WHAT IS IWMS?

INFORMATION AND BUSINESS PROCESSES

The profession of Facility Management (FM) and Real Estate Management (RE) has evolved rapidly in the last two decades. Organisations are aware that real estate represents the second largest expense on their balance sheet and that professional facility management adds significant value to their core business.

The increasing need for cost efficiency, business flexibility and transparency is challenging today's FM and RE managers. What are the real costs and where are saving potentials? How to align real estate and facility services with changing demands? What's the best sourcing strategy? How to measure and assure quality within budgets? How to align workplace concepts with the increasing workforce mobility? And on top of that, FM and RE managers are faced with new complexities like legislation, compliance, business continuity and the evolution of technology and sustainability.

In this realm, the need for reliable information is obvious, as well on operational, tactical and strategic levels. Operational data and information about your buildings, spaces and usage is needed to analyse actual occupancy, identify future vacancies and to benchmark the performance of your buildings. Knowing your HVAC installations and their maintenance requirements allows you to forecast maintenance costs and balance them with available long term maintenance budgets. Registering supplier contracts and service level agreements supports you in tracking quality, costs and timelines to ultimately realise the best value for your money. Knowing your energy consumption by individual building or workplace allows you to identify cost and carbon reduction opportunities. Knowing your lease contracts and their financial impact ensures compliant and reliable administration and processing. These are just a few examples.

In many organisations a lot of the FM and RE related data and information is available, however in most cases it is in different spread sheets, different IT systems and often in the minds of different employees. The quality and accuracy of this data is questionable and because of the fragmented sources it's impossible to generate any type of useful information. Bringing this data together in a structured 'single-source-of-truth', in most cases a database, is an important step to answer the 'what' question like what real estate to manage, what assets to maintain or what services to deliver.

Next to the 'what' question, the 'how' question is even more important to achieve FM and RE targets. How is a service or product executed and delivered? How does the workflow work? Who is responsible for which step? These so called 'business processes' are at the heart of any efficient and professional FM and RE organisation. How is a service request handled? How is a move process planned and executed? How is a real estate transaction processed? How is technical maintenance budgeted and executed? How is a room booking processed? These are again just a few examples of the wide diversity of business processes in FM and RE. The implementation of processes in an organisation is almost impossible without supporting software that includes automated workflow to dispatch tasks to relevant people, monitoring to track and trace the execution of processes and proactive alerts of potential escalations.

Combining the 'single-source-of-truth' with 'business processes' in an integrated software solution is a key precondition to continuously identify and execute cost efficiency and quality improvement initiatives in any Facilityand Real Estate Management organisation. These software solutions are called Integrated Workplace Management Systems (IWMS).

INTEGRATED WORKPLACE MANAGEMENT SYSTEMS

Integrated Workplace Management System (IWMS) is the globally accepted name for software solutions that support processes in Facility Management and Real Estate Management. The term was initially launched in 2004 by Gartner, the leading technology research institute that evaluates and reports on the software and technology markets. IWMS is characterised by Gartner as an enterprise-class software platform that integrates five key components of functionality, operated from a single technology platform and database repository. These functional areas are:

- Real Estate and Lease management
- Facilities and Space management
- Maintenance management
- Project management
- Environmental sustainability

Gartner periodically presents market evolution research and vendor information of IWMS in the 'Magic Quadrant for Integrated Workplace Management Systems'. Please visit **www.gartner.com** for more information.

COMPUTER AIDED FACILITY MANAGEMENT (CAFM)

In the United States and within globally operating organisations, the IWMS concept is a well-accepted best practice. In Europe and the United Kingdom, software for Facility and Real Estate Management is frequently labelled as Computer Aided Facility Management (CAFM), in the Netherlands and Belgium also as Facility Management Informatiesysteem (FMIS). The German Facility Management Association (GEFMA) has developed standardised definitions for CAFM systems as described in the GEFMA 400 guidelines. Please visit **www.gefma.de** for more information.
In general, CAFM or FMIS systems support at a minimum, processes in:

- Space management, alphanumerical and graphical
- Facility management
- Reactive Maintenance management

From a functional perspective the most important difference between IWMS and CAFM is that IWMS additionally includes extensive functionality for real estate and lease management, project management and environmental sustainability. Individual offerings however differ per vendor.

Next to IWMS and CAFM, which aim to support a combination of integrated processes, there are many point solutions available that focus on one specific process. Some examples are Computerised Maintenance Management Systems (CMMS), Gestion de la Maintenance Assistée par Ordinateur (GMAO), Enterprise Asset Management (EAM), and room booking or visitor registration are some examples of specific point solutions.

EVOLUTION OF IWMS

Software for Facility Management and Real Estate Management has evolved quickly over the last two decades. In the early 90's these systems focussed on registering base data and CAD drawings to support space management and the registration of technical assets. In the year 2000 the attention turned to business process support to improve efficiency and reduce costs. The introduction of workflow management and need for management information drove vendors to either extend or re-engineer their software. Also the introduction of the internet and new technologies pushed this change even further.

The IWMS vendor landscape has changed over the past 10 years. Several vendors disappeared from the market, others took the opportunity and completely re-developed their solutions, and some tried to combine power by acquisitions and mergers. The impact of this evolution is still visible in today's marketplace. Only a very limited number of IWMS meet today's technological requirements in terms of architecture, security, ease of deployment, and system integration capabilities. And even fewer solutions are truly integrated and based on a single technology platform and database repository.

CONFIGURATION VERSUS CUSTOMISATION

Along with the evolution of IWMS, the market demand for standard software has increased drastically. Project specific customisations and tailor made software have shown to be expensive, time consuming, and extremely hard to maintain. Business processes will change over time, so most organisations choose an IWMS that is able to adapt to expanding needs within the standard software. Changes are not customised with special software, but are configured using the standard solution. This increases flexibility, reduces Total Cost of Ownership (TCO) and ensures compatibility with new software versions.

Configurability within the standard software is in many cases a key requirement for any successful and future proof IWMS implementation. Configuration capabilities differ strongly by vendor and it's recommended that you evaluate your requirements extensively.

INTEGRATION

An IWMS is typically connected to various other IT solutions, like Enterprise Resource Planning (ERP), Human Resources (HR), Building Management Systems (BMS) or Smart Meters.

ERP systems like SAP or Oracle contain data that is relevant for Facility Management and Real Estate Management processes. Cost centres, budget codes or supplier data are examples of data that is frequently exchanged between ERP and IWMS. HR systems deliver personnel data, BMS send technical data, and Smart Meters deliver online energy consumption data to the IWMS. This data exchange is in most cases bidirectional. The IWMS for example sends financial charge back information to ERP, or updates roomand phone information in the HR system. Next to data exchange, today's technology like Service Oriented Architecture (SOA or SOAP) even supports real-time process integration between software systems. IWMS vendors offer different solutions for this, either based on specific customisations or the configuration of Webservices within the standard software.

VISUALISATION

Traditionally IWMS is strongly interconnected with Computer Aided Design (CAD) systems like AutoCAD©. Especially in the area of space and asset management this connection has proven its value. Existing CAD drawings can easily be re-used when implementing an IWMS to import for example, spaces, sq ft, assets and space usage. Database scenarios can again become visualised in graphical space mappings or even graphical scenarios in CAD drawings can be synchronised with the IWMS database. This integration allows organisations to maximise the use of their investments in CAD and allows them to continue using their CAD drawings consistently.

Building Information Modelling (BIM) is also gaining more attention in relation to IWMS, in some cases it is even driven by legislation. With three-dimensional graphical (CAD) models including relevant data, BIM aims to support the full lifecycle of any building: from design through engineering, during construction and operations. BIM also aims to eliminate the big gap between the construction phase and operating phase of buildings. Some IWMS solutions already support automated data exchange between IWMS and BIM and vice versa. CoBie is one of the most used data exchange standards in this area.

For organisations that have a large and geographically spread portfolio, integration with Geographical Information Systems (GIS) like ESRI offer new opportunities in terms of analyses and visualisation. The connection of IWMS with GIS combines intelligence of both worlds to analyse, for example, the impact of demographical circumstances on your real estate portfolio, or helps you in finding the best location for your retail expansions.

IMPLEMENTATION BEST-PRACTICES

Any organisation that begins a new IWMS initiative expects fast implementation, a quick results and a maximised re-use of the market's collective experiences. Some IWMS vendors have anticipated on these changing requirements and created best-practices that are based on many implementation experiences and market standards like IPD, BOMA, CEN or LEED and BREEAM. This allows organisations to shorten the time to implementation and benefit from the IWMS almost immediately. Vendors can differentiate themselves by these best-practices and use their experience to bring measureable value to their customers.

BENEFITS FROM IWMS

FULL TRANSPARENCY

Not knowing your portfolio, its value, sq ft, occupancy, planned maintenance, lease contracts, service suppliers, SLA's, etc. brings an enormous risk in terms of costs, compliance and business continuity. An IWMS gives you transparency in all relevant aspects by creating a standardised and structured data repository for all your processes. You know exactly the available sq ft for future growth, the floor areas for contracting the cleaning, the expiration of lease contracts, and when the next maintenance needs to be executed. With this type of information FM and RE managers are back in control.

MORE EFFICIENCY

As IWMS supports your business processes, you can easily analyse the performance of these processes and ultimately improve efficiency and quality of output. Identify bottlenecks, inefficiencies, excessive time spent, exceeding budgets or any other parameters that impact your business. IWMS allows you to continuously improve and benchmark these processes to achieve maximised efficiency and customer satisfaction.

IMPROVED OCCUPANCY

Facilities, office spaces, meeting rooms and workplaces often seem to be well utilised, however upon further inspection, it shows that their occupancy is on average just between 50% and 60%. An IWMS offers you the tools to measure and analyse your utilisation and increase the effective use and value for your organisation. This even allows you to eliminate underperforming facilities and spaces or change their functions.

BETTER PLANNING

For many organisations it's extremely difficult to forecast and plan for future space occupancy, workplace demand, maintenance budgets, energy consumptions or any other metric that impacts the business. IWMS supports strategic, tactical and operational planning processes based on historical information, standardised catalogues, or even future scenarios. This allows FM and RE managers to align real estate and facilities with future demands and plan budgets and resources accordingly.

EMPLOYEE CONNECTION

Employees expect easy and 24/7 access to any type of business support service. In combination with the growing mobility of the workforce this becomes a true challenge for FM organisations. An IWMS includes the tools such as self-service or native smartphone apps that allows employees to easily request services, query relevant information, book a meeting room or workplace, enter a malfunction or access any other customer oriented process. This increases the accessibility of services and facilities, shortens the processing, and improves the employee satisfaction.

CHAIN INTEGRATION AND MONITORING

In many cases operational services are outsourced to one or more external service provider. For FM and RE managers it becomes important to monitor the suppliers' performances and validate them on the agreed contracts and service level agreements. An IWMS allows you to connect external providers to your processes by giving them access to authorised functions of the IWMS. This chain integration ensures maximised process efficiency, allows you to monitor suppliers' performances in real-time and supports full flexibility in your sourcing strategy.

COMPLIANCE

Compliance, legislation and law are impacting processes in real estate and facility management more and more. Health & safety, maintenance, security, sustainability and FASB lease accounting are just a few examples of areas with increasing need for compliant processes and reporting. A structured administration and documentation needs to be in place to prove compliance in cases of any audit or incident. IWMS offers the functions, tools and structures to ensure compliance in FM and RE, protecting businesses from any legal consequences.

DECISION SUPPORT

In today's business climate it is extremely important to make the right decisions fast. Mergers, acquisitions, reorganisations, budget constraints and other economical factors, put high pressure on FM and RE managers. This increases the need for reliable and integrated management information to support decision making processes. IWMS supports operational, tactical and strategic decision making with reports, analyses, dashboards and benchmarks. Next to standard reports, IWMS allows organisations to create specific output or analyses based on historical trends and future forecasts.

IMAGE AND PROFESSIONALISM

A successful IWMS implementation will immediately improve the image, professionalism and power to innovate in any organisation. Employees appreciate the improved quality and accessibility of services. Due to standardisation of processes FM and RE staff can focus more on exceptions and special cases rather than standard work. This drives motivation, pride, innovation, customer orientation and professionalism within the team.

COST SAVINGS

From a monetary perspective all mentioned IWMS benefits include direct and indirect cost saving, cost avoidance and revenue increasing benefits. A general quantification of these monetary benefits is hardly possible because of the different circumstances and starting points in each organisation. Gartner published an analysis on IWMS savings stating 10-15% cost reduction in space by effective and efficient management, 5-8% costs savings by process improvements and better contracting, and 5-8% savings in lease costs by professional lease administration.

BUSINESS CASE

Before selecting and implementing an IWMS it's recommended that you make a business case to include internal and external costs and monetary and non-monetary benefits from at least a three year perspective. In many cases the IWMS software costs are a minor part of the total investment. Data collection, change management, internal costs, IT infrastructure and project management should be taken into account. Also specific customisations or integrations can impact the Total Costs of Ownership heavily, depending on the vendor and solution of choice.

The IWMS deployment and exploitation model is also a part of the business case: is the IWMS installed within your organisation or hosted by the vendor? Is application management done internally or outsourced to the vendor? Choices that are made will impact costs as well as benefits.

WHO USES IWMS?

ACROSS INDUSTRIES

IWMS is used across all industries in profit and non-profit organisations including financial services, local and central government, education, healthcare, retail, production, chemical and pharmaceuticals. Multinational organisations that are represented in multiple countries tend, due to their complexity, to use an IWMS as a key strategic tool to manage and align real estate portfolios and facility management processes.

Next to the size of an organisation and the volume of its real estate also the complexity and value of facility management processes determine the need for using an IWMS. Best-practices show that medium sized organisations already can benefit from IWMS. This is also impacted by the question whether real estate is owned or leased and facility management processes are outsourced or in-house. These parameters determine functional priorities as for example owners of real estate need portfolio management, planned preventative maintenance and commercial lease processes supported by IWMS. In most cases portfolios contain owned and leased real estate with partially outsourced and in-house executed services: in these complex environments the use of an IWMS is obvious.

PROFESSIONAL SERVICE PROVIDERS

Commercial providers of professional facility, maintenance or real estate services have adapted IWMS as a part of their core business as it helps them to improve the planning, delivery and quality of services to their customers. Due to the growing trend for outsourcing, the service provider market has undertaken significant change as providers need to deliver more integrated services on a larger geographical scale.

As a result, mergers and acquisitions will further strengthen the role for IWMS to standardise, align and monitor any type of service processes. Innovative Service Providers use an IWMS today already as a part of their value proposition and even offer system accessibility to their customers. Not just to connect these customers to their processes, but also to give them online transparency on performance.

For professional Service Providers the use of an IWMS is business critical. Therefore the need for stable, flexible and truly integrated solutions becomes more and more important. Also from a functional perspective this industry has specific and extensive requirements like planning and dispatching maintenance or services work orders, mobile solutions to execute field- or maintenance services, health and safety regulations, stock- and purchase management, controlling and monitoring, and excellent integration with financial systems for billing.

END USERS OF IWMS

An IWMS supports many different user-personas in any organisation. In most organisations the initial implementation of IWMS aims at FM and RE back-office users: the planners, coordinators and managers that are responsible for business processes in areas like portfolio management, lease and contract management, space management, facility services, maintenance management and energy management. These users require full and extensive access to the IWMS.

The second IWMS user-persona in FM and RE is the front office user: the connection between the back-office organisation and the employees in the core business. These users require specific functionality for call-logging, helpdesk support, to answer frequently asked questions, and handle room reservations and service requests like catering, cleaning or travelling.

The third IWMS user-persona in FM and RE is the field engineer who is responsible for the execution of work and job tickets. This can either be in-house or outsourced to a professional service providers. Field engineers again need specific functionality to execute their work fast and efficient like mobile solutions that present the next job, guide the engineer to the right location, ensure health and safety regulations, and offer time and materials registration. These solutions need to work in online and offline mode as work is frequently executed in non-internet connected areas.

The next IWMS user-persona is the employee in the core business. This persona consumes FM and RE services to execute his or her job effectivity. IWMS supports these users with self-service solutions that allow employees to order or book any service like a meeting room, catering, travel, parking space etc. These browser-based solutions are in most cases embedded in the corporate company portal to make accessibility as easy as possible. Modern IWMS solutions even offer native smartphone apps to request services or book a meeting room on-the-fly. By utilising today's technology like GPS positioning, RFID or QR code scanning, these apps are very easy to use and bring FM services to the front end of any organisation.

A separate end-user of IWMS is the manager-persona. This persona is typically not interested in detailed IWMS functionality but needs easy to access output like management dashboards, trend analyses, occupancy reports, SLA and performance indicators, benchmarks and other tactical and strategic output. On top, this persona needs dynamic alerts and notifications such as an email or SMS whenever a process threatens to escalate, a budget threatens to overrun, or a service level is not met. This allows managers to act accordingly to avoid further escalations.

And finally the application manager is an important end-user persona in any IWMS. This persona needs full access to the configuration, authorisation and system management functions of the IWMS. To (re)configure processes, change user-interfaces and system behaviours, maintain standards, add or change user authorisations, etc. This persona makes sure that the IWMS stays in shape and aligned with your changing requirements and needs easy-to-learn and easy-to-use use tools within the IWMS.

SELECTING AN IWMS

PROCESSES AND OUTPUT

The organisation's FM and RE strategy determines the scope, functionality and processes the IWMS needs to support.

Aim your strategy at outsourcing FM? Processes like SLA and contract management, supplier management, performance monitoring, customer satisfaction surveys and chain integration become relevant. Aiming to consolidate your real estate portfolio? Processes like portfolio management, lease management, strategic space planning, scenario planning and transaction management will play a key role in your IWMS. Aiming to increase added value to your core business? Processes like efficient space and workplace management, room booking services, helpdesk support and self-service processes will help immediately. Focussed on business continuity and compliance? Planned preventative maintenance, reactive maintenance, health and safety procedures, security management, compliant administration and reporting enable achieving your goals. Is corporate sustainability a part of your strategy? Processes like energy monitoring, waste management, carbon emission reporting, BREEAM or LEED certification and project management become relevant.

The broader the scope and number of processes, the larger the benefits you achieve from selecting a true integrated IWMS solution. This maximises the re use of base data and allows a real interconnection between processes. Some examples: well planned maintenance avoids expensive reactive maintenance, combine energy reduction targets with a sustainable maintenance plan, effectively combine FM and IT support services in one integrated helpdesk, smart space and workplace management reduces your need for real estate and impacts your portfolio planning.

Next to processes and workflows, it's important to understand the required output, reports, KPI's and management information from an IWMS and to validate these requirements carefully when selecting your solution of choice.

For global organisations that operate in multiple countries or continents, the requirements for an IWMS typically will include aspects such as multi language, currency, time-zone and measurements. Practice shows that these organisations tend to combine a centralised standardisation with opportunities for local fine-tuning. Multinationals and professional Service Providers are advised to validate these requirements carefully when selecting an IWMS.

TECHNOLOGY AND INTEGRATION

The IWMS needs to comply with your IT and technology standards such as operating systems, database systems, browser versions and security standards. Whenever the IWMS is hosted externally in an ASP or SaaS contract, aspects such as data security, encryption, legal compliancy and uptime requirements need to be assessed and checked during the selection process.

As an IWMS is typically connected and integrated with other IT technology or solutions such as Microsoft Exchange, SAP, HR solutions, Building Management Systems, smart meters, GIS solutions, mobile technology or other solutions, the integration capabilities of IWMS are gaining much more attention during the selection. There is a clear market trend and demand for maintainable and configurable standardised integrations rather than custom specific developments. Configurable standards have a substantially lower Total Cost of Ownership, are faster to implement and much more easy to maintain during their lifecycle. Open standards like SOA/SOAP and XML are driving these real-time integrations and standardisation.

Note that Gartner's' market research indicates that not all IWMS vendors offer truly integrated solutions. Although positioned as 'integrated', several solutions are still based on different technology platforms and even on different database solutions. This can substantially increase the IWMS' TCO, increase the implementation and maintenance effort during its lifecycle, and decrease the previously mentioned benefits from integrated processes.

IMPLEMENTATION

Market best-practices and Gartner research shows that the implementation effort for IWMS differs significantly by vendor. Where some vendors start to implement their solution from scratch, other vendors start from a best-practice approach. There is a very strong growing market demand for the latter best-practice approach: it shortens time-to-value, allows organisations to profit from the vendor's experiences, and reduces the risk to overshoot budgets and timelines. Where a traditional IWMS implementation lasts between 9 and 16 months and will use about 60% of the project's budget, the best-practice implementations last between 2 and 6 months and reduce the effort to only 30% of the budget. A few IWMS vendors even offer fixed-price scenarios in combination with their best-practices solutions.

OPERATION

Selecting and implementing an IWMS are the first two, and shortest, steps in its lifecycle. Therefore it has shown extreme important to analyse upfront the resources, time, and budgets needed to operate the preferred IWMS. This can heavily impact the solution of choice: initial purchase or implementation costs might be overruled because of huge operation costs, or the other way around: an expensive IWMS might be very lean and easy to operate.

Best-practices and analyses have shown that configurable and standard IWMS offerings show substantial lower operating efforts and costs.

Organisations can easily (re)configure workflows themselves, maintain standards and authorisations, configure and maintain interfaces, and even add or change reports and output. This not only reduces the TCO substantially, but makes organisations independent from vendors and ensures a fast alignment with changing circumstances.

INVESTMENT

There are no standard investment figures for IWMS as size, functionality, complexity and preconditions can change per project. However research indicates clearly that the level of investment in the lifecycle phases of IWMS heavily depends on the type selected type of IWMS.

True integrated standard solutions, based on best-practices and including configuration tooling within the standard, have substantial lower initial investment costs and even a substantial lower TCO during operation. These solutions are easier to install, faster to implement, and easier to maintain. This not only reduces costs, but also shortens time-to-value and reduces implementation risks.

VENDOR CRITERIA

When selecting and implementing an IWMS, the demand for continuity and full lifecycle support from your vendor is very important. New technologies, market developments and changing user experiences impact the evolution of IWMS. The vendor landscape shows different strategies in this area: some generic IT vendors acquire others to complete and extend their offering; others continue to specialise and focus their Research and Development (R&D) in IWMS. Next to the investment in R&D, the ability to implement and deliver local support is a key criterion to take into account when selecting your vendor of choice. As mentioned in the introduction, Gartner periodically presents market evolution research and vendor information of IWMS in the 'Magic Quadrant for Integrated Workplace Management Systems'. Please visit **www.gartner.com** for more information.