

The logo features the letters 'CN' in a bold, black, sans-serif font, with a red square positioned between the 'C' and the 'N'. To the right of 'CN' is the word 'KEY' in a larger, bold, black, sans-serif font.

# CN KEY

asset management | switched on



Enterprise Asset Management System

# New Generation

Intelligently managing and connecting  
enterprise assets with people and systems

a product by  
 **pragma**

# Contents

|    |                                     |
|----|-------------------------------------|
| 3  | World-class EAM system              |
| 4  | Why On Key?                         |
| 5  | On Key EAM                          |
| 6  | On Key Suite                        |
| 7  | Benefits: Fundamental Design Shifts |
| 8  | Open Architecture                   |
| 10 | Good Security                       |
| 12 | Scalability & Performance           |
| 14 | Advanced Features                   |
| 16 | Improved Data Quality               |
| 18 | Industry 4.0 Ready                  |
| 20 | Mobile First                        |
| 22 | Configurable User Experience        |
| 24 | Time to Value                       |
| 26 | Implementation                      |
| 27 | Training                            |
| 28 | SaaS & On-premise Deployment        |
| 29 | Excellent Technical Support         |
| 30 | System Architecture                 |
| 31 | Licensing                           |

# World-class Enterprise Asset Management System

On Key is a world-class EAM system that offers a suite of software applications that assist asset intensive organisations in the management of their physical assets across their entire life cycle. This includes planning and scheduling maintenance work, managing maintenance activities, repairing and operating inventory items, tracking life cycle costs, analysing failures, managing the maintenance workforce, and more.

On Key has evolved over a period of more than 30 years. It incorporates insights from seasoned asset and maintenance management practitioners and industrial engineers who have worked closely with the software development team to ensure that the system addresses the primary requirements of an asset management system.

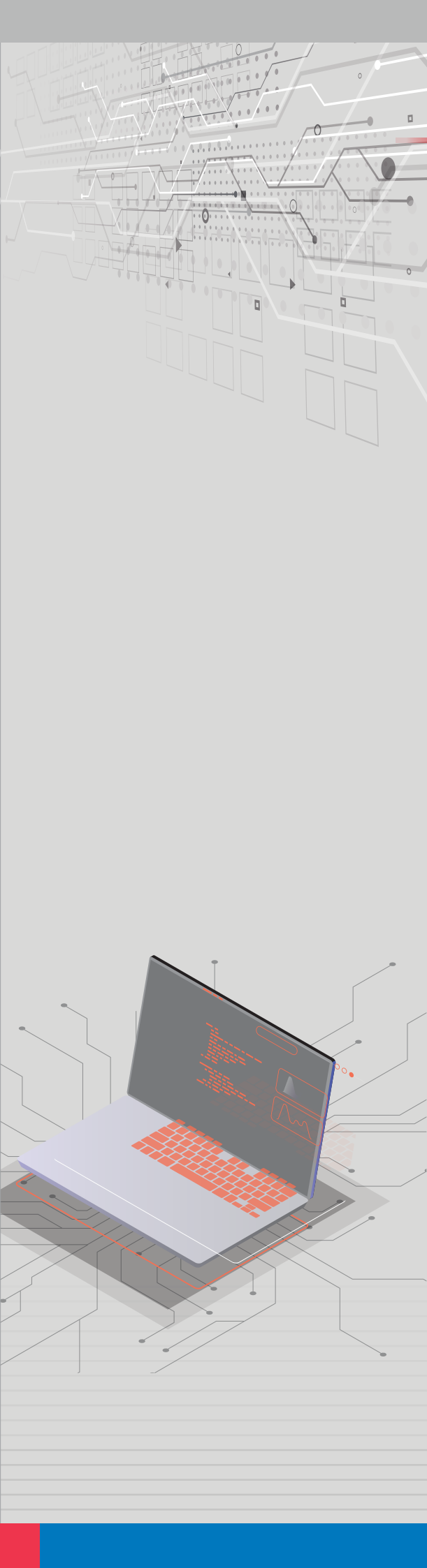


## CN KEY unlocks tangible value

Smarter business decisions rely on credible, real-time information. On Key supports this requirement through built-in features with appropriate business processes and triggers in mind to ensure data is captured in full, timeously and accurately without duplication. This approach makes On Key the system of record for all your physical asset information across your installed base. Since it can integrate with other enterprise systems, teams from different divisions can perform the work they need to on their preferred systems knowing that the information they use is accurate and up to date.

Empowered with accurate, real-time data, you can:

- ▶ Increase asset availability and performance, and improve product or process quality
- ▶ Increase efficiency of maintenance team and increase asset longevity
- ▶ Reduce spending on parts, inventory and insurance premiums
- ▶ Create structures and data management in support of your asset management strategy (like ISO 55001)
- ▶ Support quantifiable and transparent Environmental, Social and Governance (ESG) and sustainability initiatives.



# Why ON KEY?

---

## Superior system capabilities

The breadth of applications and features delivered on a single platform is what differentiates On Key from competitors. Its open architecture is geared for integration with industrial software, business systems and sensors, making it an ideal fit for most system landscapes.

Asset management service providers and large asset owners across sectors use On Key's comprehensive feature set to manage the complexities in their businesses to deliver different services, across different asset types, across different sites and clients, at different conditions, at different service levels and priorities.

Other key capabilities include:

- ▶ Flexible user profiles that provide simple and configurable user interface capabilities
- ▶ Multi language support of the user interface and master data
- ▶ Multi time zone and multi-currency support
- ▶ Workflows can be configured to action insights generated from analytics
- ▶ Software is available for on-premise deployment
- ▶ Data management to keep data updated over an asset's entire life cycle
- ▶ User friendly and responsive user interface
- ▶ DIY report development.

## On Key EAM primary process features

1



### Intelligent asset register

Creation of a detailed asset registry with scalable maintenance plans.

- ▶ Manage an asset registry with linked components and parts across single and multiple sites
- ▶ Maintenance plans for all asset types and assets
- ▶ Serial number tracking and tracking of rotatable movement
- ▶ Statistical analysis of equipment performance and reliability
- ▶ Detailed cost analysis
- ▶ Warranty tracking to component

2



### Work management

Planning and control of all asset related work activities.

- ▶ Create service or work requests, fault reporting
- ▶ Preventive maintenance (time-based or usage-based) – creating recurring maintenance work based on a schedule
- ▶ Long-term maintenance plans, project and work schedules
- ▶ Resource planning capabilities to match skills, training and availability with work requirements
- ▶ Condition-based triggers and alerts creating work orders
- ▶ Permit-to-work functions
- ▶ Mobile app supporting online and offline mode, enabling mobile workers

3

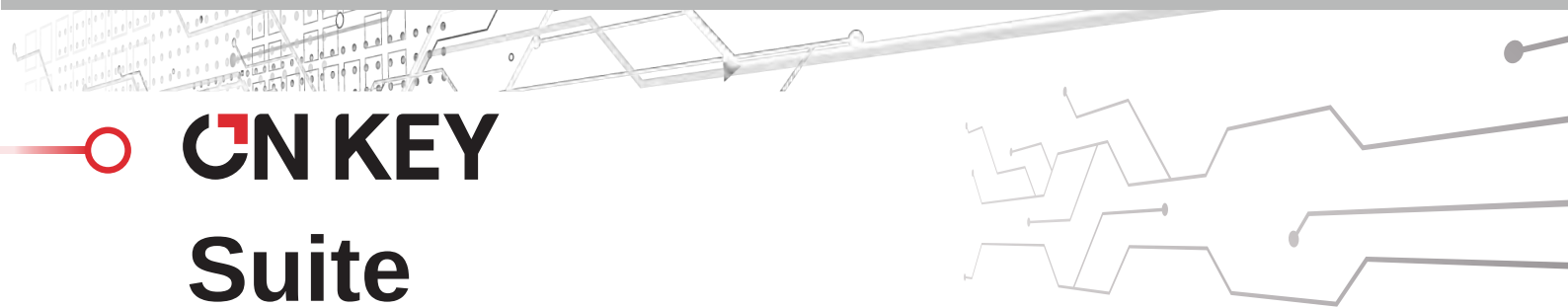


### Supplier and material management

Management of suppliers, spares and asset related spend.

- ▶ Support complex spending methods like stocked items, nonstock items, direct purchases, contractors
- ▶ Demand planning linked to maintenance plans and reorder levels
- ▶ Maintenance plans enabling requesting parts and materials for both stocked and nonstock items; capability of procurement management and supplier management
- ▶ Flexible, supported integration with ERP and financial packages

While On Key remains the system of record for all asset management related information and primary asset management processes, its superior integration platform enables On Key to seamlessly integrate with most ERPs and other business systems in support of streamlined and optimised business processes.



# **ON KEY** **Suite**

## The On Key suite

To elevate your maintenance management to a holistic and integrated asset management system that facilitates informed decision making through credible, real-time information, the core EAM system is extended through four supporting platforms. Each one has a dedicated function but can also function independently or in support of another CMMS.

### Supporting platforms



#### **On Key Insights**

Business intelligence apps that give you the information to make decisions when and where you need it in the form of standard and custom reports.



#### **On Key Action**

Focused maintenance and facility management, web-based and offline mobile apps to optimise, automate and simplify maintenance activities.



#### **On Key Integrate**

Standardised system-to-system integration solution that includes monitoring and maintenance.



#### **On Key Connect**

Complete integrated monitoring solution that connects assets, gathers data and automates work management processes using a combination of technologies such as the Industrial Internet of Things (IIoT) and EAM systems.

For each supporting platform, we have partnered with carefully selected leading technology suppliers to bring the best possible integrated solution to the market.

Operational excellence is possible only when suitable systems and appropriate business processes are in place. On Key is steadily growing and is set to become the dominant player in asset-performance-management-software. Its breadth of functionality and open architecture make it an excellent choice to accelerate the digital transformation of asset management in forward-thinking enterprises.

# Benefits

## Fundamental design shifts

On Key is a next generation EAM system built with leading software technologies.

### How your company benefits from On Key

In addition to its primary asset management processes, On Key offers nine benefits which we can broadly group into three categories:



#### Modern technology

The core On Key architecture is designed and built using open technology stacks on both the (HTML5, CSS3, JavaScript) front end and the (.NET Core) back end. These technology stacks are developed in the open and, where applicable, are based on well-governed industry standards. Broad industry adoption and active community involvement with frequent updates to the technology stacks are key considerations when technologies are accepted into the technology stack. The architecture gives these benefits:

1. Open architecture
2. Good security
3. Scalability and performance



#### Advanced capabilities

Continuous input over the last 30 years from clients at enterprises (multi-national, medium and small) from across the globe and the extensive On Key user experience of our engineering team has resulted in:

4. Advanced features, where an existing feature set is expanded to meet and often exceed business expectations
5. Improved data quality
6. Industry 4.0 readiness, where technologies such as the IIoT are embraced



#### Improved user experience

On Key provides a modern responsive web user interface operating on all major desktop and mobile web browsers. The underlying user interface design is configured to meet client needs by hiding unwanted complexity. It provides configurable input validations based on user roles and other dynamic parameters. User benefits include:

7. Mobile friendly user experience
8. A highly configurable user interface
9. Time to value – a term that describes the speed at which organisations gain value from using the latest version of On Key EAM



# Open Architecture

## Modern technology

### API first



First class, open industry standards-based API exposes the rich feature-set of the On Key EAMS system to devices, eco-systems and platforms and provides efficient mechanisms for building integrations.



On Key API conforms to the OpenAPI Specification (OAS), which defines a standard, language-agnostic interface to RESTful APIs. Leveraging this capability, allowed us to enable clients to understand and interact with our API with a minimal amount of implementation logic.



Our API supports bulk operations to efficiently import and export multiple records in a single call.



Our API provides rich query capabilities to support features like Query Builder, allowing the API consumer to easily filter, project, order and page through the data returned using the API itself.



Our API has rich end-user documentation to ensure the effective use of the API by developers. On Key also fully leverages the OAS ecosystem, which has world-class documentation generation tools, code generation tools and clients in various programming languages, testing tools like Postman, and many other use cases.





# Good Security

OAuth 2 for federated authentication, OpenID Connect compliant provider integration, OWASP top 10 vulnerability testing



## Robust authorisation and access delegation

On Key supports federated authentication with existing OpenID Connect compliant authorisation providers like ADFS, AzureAD and Ping. Utilising OAuth 2, an open-standard authorisation protocol, On Key provides secure and delegated access control to authorise third-party access without having to configure and manage user credentials within On Key itself.



## Continuous security testing

Security is critical to all our development efforts. The On Key team conducts numerous security tests, which include both internal and external vulnerability assessments and penetration tests. Tests are executed to identify security issues related to the OWASP top 10 web application vulnerabilities and the OWASP top 10 API security vulnerabilities. Where possible, these tests are integrated into the CI/CD pipelines to ensure that potential threats to On Key are immediately identified and actioned.



## Field level access control

On Key implements a permission tree in which the organisation can configure a logical data access management model that resembles the organisation's needs.

A simple example is if you set up the permissions tree with two branches, one for USA and one for Canada. All users that have rights to access USA records only, will not have insight into any data related to Canada.

The permission tree can be configured in different layers representing regions, sites, asset classes, different contracts, etc. There is no limitation. The permissions can be one level lower as well, if required.

On a certain record, like an asset, privileged information might exist which not all roles should be able to access, such as the acquisition cost of the asset. The data security and permissions within On Key can be configured in such a way that only certain roles are allowed to view the privileged information. Unprivileged users will be able to access and update the rest of the record, but not the relevant sensitive field.

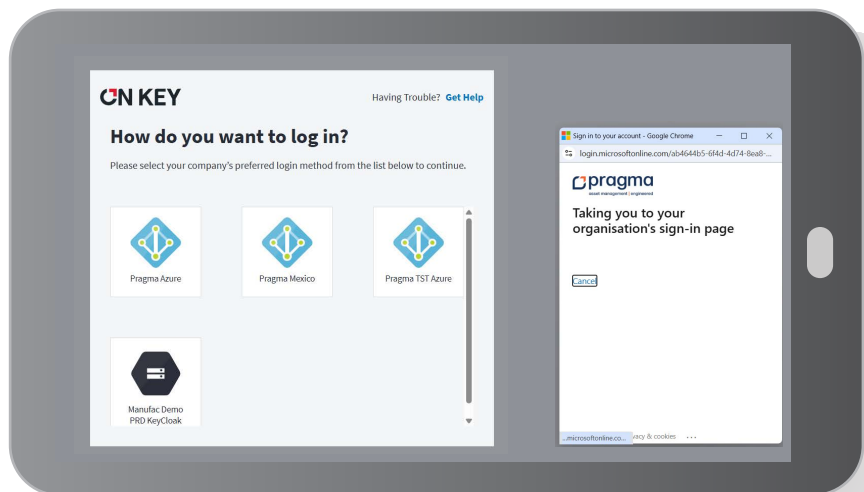
+2

Good security



# Good Security

We take security seriously and are continuously looking at ways to make our systems more secure.



The authentication provider integration functionality eliminates the need for a user to remember additional passwords or log-in credentials to log in to On Key EAM specifically.

They simply use their organisation's preferred log-in method.





# Scalability & Performance

## Real time

Horizontal scaling, database separation, massive performance improvement

### Horizontal scaling

On Key provides an architecture that can grow to support increasing computing demands. Through scaling out its .NET Core back end by load-balancing all requests running across multiple On Key application instances in clusters, On Key can optimise resource utilisation, maximise throughput, reduce latency and ensure fault-tolerant configurations.

### Read/Write database separation

On Key reduces the load of the primary database through read/write database separation.

### Linux for scalable deployments

The On Key .NET Core back end and other core back-end components run on both Windows and Linux in support of an operating system agnostic objective.

Some of these back-end components, like PostgreSQL RDBMS, grew up on Unix based platforms and therefore run and perform best on Linux.



# Performance

Extensive performance improvements have been made in the latest version of On Key EAM. These improvements make a massive impact when On Key is used on a large scale.

The level of performance has a positive effect on the experience of the front-end user.

It gives system administrators peace of mind that their system is stable no matter the size of transactions.

|                              | Synchronisation transaction | Proposed work orders transaction | Work order generation transaction |
|------------------------------|-----------------------------|----------------------------------|-----------------------------------|
| Older versions of On Key EAM | 28hrs                       | 45min                            | 20min                             |
| On Key EAM today             | 14hrs                       | 4min                             | 2min                              |
|                              | 50% time reduction          | 91% time reduction               | 90% time reduction                |

On Key EAM's most performance-intensive and popular transactions are synchronisation, proposed work orders and work order generation. In the latest version of On Key EAM, all three of these transactions shows remarkable speed improvements when large-scale records are transacted.



## Advanced Features

### Empowering enterprises

Conditions matrix, Embedded self-service reports, Configurable business rules, Predictive tasking



#### Asset management optimisation

On Key is packed with advanced features that manage the network complexities that can exist within a business (ability to deliver different services, across different asset types, across different sites/customers, at different conditions, at different service levels and/or priorities, etc).



#### Configurable business rules

On Key enforces business logic and rules on transactions. An example is that the Work Performed field must be populated before a Work Order can be Closed. But what if that is not relevant for all Work Orders? On Key allows for these unique requirements. Organisations can refine their business rule configurations, creating business processes that are more intuitive and streamlined.



#### Notifications that add value

There is a large number of transactions constantly flowing through On Key. Assets and users are involved in these processes.

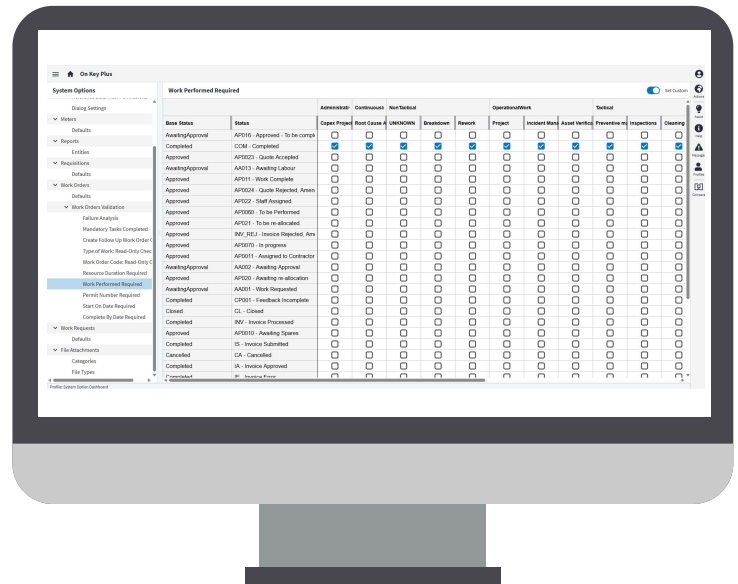
Being informed at the appropriate time of a relevant transaction that requires attention increases the productivity of users interacting with the system. On Key has taken the concept of event driven notification to the next level. Any type of change on a field in the entire system can be configured as the trigger of a notification.

## Configurable Business Rules

Build your business processes in On Key with configurable business rules. Manage and streamline the flow of work orders and data quality with validations. Configurable business rules provide the ability to change certain rules by specifying at which status you want them to be applied in your specific environment.

In the example screenshot, a business validation rule is configured to ensure that the Work Performed field is populated before a Work Order can be placed in the Completed state.

Admin type of work is the one exception where it is still allowed to Complete a Work Order without having the Work Performed field populated. Power users can configure low grain business validation rules based on the business process.





# Improved Data Quality



## Enhanced features

Multi-level conditional validation,  
Configurable settings for intuitive  
opening of asset and task defaults,  
Cell level editing

### Enforced data quality

To generate insight from asset management data, organisations must ensure a high level of data quality. Without data quality, many advanced analytics, including data science and machine learning, will not be feasible. On Key offers a comprehensive feature set aimed at improving the quality of data captured by end users.

### Conditional defaults

On Key allows for the configuration of conditional default values for specified fields. In conjunction with Benefit 9 – Configurable user experience – this becomes a powerful mechanism where the system ensures that certain data is captured upon the creation or updating of a record. A use case is to set up a rule where the Section field is auto populated based on the asset selected.

### Field level conditional validations

Through the conditional validations functionality, clients can create a layer of business logic that is specific to a role. This conditional validation layer can be used in many ways. By carefully configuring the right conditional validation rules, organisations can ensure that data is recorded accurately at the point of origin.

### Cell level editing

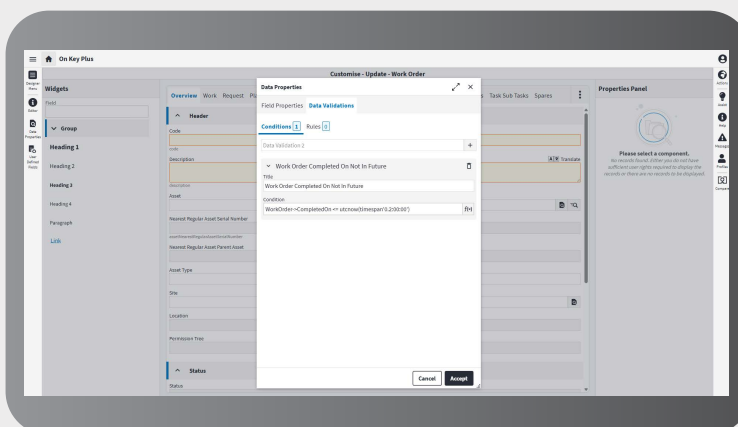
When users are expected to enter large numbers of similar records, errors often creep in. On Key offers the option to view the record of the same entity in a grid. Within this grid, users can edit each cell individually. Lookups and validations are still applied within this editable grid. The major benefit to users is that they can see all the records that are similar in nature and quickly identify what data requires updates.

# Improving Data Quality

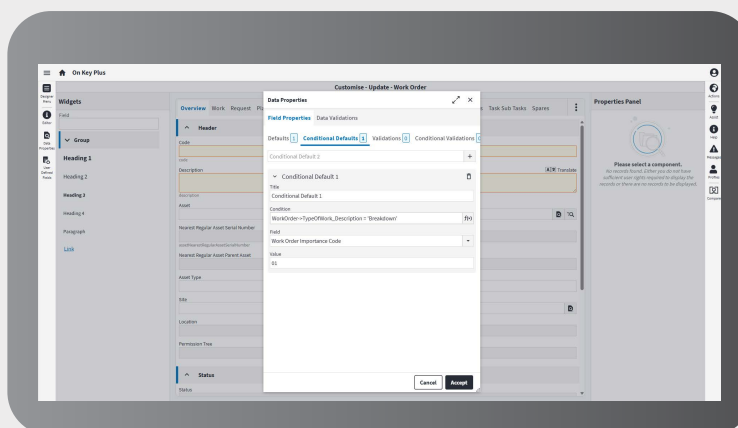
## Conditional validations

Field level conditional validations ensure that data is entered correctly and is complete before a record is saved. Defaults are configured for fields to ensure data completeness and simplify data entering.

Validations are rules that are configured to evaluate the data that was entered on a record. They are checks that occur after data is inserted. The validations mechanism prevents users from inserting incorrect data into the system. The system reviews a user's input on a field and evaluates it against set conditions that are defined. Then the system assists the user and indicates the expected input on a field by displaying an error message.



Data validation can be configured per user per role. Users can also easily switch between profiles as they switch between different roles or processes.



Conditional defaults enable the automatic completion of fields based on the values of other fields. This functionality increases the data capture speed and ensures compliance with business processes and data conventions.



# Industry 4.0 Ready

## Internet of Things

On Key Connect real-time condition monitoring, Customisable thresholds and triggers, Automated workflows kicked off by specific condition thresholds

### ✓ Industry-ready solution

It is estimated that there are 21 billion connected devices in the IIoT, with a sizeable portion of these operating in industrial settings.

The ability to collect asset management relevant data that originates from the edge is becoming essential.

In the asset management context, the IIoT yields opportunities in remote condition monitoring, safety, and asset performance management.

On Key offers an Industry 4.0 ready solution that can take full advantage of IIoT and remote condition monitoring.

### ✓ On Key Connect

On Key Connect is a complete IIoT platform that incorporates asset management and condition monitoring expertise.

The technology includes sensor selection, edge processing, secure transfer of data to a cloud platform with real-time visualisation, and integration logic into the On Key online condition monitoring features and processes.

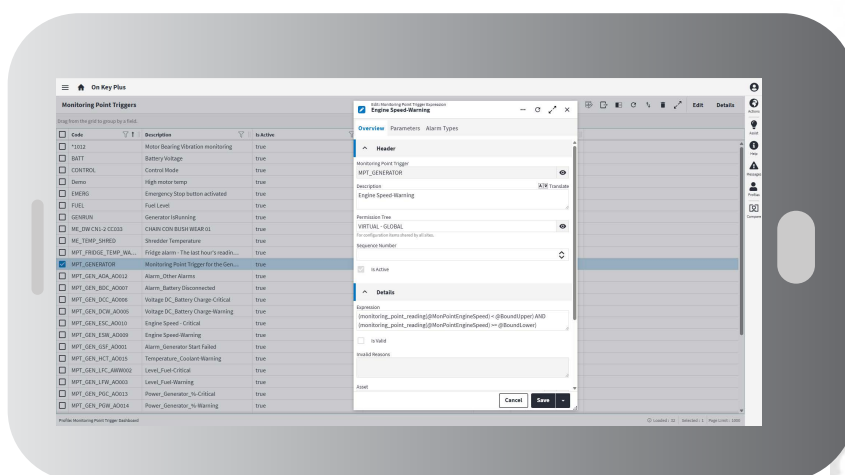
With this comprehensive technology stack, coupled with Pragma's asset management expertise, On Key Connect offers preconfigured condition monitoring solutions that are based on failure mode and effects analysis (FMEA) and condition monitoring best practices for selected critical assets.

Industry 4.0 ready

+6

# Give your Assets a Voice

Improve your physical assets' availability and performance while reducing risk with a complete integrated monitoring solution that connects assets, gathers data, and automates work management processes using a combination of technologies such as IIoT and EAM systems.



Complex formulas are used to convert monitoring point input values to useable data. This data informs the user of the asset's condition and can trigger alarms notifying the user of corrective actions.



# Mobile First

High quality experience mobile interface for all transactions, fully adaptive



## Scaling across multiple devices

With On Key, users get a high quality experience that effortlessly scales across all devices. The On Key user experience design process considers all devices – desktop and mobile, iOS and Android. We recognise that people work across many different devices, and we strive to offer a consistent experience across all devices.



## Mobile

On Key is usable on mobile. This is not just as a second-hand experience but as a primary goal. Granted, not all screens work well on mobile. The Designer is an example of that because of the screen space requirements required to do designs. However, transactional and informational screens provide an excellent experience on mobile. This should work to such an extent that some profile packs could target mobile-only experiences for users who are in the field with mobile as their default view into their information.



## Accessibility

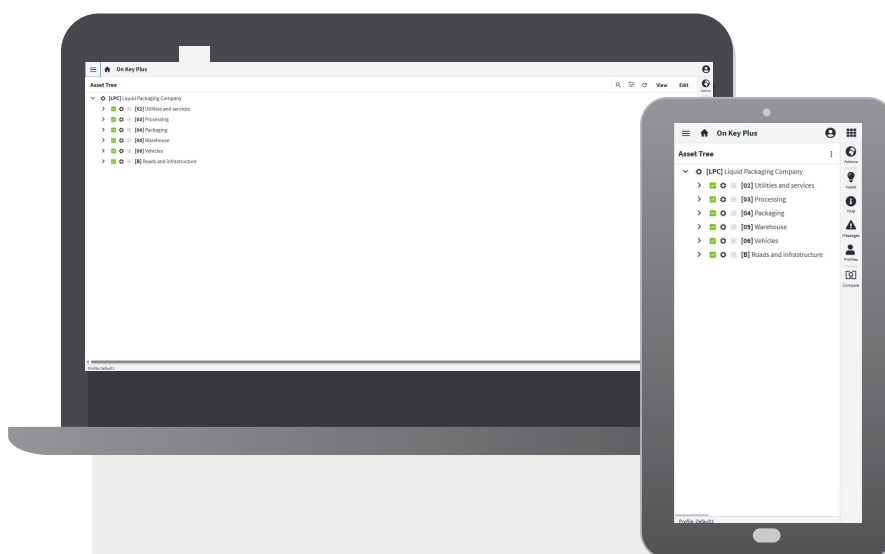
On Key is web accessible. One of our goals is to add value to our physically disabled users. It is our moral responsibility to develop a system that is accessible to all users. Web accessibility enables physically disabled users to be productive members of the team. Not investing in accessibility means that someone will be prevented from doing their job.



# Fluid Design

On Key's fluid design enables you to access it from any browser on your desktop, tablet or mobile without losing the rich experience.

No matter your device, the layout is optimised.



## Mobile first benefits

- ▶ Browser agnostic
- ▶ Offline capabilities are possible through On Key Action apps



# Configurable User Experience

## Fully customisable

Personalised or role-based, configurable menu, theme and screens, conditional formatting and validation at field-level.

### User interface configurable for specific needs

On Key is used extensively across many industries such as mining, manufacturing, oil and gas, facilities management, the public sector and OEMs. To enable clients to effectively use On Key within their industries, On Key provides clients with the ability to configure the user interface to suit their specific needs.

The user experience configuration capabilities start with the definition of a theme. Within the Theme Designer, a client can configure their preferred colour schemes, fonts, and other visual cues.

The next layer of configurability tailors role-based user experiences. Each role can have a unique and focused user experience by creating a set of screen profiles and linking it to the role. This includes the design of a system menu. Users with multiple roles can move between their different user experiences. A comprehensive screen designer powers the configuration of all the screens. The designer allows super users to create role-based experiences that are intuitive and support a high quality of data capturing.

### The designer supports

- ▶ configuring screens to only display/capture required information
- ▶ choosing different visualisations for displaying information
- ▶ visually grouping/filtering/sorting information
- ▶ grouping/filtering/sorting and formatting information based on user-defined conditional formatting rules
- ▶ validating data using user-defined conditional validation rules
- ▶ custom and interactive help content.

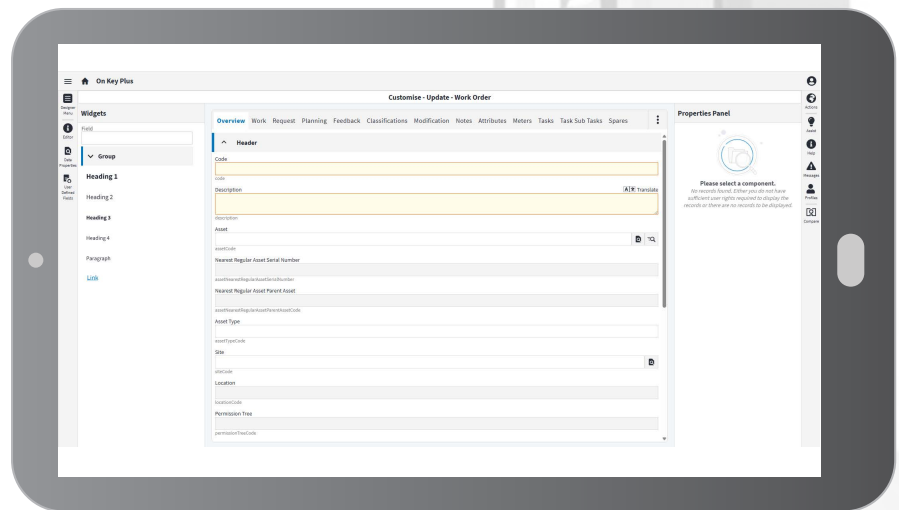
### Custom help

In On Key there is a side panel (on the right) that contains context-sensitive help. A super user or administrator can edit what content the user can see in that side panel. This can include links to websites, training management systems, documents or videos. The super user can create a custom help page per screen and define custom text, headers, paragraphs, images and legends. This creates a Help experience that is unique to the business and familiar to the audience.



# Fully Customisable

Customising the user experience allows the organisation to enable every user to view and edit information in the system in a way that suits them. Closing the gap between end-user expectations and experiences leads to improved efficiency, enhanced user takeup, an engaged workforce and fewer errors.



The Dashboards, Create and Edit screens can be customised through the Designer to display only the relevant information required at the various steps of your business process. Adding custom headings, paragraphs and images create a unique user experience to streamline the process. This, in turn, will improve data quality and velocity.



# Time to Value

## Rapid deployment

Store custom configuration as profiles,  
Deploy in minutes, Rapid user  
onboarding, Step-by-step onboarding

## Best practices at its very core



### Profile packs

With a profile pack you can configure On Key, define profile packs and quickly deploy a new set of configured user experiences with industry-defined best practice processes at the very core. The profile packs include screen and theme configurations, validations, visualisations and custom help content.

Each configuration type is saved in a schema, while the profile manager manages the easy import and export of profiles.

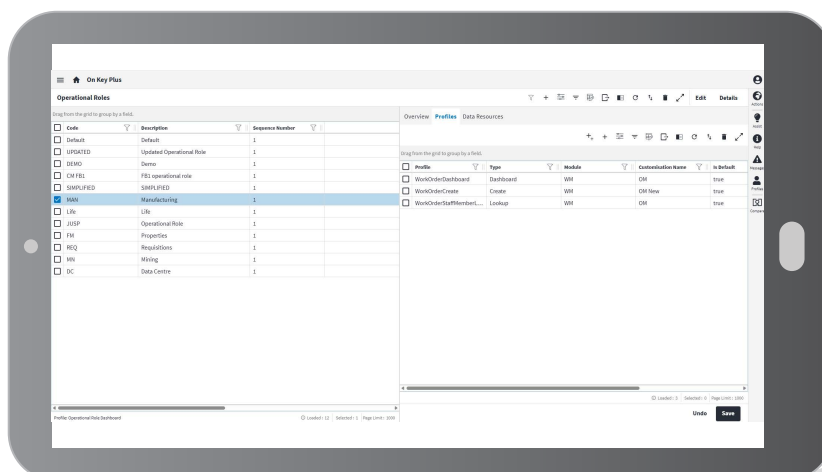


# Role-based Views

Operational roles enable the system administrator to tailor the front-end experience for users based on their roles.

Dashboards, edit-and-create screens and the main menu can be customised to show users exactly what they need to see.

In addition, users can quickly switch between operational roles as they engage in different activities during the day.



Operational roles are selected from a user's account dropdown, enabling a customised view of On Key EAM based on the user's role.



# Implementation

On Key can be used by an organisation of any size, from small businesses to large enterprises. The size and complexity of the implementation is directly related to the complexity of the organisation and its requirements. The size of the implementation effort will vary while the essence of the activities will remain consistent.

At a high level, the implementation project will contain the following milestones:

- ▶ Alignment on asset management objectives and requirements gathering
- ▶ Definition of business processes and configuration of business logic and rules
- ▶ Definition and configuration of user roles
- ▶ Configuration of the master data and configuration of the user experience (profiles)
- ▶ Configuration and setup of reporting and business intelligence
- ▶ Where applicable, the provisioning of On Key Action mobile apps
- ▶ Where applicable, the deployment of On Key Integrate system integrations
- ▶ End user and super user training
- ▶ System validation, signoff and go live.

To increase time to value, the implementation teams apply industry best practices and standards where it makes sense to do so. Where the organisation has a specific requirement, On Key is configured to address unique business needs.

## Upgrading

Organisations upgrading from On Key 5 to the latest version of On Key EAM will retain their data. The majority of On Key 5 transactions are the same in the latest version of On Key EAM, which has been rebuilt on a new platform. The upgrade process will convert existing data. As part of the upgrade journey, organisations will have to perform the following:

- ▶ Definition and configuration of user roles
- ▶ Configuration of user experiences (profiles)
- ▶ Configuration and setup of reporting and business intelligence
- ▶ Validation of the migration of On Key
- ▶ Migrate system integrations
- ▶ End user and super user training
- ▶ System validation, sign-off and go live.



# Training



## Comprehensive offering

On Key offers comprehensive training to upskill all users and to ensure that the organisation gets the most value from their IT investment.

We use standard tools and technologies in our training. We follow a blended approach where learners complete eLearning on their own, participate in discussion forums and interact in a virtual instructor-led training (VILT) contact session. This contact session simulates a live classroom, but unlike pure eLearning, a VILT classroom includes real-time facilitation, enabling learners and facilitators who are in different physical locations to come together via the internet and communicate audio-visually.



## Learning pathways

We have developed standard training for the main asset management roles, such as planners, data clerks, foremen and technicians. The training includes an introduction to On Key and general navigation. It continues with basic configuration required to use On Key followed by more transactional courses focused on the operational use of On Key.



## Meet Alex and Julia

The training is based on the fictitious business of a rental bicycle shop and workshop. The bicycles are the assets – a basic type of asset that learners can relate to no matter what industry they find themselves in. Learners will follow the story of Alex and Julia while they learn about On Key and all of its features and will learn On Key through practical examples based on Pragma's business processes.



# SaaS and On-premise Deployment

---

## Recommended scenario (SaaS)

Our recommended deployment scenario is that we provide On Key to clients through a Software as a Service (SaaS) subscription model. Pragma takes full responsibility for hosting, maintenance, disaster recovery and all other aspects of providing an enterprise grade software platform in the Cloud.

The additional benefit of a Pragma hosted deployment scenario is that clients will be kept up to date with the latest feature releases and improvements to On Key without the risk and IT burden of managing the application. This scenario will also ensure seamless integration with other On Key platforms, such as the On Key Connect platform for IoT connectivity, On Key Insights for advanced analytics, and On Key Integrate for integration with other third-party applications.

## On-premise deployments (IaaS)

On Key is architected to make use of Infrastructure as a Service (IaaS). Offering an on-premise deployment model for On Key supports clients who still prefer to self-host. Some clients invest in their own data centres or specific cloud computing platforms and want to host On Key within the data centres of their choice. The IaaS cloud servicing model enables the deployment of On Key into the data centres of various cloud computing platforms (Azure, AWS, GCP, etc).

While IaaS will be used as the primary servicing model, this does not exclude the potential use of certain specialised PaaS offerings for add-on feature sets within On Key EAM, such as Machine Learning, IoT Hubs, IPaaS offerings and Notification Hubs. On-premise deployments might not be able to receive the full benefit of these features once they become available.

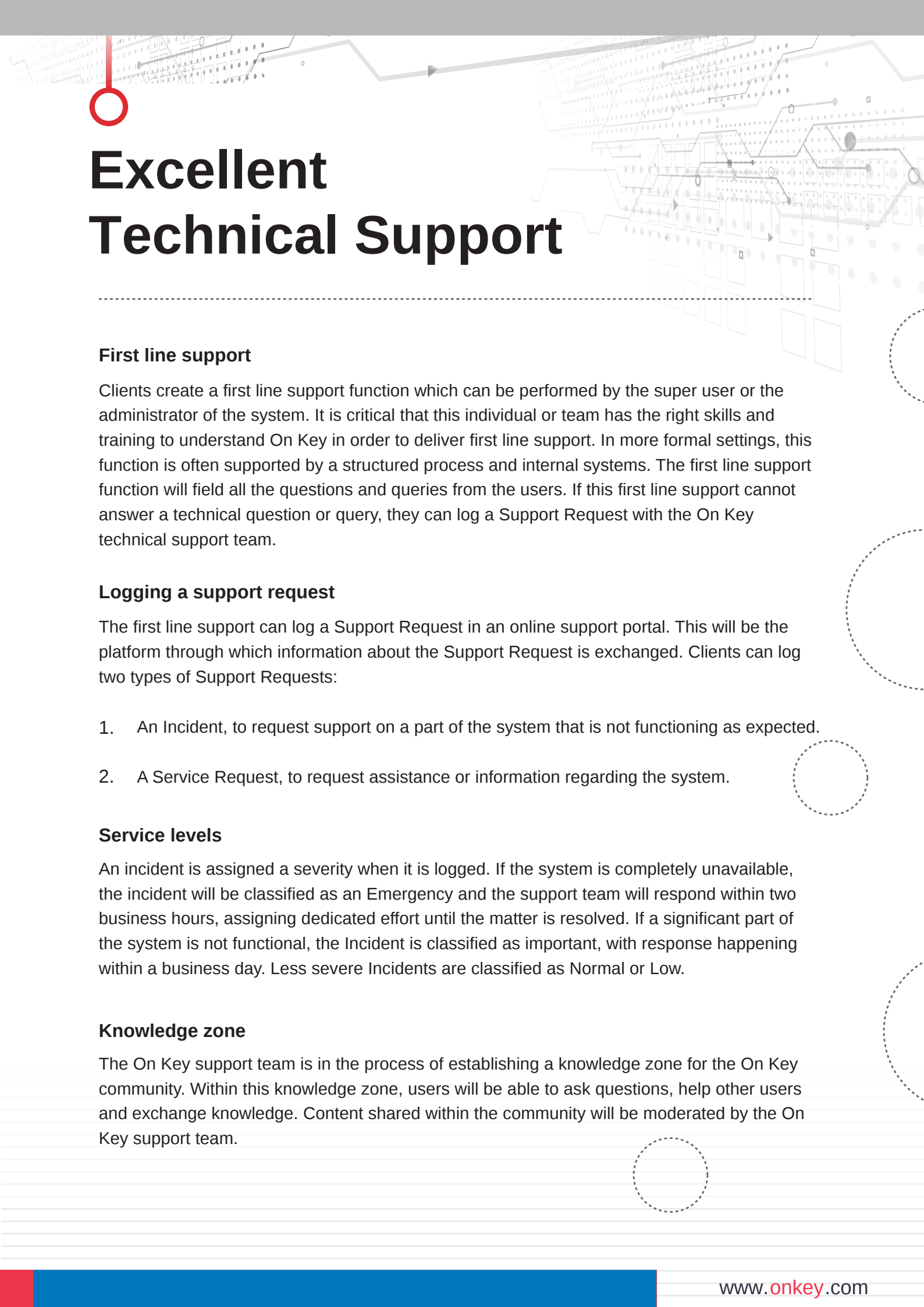
## Considerations for IaaS

On Key will support deployment to a Linux and Windows server based environment. The Linux deployment option is aimed at high performance, high scalability client requirements, and the Windows server deployment will be aimed at clients with less demanding performance requirements.

PostgreSQL is the On Key database technology.

PostgreSQL comes with certain standard functional features required for a highly scalable server environment as required by large Pragma clients and the Pragma hosting environment.

This results in the overall solution being much more affordable than an equivalent Microsoft SQL Server Enterprise edition that would be required to deliver similar performance. Clients considering on-premise deployments will need to know how to operate and maintain the PostgreSQL server.



# Excellent Technical Support

---

## First line support

Clients create a first line support function which can be performed by the super user or the administrator of the system. It is critical that this individual or team has the right skills and training to understand On Key in order to deliver first line support. In more formal settings, this function is often supported by a structured process and internal systems. The first line support function will field all the questions and queries from the users. If this first line support cannot answer a technical question or query, they can log a Support Request with the On Key technical support team.

## Logging a support request

The first line support can log a Support Request in an online support portal. This will be the platform through which information about the Support Request is exchanged. Clients can log two types of Support Requests:

1. An Incident, to request support on a part of the system that is not functioning as expected.
2. A Service Request, to request assistance or information regarding the system.

## Service levels

An incident is assigned a severity when it is logged. If the system is completely unavailable, the incident will be classified as an Emergency and the support team will respond within two business hours, assigning dedicated effort until the matter is resolved. If a significant part of the system is not functional, the Incident is classified as important, with response happening within a business day. Less severe Incidents are classified as Normal or Low.

## Knowledge zone

The On Key support team is in the process of establishing a knowledge zone for the On Key community. Within this knowledge zone, users will be able to ask questions, help other users and exchange knowledge. Content shared within the community will be moderated by the On Key support team.



# System Architecture

## Open technology stack

The core On Key Plus architecture is designed and built using open technology stacks on both the (HTML5, CSS3, JavaScript) front end and the (.NET Core) back end. These technology stacks are developed in the open and, where applicable, are based on well-governed industry standards. Broad industry adoption and active community involvement with frequent updates to the technology stacks are key considerations when technologies are accepted into the technology stack.

## Preference for Linux operating system

The On Key front end supports evergreen browsers running on Windows, MacOS and Linux operating systems.

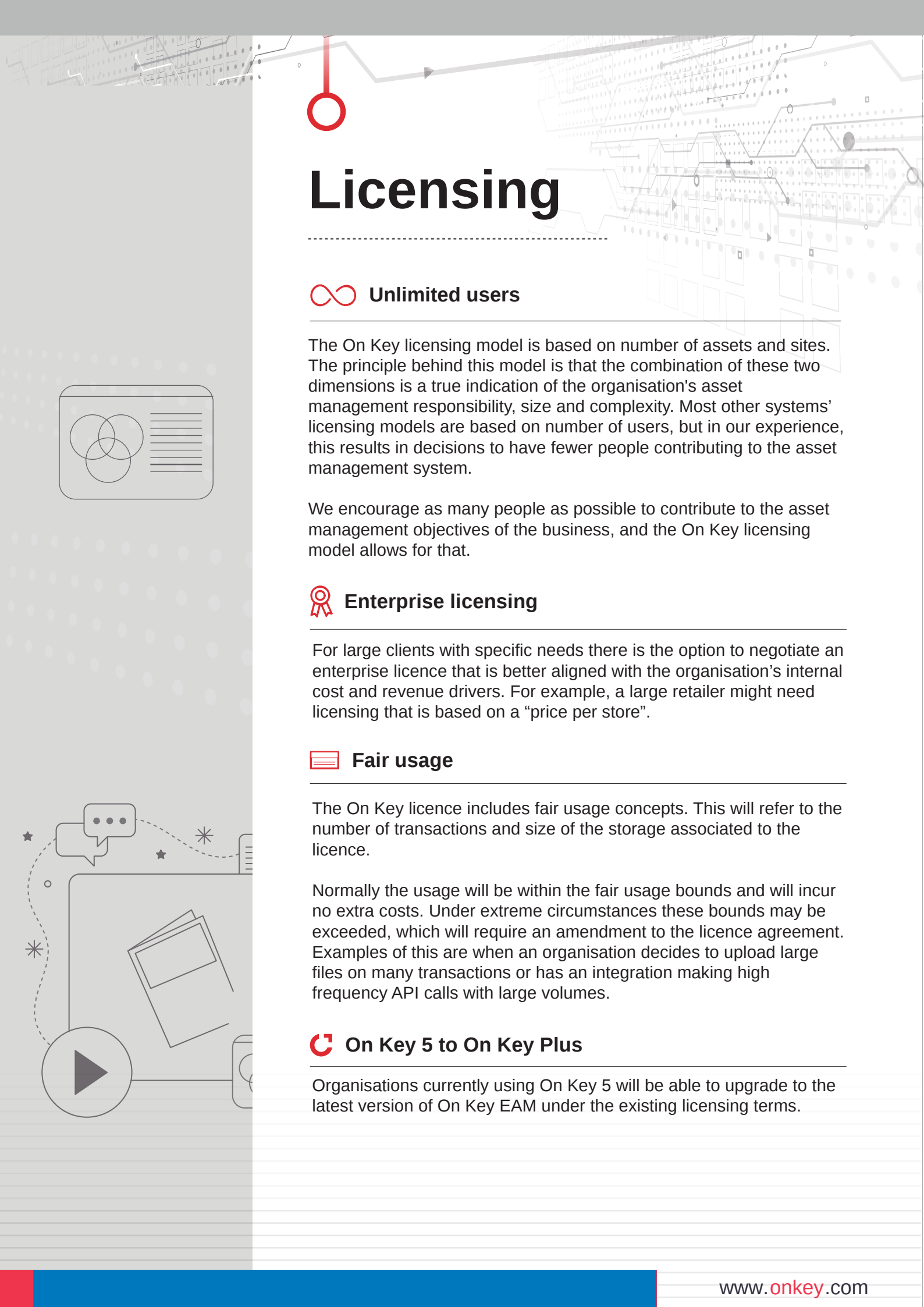
The On Key back end supports both Windows and Linux, but Linux is greatly preferred. Linux has broad support and industry momentum within the different cloud computing providers (AWS, Azure), with Linux usage now even surpassing that of Windows on Microsoft Azure. The horizontal scalable solution is only supported in Linux. Windows deployments will only be recommended/supported for self-hosted clients where horizontal scalability is not a requirement.

## PostgreSQL RDMS

PostgreSQL is the On Key database technology. PostgreSQL comes with certain standard functional features required for a highly scalable server environment as required by large Pragma clients and the Pragma hosting environment. This results in the overall solution being much more affordable than an equivalent Microsoft SQL Server Enterprise edition that would be required to deliver similar performance. PostgreSQL is an extremely extensible database platform with notable extensions like PostGIS that can be used for the geospatial feature set requirements in On Key.

## Kafka message broker

Kafka is the On Key message broker technology. Kafka is a distributed event streaming platform. Kafka's data streaming features and the flexibility it provides to build real-time data pipelines and streaming apps are a core part of the future vision for the On Key technology landscape. This, coupled with Kafka's high availability through load balancing and replication, makes Kafka the ideal messaging platform.



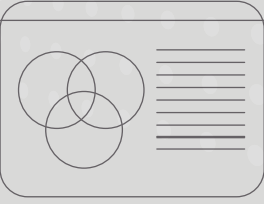
# Licensing

---



## Unlimited users

---



The On Key licensing model is based on number of assets and sites. The principle behind this model is that the combination of these two dimensions is a true indication of the organisation's asset management responsibility, size and complexity. Most other systems' licensing models are based on number of users, but in our experience, this results in decisions to have fewer people contributing to the asset management system.

We encourage as many people as possible to contribute to the asset management objectives of the business, and the On Key licensing model allows for that.



## Enterprise licensing

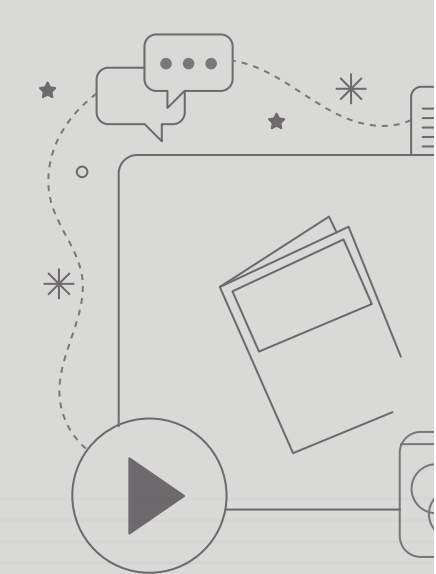
---

For large clients with specific needs there is the option to negotiate an enterprise licence that is better aligned with the organisation's internal cost and revenue drivers. For example, a large retailer might need licensing that is based on a "price per store".



## Fair usage

---



The On Key licence includes fair usage concepts. This will refer to the number of transactions and size of the storage associated to the licence.

Normally the usage will be within the fair usage bounds and will incur no extra costs. Under extreme circumstances these bounds may be exceeded, which will require an amendment to the licence agreement. Examples of this are when an organisation decides to upload large files on many transactions or has an integration making high frequency API calls with large volumes.



## On Key 5 to On Key Plus

---

Organisations currently using On Key 5 will be able to upgrade to the latest version of On Key EAM under the existing licensing terms.