

ITSO Smart Ticketing

SERVICE DEFINITION

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ITSO Smart Ticketing Overview

ITSO smart ticketing solution for ferry, train or bus for retail and/or validation

ITSO certified mobile android device, app and Backoffice support for ticket sales, validation checking and revenue protection. Includes stored entitlement, e-purse and account-based ticketing.

The ITSO Smart Ticketing service from PDMS provides an ITSO compliant ticketing solution that is applicable to ferry, train and bus travel. It offers a dedicated solution for Android mobile devices.

Features & Functionality

The ITSO Smart Ticketing solution includes the following features:

- ✓ Secure interoperable smartcard solution for use on or offline
- ✓ Mobile and desktop ITSO certified hardware
- ✓ Back office for capture and reporting of all transactions
- ✓ Option for rugged IP67 rated device for use outdoors
- ✓ Retail and validation of a range of ITSO products such as:
 - stored travel rights
 - identity validation for account-based ticketing
 - concessionary product validation
- ✓ Messaging to and from HOPS provider
- ✓ Development of client business rules around handling of ITSO products

Benefits



Mobile or desktop ticket sales



Multi-modal ticketing (bus/ferry)



Revenue protection



Account-based ticketing



Ticket validation



PCI-compliant payments



Check in



Improved system reliability



Enhanced customer data collection



Increased user efficiency



Financial integration



Quicker boarding



Rugged/waterproof mobile ticketing machines (IP67)



Flexible, robust ticketing



Comprehensive auditing



Interoperability across transport modes



Interoperability across different operators



Hosting

We can provide hosting options for each of our services including Microsoft Azure Hosting Services and our dedicated PDMS Cloud services.

Azure Hosting Services

Supply of Azure Resources

PDMS will supply the required Azure resources through our Microsoft Cloud Solution Provider agreement. Our simplified approach allows for the customer to roll up all the costs relating to hosting of the application into a single managed service contract.

Design Services

The architectural design and choice of Azure resources to provide the hosting for an application is a complex process. PDMS provide these services to simplify the process for our customers. Based on our experience we choose the most appropriate resources from the Azure catalogue and build an architecture that we know can support the hosting of the application to the required SLA.

Cost Management

Part of the service PDMS provides is to monitor and optimise the cost of the Azure resources that are used to provide hosting of the application. Either by scaling existing resources to an appropriate level for the application requirements, utilising features such as the reserved instances to reduce long term costs or by switching the type of resource used to provide the application hosting to be more cost effective.

Build and Automation

PDMS utilise a whole range of technologies to bring together the build, release and automation of the application hosting within Azure to provide integration and alignment with the software lifecycle used to develop the application. This close integration and automation means that as the application is developed and tested it is ensured to work as expected within the Azure hosting environment that has been designed for it.

Service Monitoring

Utilising both inbuilt Microsoft technologies and third-party external monitors PDMS gains insight into the workings of the application and the hosting. Using this information with queries and notification we maintain the expected availability and performance of the application.

Service Maintenance

The ongoing maintenance of the hosting environment, including the patching of any IaaS components and analysis and response to any notifications raised by the monitoring systems. Our business and technical processes are robust ensuring that maintenance is performed in a timely manner while minimising service impact. Routine maintenance is carried out such that the resilience in the hosting environment ensures that there is no impact to the service level.

Experience

PDMS has a broad range of experience in provision Azure IaaS Resources, & Azure PaaS Resources. Track record in provisioning and support Azure Architectures, including, Compute, Storage, Networking and Security.

Additionally, PDMS has also provided consultancy and delivery of projects making use of the Power Platform including Power BI, and the associated Office product suite.



PDMS Cloud

Data Storage & Processing Locations

All data processing and storage is undertaken at Data Centres located on the Isle of Man selected by PDMS.

Data Centres and Networks

PDMS Software-as-a-Service is hosted on a highly resilient infrastructure using multiple storage, memory and processing units across multiple locales in multiple Data Centres on the Isle of Man – an architecture aimed at achieving extremely high availability. The Data Centres adhere to best practices described by the EU Code of Conduct for Data Centre Operations and meet the Uptime Institute Tier Level 3 classification. PDMS holds ISO 27001:2022 Information Security Management System standard certification and also the UK Government's new Cyber Essential Plus Certificate of Compliance. The Cyber Essentials Plus Scheme covers cyber security in an organisation's enterprise or corporate IT system. It concentrates on five key controls:

- 1 Boundary firewalls and internet gateways
- 2 Secure configuration
- 3 Access control
- 4 Malware protection
- 5 Patch management

Persistence of Storage

All data (including documents and images) input into PDMS' SaaS offerings are stored in a persistent manner on multiple storage instances and will remain that way until actively off-boarded on termination of a subscription.

Backups

The data managed by PDMS' SaaS offerings is backed up nightly using a combination of disk and tape mechanisms. These backups are intended purely to restore data in the highly unlikely event of a complete infrastructure failure; they are not intended to, nor do they provide a data archive. If such an archive facility is required, then this can be provided on request by contacting PDMS but is outside the scope and the terms of the standard Subscriptions.

Disaster Recovery & Business Continuity

Designed for resilience and high availability, systems are implemented on two discrete sets of infrastructure in two separate on-island locations. We have implemented an 'active-active' system with data replicated synchronously to provide exceedingly high levels of uptime and business continuity.

Service Availability

The Service Availability is set at **99.95%**





Approach to Delivery

Agile development – testing and learning

- Short Sprints to test and validate the outcomes and determine the requirements for the next sprint
- Frequent measuring and reporting of progress against roadmap to ensure meeting the project outcomes
- Experienced agile team with an established process
- Inception Workshops
- Daily Scrums
- Sprint Reviews
- Sprint Retrospectives



Following core principles for agile:





Using the Service - Onboarding

Ordering and Invoicing

Requests for more information or to place an order for our ITSO Smart Ticketing service, contact PDMS on sales@pdms.com.

We would propose arranging a meeting to find out more about your precise requirements and answer any specific questions you may have. If required, we are also happy to provide an additional detailed proposal which will cover the specific deliverables, approach, timelines etc.

Should we then progress to the order stage, the GCloud call off contract would be signed by both parties. Depending on the solution or service we are delivering, we will also provide a Statement of Work(s) which clearly defines the project deliverables and ensures that we are both fully aligned in terms of the approach and the outcomes.

The minimum contract period is typically 1 year and commences following UAT handover, subject to contract agreements.

Once we have a more detailed understanding of your specific requirements, we can provide a detailed cost breakdown which is usually on a Time and Materials basis. We can also provide Fixed Price quotes depending on the project deliverables.

- Time & Materials services will be invoiced monthly in arrears.
- Fixed Price projects payment milestones will be discussed and agreed as part of our onboarding process.
- Recurring fees will be invoiced annually in advance.

Use of the service is subject to the PDMS Terms & Conditions and any terms outlined in the Call Off Contract.

Pricing Overview

You can find pricing information in the ITSO Smart Ticketing Service Pricing Document and the PDMS Rate Card.



Implementation Plan

We will hold a number of briefing calls as part of our onboarding process where we will ensure that we have a shared understanding of the project outcomes, the broader project context and to establish agreed ways of working.

As part of our onboarding process, we will provide an implementation plan that may cover the following:

- Project Overview covering objectives and scope
- Project Roles & Responsibilities for stakeholders and key team members
- Project Delivery methodology e.g. Agile, Waterfall
- High level Project Timeline with major milestones etc.
- Risk Management to identify and mitigate any potential risks
- Change Management procedures
- Communication Plan, including channels, frequency and format
- High Level Technical approach
- Hosting (if applicable)
- Documentation and knowledge transfer
- Go-Live
- Post go-live processes such as support and system enhancements

Offboarding

We will agree an offboarding process which will include details of the data that will be provided, the format, any relevant documentation and details of how knowledge and learning can be handed back over to the organisations. Depending on the specific tasks related to offboarding at the end of a contract, there may be additional costs.

Training

PDMS provides training for our services and solutions in a variety of different ways. We will outline and provide costs for an agreed training plan and knowledge transfer as part of our onboarding process.

We offer several different training approaches including:

- Workshops and training sessions – in person or online
- User guides – including online wikis
- Online video tutorials and how to guides – for self-paced training or as refresher materials

We can also provide in-depth training to “Super-Users” of the solution to support a “train the trainer” approach.

Termination Process

Our terms and conditions are tailored to meet the nature of the specific solution, project or service we are delivering to ensure that it best meets our client’s objectives. The specific terms relating to contract termination would be agreed as part of the contract award and onboarding process and form part of our final contract.

Our standard termination clause, without cause requires 3 months’ notice of termination.

As standard PDMS will supply:

- A standard extract of the data in a delimited form to facilitate on-boarding elsewhere to include suitable definitions of the extracted files and delimited fields.
- Relationships between entities will also be retained / supported through the use of appropriate keys.
- An extract of all the latest versions of the documents stored within the system along with their metadata.
- Where previous versions are required for reasons of compliance then these can also be provided.
- A document reference index will be provided to map the association of the document to its owning entity.

The cost of this is included in your Subscription to the Service except where extra services are required. Bespoke extract requirements can also be provided on request but would form part of a service request.



Data Security

PDMS is certified to ISO/IEC 27001, the internationally recognised standard for Information Security Management and is certified under the Cyber Essentials Plus scheme.

In the Isle of Man, the Data Protection Act 2018 makes provisions for the regulation of the processing of information relating to individuals.

The Data Protection (Implementation of GDPR) Order 2018 gives effect in the Island to EU Directive 2016/79 of the European Parliament (General Data Protection Regulation).



Data Back Up & Restoration

PDMS understands the requirements and the comfort that is brought about by backing data up. PDMS has exceedingly high levels of uptime, resilience and redundancy although there are still occasions where data will need to be restored to a previous date.

PDMS has therefore built a backup system which provides continuous recovery points for the data underlying the systems that we have developed. These backups are written to online storage for quick recovery and also regularly taken to tape so as to provide a point in time archive.

The underlying database engine allows point in time recovery, giving an RPO of near zero in the case of data corruption. In the unlikely event of a total system failure, our combination of backup strategies (including transactional data backups every 4 hours) supports an RPO maximum of 4 hours.

We perform periodic testing of the backup archives to ensure integrity of the data and restore capabilities.





Business Continuity

PDMS has a robust set of policies and procedures, which form part of an overall Business Continuity and Disaster Recovery Framework to ensure that PDMS is able to provide services to its customers during, and after, significant events that can occur from time-to-time. These policies and procedures form part of PDMS' ISO 27001 and ISO 9001 certified management systems, and as such are externally audited to validate their appropriateness and effectiveness.

PDMS' general approach to business continuity is to ensure that there are no single points of failure within any part of the business.

This ethos means that we make use of multiple, geographical diverse, tier 3+ datacentres to house all of our business-critical data processing units. Our systems are setup in such a way that should a single datacentre fail then customers and PDMS staff should see no loss of service. Should an incident occur then the system will automatically fail over to the other data centre for the provision of services.

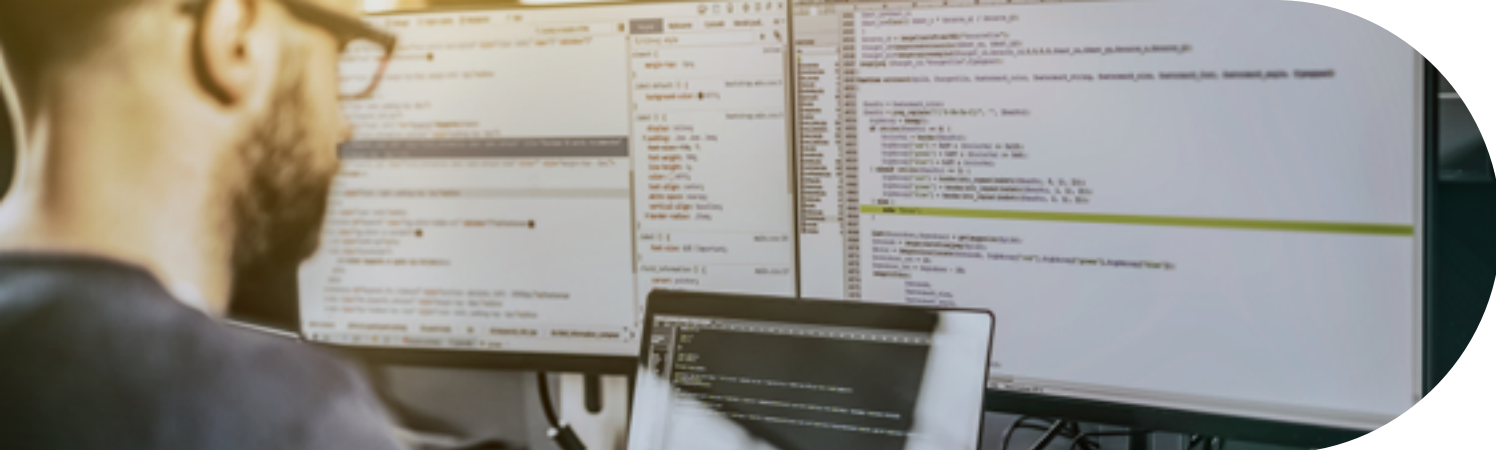
We can provide copies of the various policies and procedures that relate to Business Continuity on request.

Data Protection

PDMS has a dedicated, qualified Data Protection Officer who is responsible for overseeing data protection across the organisation. PDMS has a Data Protection Policy that details how PDMS and our staff will conform to the requirements of the applicable Data Protection Legislation. The Data Protection Officer provides support and advice to each department and ensures ongoing compliance with the legislative requirements through auditing each department. These audits cover all aspects of data protection from collection through to disposal, ensuring that we correctly follow the identified requirements.

PDMS will also, in conjunction with our customers as the Data Controller, provide assistance for any required Data Protection Impact Assessments as part of our services and solutions, which may identify any controls needed that are over and above the standard provision.





Support

We have a dedicated support team providing support for the solutions we have developed. We will agree a support service that meets your specific needs as part of our implementation plan and we provide a support and management contract which outlines our support commitments.

Support is typically available during office hours but can be extended to provide 24/7 coverage if required.

We have a number of channels for reporting support cases including an online system to record, manage and monitor the progress of individual support cases.

PDMS will work with you to identify suitable KPIs for ongoing monitoring to demonstrate adherence to agreed service levels. These will be included within regular project service reports. An example of a typical response time KPI is as follows:

Target achievement of SLA response times	P1 (High): Response within 1 working hour; resolution within 4 working hours.	>95%
	P2 (Medium): Response within 4 working hours; resolution within 2 working days.	
	P3 (Low): Response within 2 working days; resolution within 5 working days.	

When an issue is reported, it will be classified either as a major incident (P1/P2) or an incident (P3/P4), determined by its severity. P1/P2 incidents will receive immediate attention and will be resolved within the agreed upon SLA for the respective tier. P3/P4 incidents, on the other hand, are non-business critical matters identified as impacting system or solution usability.

In addition, PDMS assigns a Solution Architect to each of our live projects, who alongside the support team

regularly reviews the solution against KPIs to identify any potential improvements as part of the ongoing support provision.

We proactively monitor our systems and solutions to reduce the risk of potential application downtime.

We can also provide a Mobile Device Management solution as an option which allows for remote configuration and management of rugged ITS0 mobile devices.

Account Management

We assign a dedicated Account Manager to all our customers. Our Account Managers, together with our Project Managers are a main point of contact for our customers. They are responsible for contract management and any account queries that you may have over the course of the contract. They will proactively support you to ensure that our services and solutions are delivering the best possible outcomes for your organisation.





About PDMS

PDMS is a technology company specialising in software development and digital services. With a unique blend of software engineering excellence and creative digital design, we prioritise user-centric solutions. From analysis to ongoing support, we guide clients through every stage of their digital journey.

Our team consists entirely of full-time employees who are committed to continuous learning and skills development. Each member undergoes BPSS checks, with the majority holding SC security level clearance. Our diverse team brings expertise in project management, business analysis, UX design, software development, testing and infrastructure support.

We prioritise customer success, fostering long-term relationships - working with over half of our clients for a decade or more.

With three decades of industry experience, we've honed our understanding of the unique challenges, pressures, and opportunities encountered by the public sector in harnessing technology for maximum impact. Passionate about leveraging technology for tangible outcomes, our digital projects have saved millions, benefiting both public and private sectors while reducing environmental impact and enhancing productivity and customer service.

Accreditations



Microsoft
Solutions Partner
Digital & App Innovation
Azure



Memberships

techUK



Social Value

Right from the outset, giving back to our local communities has always been important to PDMS. We do this in many ways including fundraising activities undertaken by our generous and enthusiastic staff, corporate charitable donations to local, national and international causes and providing services in kind - for example, a new website for a sporting club or a database for a wildlife charity.

However, what we are most proud of is the time that our team generously gives up to support many community charities and organisations - particularly those that focus on young people. We provide mentors to schools and students, support the work of Junior Achievement and help to broaden the horizons of young people, especially young girls, when it comes to career opportunities in tech. We've welcomed hundreds of students on work experience, placements and apprenticeships over the years and have loved helping young people to learn more about the world of work and grow in confidence.

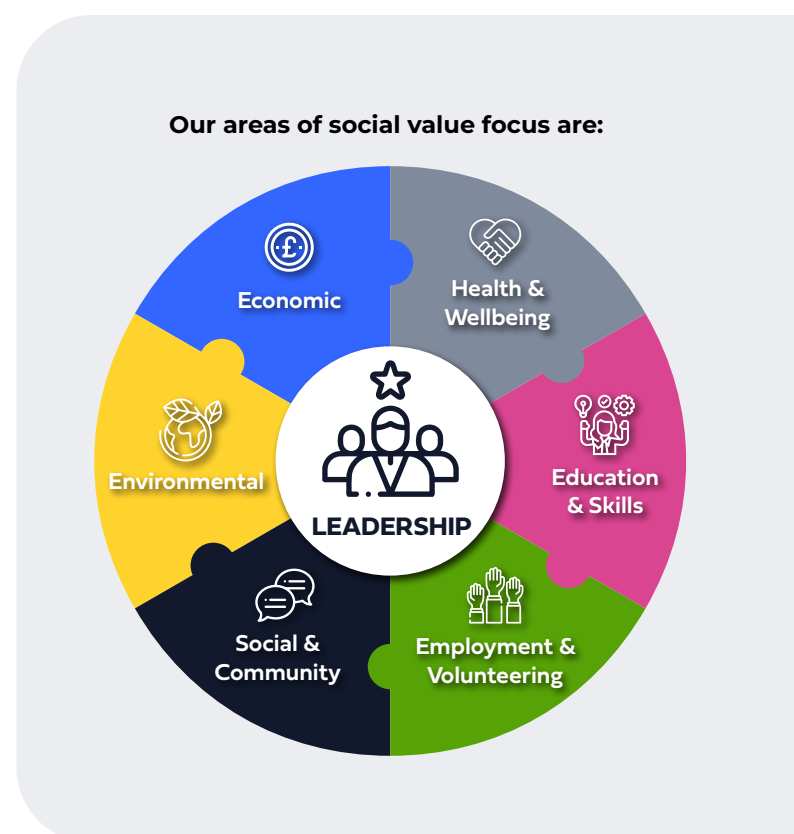
We want to play our part in protecting our environment too. Our ISO14001 accreditation, is helping us to measure and minimise our impact.

PDMS has committed to achieving Net Zero and has pledged not only to take action to measure, reduce and offset its carbon footprint but to also champion environmental protection within all spheres of influence including biodiversity.

When awarded contracts to undertake work as part of the GCloud framework, we will discuss with the buyer appropriate levels of social value that we could offer that are aligned with the buyer's social value objectives, we also liaise with the relevant buyer project team to see how we can develop and maintain skills as part of any contract. We will look to support the buyer's own social value framework by offering work careers support, mentoring and supporting charities that help women and young girls to progress a career in tech, STEM ambassadors etc.

We regularly take on apprentices across different technical roles and 17% of our current development team started as apprentices.

We will pro-actively seek to openly share our knowledge/ expertise by providing online 'lunch and learn' training sessions on accessibility, agile delivery and UX design. Examples include work experience placements, careers talks & mentoring, diversity & inclusion initiatives and supporting the development of digital skills.



We will provide regular updates on how we are performing in relation to our social value commitments as part of our regular Account Management meetings and will provide an annual report detailing the activities undertaken which have been attributed to a buyer's specific contract and the impact delivered.



Our Clients





Contact Details

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