are securely sent via the mobile data connection to Littlepay as the Transit Processor, or if required to another MSA Transit Processor, where the management of the payment processes is completed, along with the application of any caps, discounts or transfers.

Once the tap has been sent to the Transit Processor, a unique ID is stored with a summary of the tap and sent to the device manager, meaning that there is traceability between the tap and the payment transactions.

Littlepay integrates directly with a wide range of reader/validators, perform all the required MTT processing logic and connect into the local payment infrastructure via local or global acquirers, or via payment gateways such as Cybersource or MPGS.

Access to the device manager is provided to the Agency's operators for access to device information, monitoring and reporting. Training/familiarization will be provided with ongoing support provided through the same process as support is requested for the validators, should any issues occur or queries need to be addressed.

Kuba provides NCT with ongoing support and warranty for the devices, along with the device management and middleware platform used to manage validators.

Alongside Open Payments, the validator application, hardware and device management solution provides a pathway for additional fare media to be read and validated in the future on NCT' services. With the enablement of the barcode reader and integration with a mobile application, existing paper or card based tickets or passes could be presented as digital fare media should this become a requirement in the future. We have included details of this in the value added options. We have also included optional barcode readers which are required to work with card based tickets, QR codes or other passes that could be presented for digital currency. Barcode readers need to be

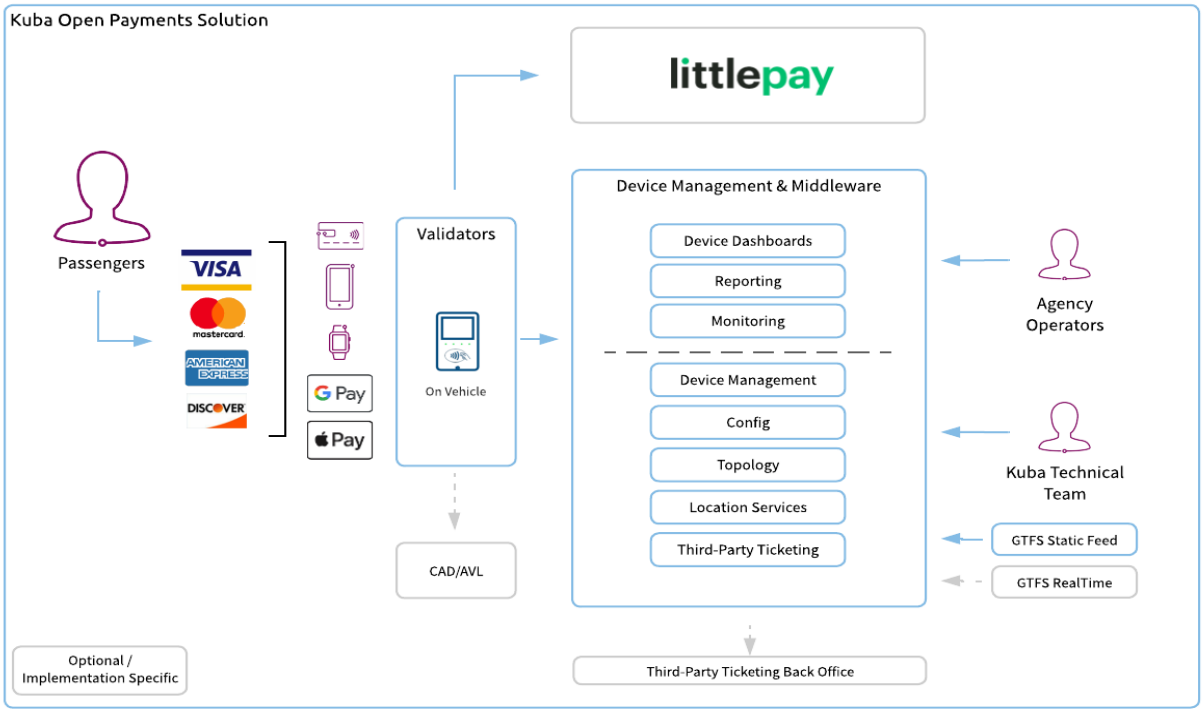
installed at the time of manufacture and not possible to add after the validators have been delivered.

System Architecture

Figure 5 below reflects an overall system architecture showing the Kuba platform built on proven technology, open architecture, and operational models.

The solution is in addition to any existing ticketing channels or validation devices which NCT will retain, however these are not shown or depicted.

Figure 5: Kuba Open Payment Solution



Device Management and Middleware

The Kuba cloud-hosted platform fulfills several roles in managing the contactless fare collection implementation. It provides services that are running continuously to maintain the health of the validators and provide them with configuration data updates, acceptance of incoming status reports, software updates, and topology changes. It also provides a management portal for access by users from NCT and Kuba. Each user is assigned a role, allowing them access to only the functions required by their job role.

Device Management

Validators installed on NCT's vehicles regularly report to the device manager, providing a heartbeat message every two minutes to allow the status of the validators to be logged. Any updates to be applied by the validator, such as configuration changes, topology updates, or software updates, are downloaded from the device manager to be applied locally by the validator.

Validator Support and Operations

The functions that are accessed by NCT can be briefly summarized as shown below:

Device and Transaction Dashboards

- Active validators and their installed locations, last communicated date and time, software versions and status
- Last validations performed, which have been reported to the device management platform

Reporting

- Provides a number of prepared reports which can be accessed only by NCT
- Any additional reports can be added (as required) should there be specific requirements

Monitoring

- Allows specific conditions to be monitored and alerted to within the dashboards
- From version 5, the addition of enhanced alerting capabilities to include alerts via email; this will allow operational support staff to be notified when validators have lost communication for a period of time.
- Kuba's happy to support other business requirements to facilitate a successful project. Upon award, representatives from Kuba and NCT will discuss any additional business needs that NCT requires to monitor the health of the onboard equipment. This can be accomplished via API's and other enhancements to backend systems.

Connectivity Options and Certifications

We are engaged in a program to achieve the PCS Type Certification Review Board (PTCRB) certification before moving on to the individual network certifications, such as AT&T, Firstnet, T-Mobile, and Verizon. The validators delivered to NCT will be compliant and suitable for connecting these cellular networks.

Onboard Router

If NCT already has an onboard router equipped with a cellular connection, then the validator can use this directly. This is our recommended approach because it can offer NCT the best value approach since only one SIM and connection needs to be maintained per vehicle.

GTFS Feeds

Kuba consumes the GTFS Static and Realtime Feeds to maintain the operating data required by the validators and to be included in the tap data that is passed to the transit processor.

Our standard implementation uses your GTFS Static Feed, published on the NCT's website, to configure the validators with the NCT's stops and their GPS coordinates. As buses move along the route, each stop is identified using the GPS module embedded in the validators.

Our solution also consumes your GTFS Realtime Feed, which is used to provide the validators with the current route/service information for each bus. The data is included in the tap transmitted to the Transit Processor and can be used for reporting purposes.

Validator

Figure 6 below shows the onboard validator, the ABT3000 device. The ABT3000 device is easy to install and equipped with an EMV3000 contactless card reader. The card reader is EMV L1 certified, EMV L2 certified for Mastercard, Visa, American Express, and Discover, and PCI-PTS 5.1 certified, and supports remote key injection.

The validator features a touch screen, integrated barcode reader, embedded GPS and a mobile data connection. An enclosure and mounting kit are available for a pole diameter of 1.37755 inches (35 mm). There is also an option for wall mounting, which may or may not be necessary for the NCT's fleet. The stanchion/pole will be customized for the bus type; with powder coating or a metal finish for the bus type.

Validators are provided with the GPS coordinates of NCT's stops obtained from the GTFS static feed. As buses move along the route, each stop is identified using the GPS module and the supplied data so that the tap location can be included in the tap or validation event data, which is subsequently available for reporting and analysis. Please refer to Exhibit C: ABT3000 Product Brochure.

Figure 6: ABT3000 validator

Open Payment Processing

Kuba banishes the burden of transit payment. Our “out-of-the-box" solution will enable NCT to implement an open payment solution in record time. Our platform also delivers clean, contactless journeys that add to a seamless rider experience.

Once installed, the PADs will register with the device manager and obtain NCT’ specific operating data as configured in the back end system. This will allow the PADs to begin accepting contactless payments from your commuters.

When boarding, commuters can use their Visa or MasterCard branded cards to travel on NCT buses; in the future American Express and Discover branded cards will also be able to be used.

Speed of boarding is maintained as all validations occur offline, using a deny list to prevent the usage of cards previously declined. The tap's result is provided visually and audibly so that the customer and the driver are informed of the result.

Taps accepted by the validators are securely sent via the mobile data connection to Littlepay as the Transit Processor, or if required to another MSA Transit Processor, where the management of the payment processes is completed, along with the application of any caps, discounts or transfers.

Once the tap has been sent to the Transit Processor, a unique ID is stored with a summary of the tap and sent to the device manager, meaning there is traceability between the tap and the payment transactions.

Supported Fare Models

A choice of two fare models are supported for the fare calculation to be applied to the passengers’ card

- Flat Fare - a flat fare is determined based solely on the entry tap and the location of the bus or the route it is assigned to or the zone it is in.
- Variable Fare - the fare is calculated based on the context of the entry and exit taps so that routes that pass through multiple zones can be accommodated.

With a single-tap solution, only flat fares can be supported. For operators with buses which travel wholly within the same zone, or who have been able to simplify their fare structure to accommodate a flat fare.

Supporting NCT Fares

To support zonal fares, the most appropriate option would be to implement variable fares, based on the riders tapping on the validator when boarding, and then tapping when alighting.

This will charge the rider the correct fare based on how many zones/stops they have traveled.

All processing to calculate the fare for each tap on and tap off is performed on the bus, with the validator using the origin and destination to determine the final fare to be applied.

When a rider taps when boarding the bus a tap transaction is sent to the transit processor which contains the fare as if the rider is traveling to the highest zone of the route. At this point no charges are made, this only records the tap and allows any authorization checks to be completed by the transit processor.

The rider taps when departing the bus. This tap is used to calculate the fare to be charged based on the location/zone of the first tap to the location/zone of the second tap. A second tap transaction is then sent to the transit processor. This is linked to the first tap and contains the actual fare to be charged.

The tap off can be on the same validator or on a rear mounted/exit mounted validator.

The transit processor will then debit the card based on this fare, but also taking into account caps that have been reached, any transfer rules or any discounts which may apply.

Example - Tap On & Off

- Rider boards a 5 bus downtown at Tinloy St and taps when boarding the bus. A tap transaction is sent to the transit processor with a fare value of $3.00.
- Rider alights the bus at Nevada St, Amtrak Station, and taps their card when leaving the bus. The second tap is matched with the first and the tap transaction is sent to the transit processor with a value of $3.00.

Whilst charging the rider the correct amount for the distance traveled, the resulting data will also be useful for NCT to understand the riders' travel patterns and provide a deeper insight into issues that may have been unreported or misunderstood.

We recommend that NCT uses this approach to ensure that fares are charged on a fair and equitable basis and are compatible with NCT’s current zonal fare implementation.

Pass-Back Protection

An anti-passback mechanism is enabled and functions as described below:

- When a card/ device is tapped on the validator, it checks if it has been tapped in the previous, for instance, five minutes.
- If the tap is within the five-minute window, the transaction is not accepted and a "Card Already Presented" message is presented on the screen.
- The time period for the check is held as a configurable parameter and is set to five minutes, and this serves most purposes. The time can be adjusted up or down should NCT have any concerns.

Deliverables

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Deliverables

Considerations for Implementation and Integration

Hardware

- Based on Receipt of Purchase Order (PO) by a certain date.
- Delivery of the ABT3000 validators and pole mount cradles within approximately five to six weeks from Notice To Proceed (NTP) or receipt of PO.
- Installation of hardware will commence.
- Programming of internal cradle - dallas memory chip takes place during installation.

Validators

Information exchange and configuration have to be approved before the shipment of the devices. This process can commence immediately after the PO is received.

- Delivery of the number of ABT3000 validators. The validators consist of the number of devices that will be installed onboard the buses and a number of spare units.
    - Workshops between Kuba and NCT will need to commence once PO is issued to allow for proper configuration.
    - Implementation of software changes (where required) after delivery of all interface specifications/requirements.

Cradle Installation

Our installation partner, QMI, will install the validators and cradles on the vehicles.

Setup

- The validator is configured once it registers with the device manager to obtain the latest NCT' settings.
- Kuba manages this configuration through coordination with the NCT's team.
- Setup/integration with Littlepay is completed before the validators are shipped.

Value-Added Services

Kuba's value-added services are based on NCTs' requirements and can include validator hardware, extended warranty, and training. More information is provided below.

Validator hardware

Validators are fitted with an integrated barcode reader for future use in the acceptance of digital fare media. Any future development may incur additional costs.

Extended hardware warranty

Adding an extended warranty for up to five years beyond the one-year manufacturer's warranty adds ample protection that your hardware will continue to work and collect fare revenue for the foreseeable future.

Training

Core training, which is included in the implementation costs, will be conducted on a "Train-the-Trainer" basis, as follows:

- Onboard Proxima validator training (for instance open loop payment solution)
- Driver training/familiarization (training will be conducted remotely)
- Technician training/familiarization
  - Device Troubleshoot 101
- Operator training for the Device Manager
- Proxima BO training
  - Device Monitoring 101
- Onboard Proxima Validator installation training

Project Implementation

High-level Overview of the Project

Our program timeline below is based on a fusion of PRINCE II and PMBOK, which gives it the flexibility to match any deployment size. The timeline overview below in **Figure 7** makes provision for QMI to install 14 validators onboard NCT's vehicles.

Figure 7: High-Level Overview of the Project

QMI is going to perform the onsite discovery survey (see Step 2.1 above). Not all the vehicles will be surveyed, we intend to use a selected number of vehicles to represent the vehicle type.

Project Dependencies

- Timeous signature of the User Agreement is required. The validators are on the critical path of the Project Implementation Plan and are dependent on the signature of the User Agreement.
- Step 2 consists of 2.1 QMI: Onsite Discovery Survey - Kuba assumes that one team consisting of two technicians can survey six vehicles per day.

- Step 4 consists of the validator implementation/deployment and commissioning. We, therefore, assumed that two technicians will work in parallel to install the validators onboard the buses.
- Kuba signs off each bus installation during Step 4.
- To avoid disrupting NCT's regular services, Kuba and NCT must determine how soon the buses will be made available to install the validators after the project has been given the all-clear.

Acceptance Testing Plan

Kuba will provide an acceptance testing plan to NCT within a month from the signature of the User Agreement that will detail the different types of tests considered. This will cover:

Pre-Delivery - to ensure that hardware and software is functioning before dispatch to NCT ready for installation.

Post-Installation - technical validation of the equipment will be completed following installation. The purpose is to confirm that all communications and functions are operational.

Fare Media - acceptance testing to ensure that the supported fare media can be used for validation or payment, that the end-to-end system's operation is correct, and that all details are recorded correctly.

For detailed information, refer to Exhibit D - Initial acceptance testing plan

Training Plan

Kuba will provide a "Train-the-Trainer" approach training plan with tutorials or other supporting materials within a month from the signature of the User Agreement.

Path to Launch

Typically, an operator will plan for a limited pilot before public launch. For open payments, this would use an acceptance list/pilot list to limit the accepted cards, where selected customers participate by traveling and reporting their usage or any issues. The customers could be staff only, staff and their friends and family, or another cohort of customers opted in via a marketing campaign in the lead-up to the launch.

This phase allows not only the technical components to be proven, but to ensure that any operational aspects are exercised, for example:

- Checking the operation of the portals
- Processing of refunds
- Checking output from reports
- Ensuring bank/card statements show the correct details
- Training/familiarization for drivers
- Logging/reporting of issues

This type of approach should cover all aspects of the system implementation. Once satisfied that all aspects are functioning, the pilot list is removed, thus opening up to the public. For detailed information refer to Exhibit E - Initial training and skills transfer plan.

Kuba works with NCT and the Transit Processor on the path to launch.

Pricing

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Pricing

Kuba is delighted to support NCT on this project. We are open to discussing the reduction of the cost of the project to promote the solution to Transit Agencies across the State of California.

Therefore, set out in **Exhibit B1** (attached to this proposal) are the elements of the program to aid future discussion. Our pricing and other assumptions also form part of **Exhibit B1**.

Pricing Assumptions

- The delivery of the solution will commence following a Notice-To-Proceed (approximately 12 weeks from submission of our Proposal) with completion expected around five weeks from the Notice-To-Proceed.

Kuba assumes that:

- The payment terms for the hardware purchase are:
  - 45% on Notice to proceed
  - 45% on delivery, and
  - 10% upon acceptance
- Kuba assumes that payment terms for support services are monthly in arrears.
- Pricing excludes taxes and government charges, which will be added to each invoice.
- Kuba assumes that no third-party mobile communication will be needed.
- We further assumed that NCT would appoint an NCT program manager/coordinator to interface with the Kuba delivery team.
- Pricing excludes transaction and other fees which may be levied by the Transit Processor (Littlepay) and the Acquirer.
- Prices and terms are per the Master Service Agreement (MSA 5-21-70-28-02).
- Errors and omissions excepted
- Additional devices can be purchased as per our pricing sheet.

Bus Assumptions

- **Kuba highly recommends that NCT utilizes our QMI to facilitate the equipment installation.**
- Travel expenses will be incurred by the installation team and are excluded from our pricing.
- Installation - Pricing does not include T-Clamps or Plates for installation purposes and will be determined during the discovery visit/survey. The need for Plates and T-Clamps will be determined by vehicle types and the mounting location of the validators in the bus.
- **Kuba highly recommends the vehicle discovery and site survey.** The pricing thereof is excluded from the pricing. Please refer to our Proposal, the section titled Considerations for Implementation and Integration - Hardware, for the relevant information about the installation discovery survey. Kuba can provide the applicable pricing provided at the time of request thereof.
- Travel and related expenses for purposes of the discovery survey trip by the installation team are not included in pricing.
- Installation of equipment/devices onboard the bus is based on the agreed upon vehicle availability. Sign-off by NCT will be required.

Other Assumptions

- Kuba assumes that the specified number of vehicles will be available, within reason, outside their normal operational hours to install the devices onboard the buses as and when required.
- QMI is going to perform the onsite discovery survey (see Step 2.1 of the Program Timeline provided in **Figure 7** in our Proposal).
    - We made provision for two working days for the onsite discovery survey. Not all the vehicles per type will be surveyed, we intend to use a selected number of vehicles to represent the vehicle type.

Sign-Off

KUBA

Sign-Off

Terms and Conditions

The Terms and Conditions of MSA number 5-21-70-28-02 apply to our Proposal.

Point of Contact

Brian Frank is the main point of contact for this Proposal. My email address is brian.frank@kubapay.com and mobile number is (702) 812-5230.

DocuSigned by:
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Brian Frank
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