ENERGY EFFICIENCY IN REAL ESTATE AND FACILITY MANAGEMENT



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Glossary

Facility Management

Companies whose activity focuses on building management, guaranteeing the comfort of those working in them.

Utilities

Companies that produce, transport and/or sell energy.

NZEB

Near Zero Energy Buildings. Buildings whose energy consumption is almost zero, non-existent.

Smart meter

0

Energy consumption meter that utilities install in commercial and residential buildings. It measures more variables than a traditional meter and allows remote access to that data.

BMS

0

Building management system. This may include different technologies.

→ BAS

Building automation system. In other words, a system for automating buildings. It may include different technologies in a single building. For example, one to control the temperature, another to control the lights, etc.

SCADA

Building control technology generally used in the industrial and manufacturing sector. Closely associated with production process variables.

0

EMS

0

Energy management system. Technology and plans for rationally managing energy in a building and achieving energy savings, data on performance and consumption.

The Challenges of the Real Estate Market and Facility Management

The real estate market has significantly changed in the last quarter of a century. It has gone from being a safe, easy and stable investment to being a more volatile market. Speculation in real estate is a reality.

14%

increase in the surface area available for rental in 2015, in the United States Real estate companies that work with office or industrial buildings have seen **square metre prices** fluctuate hugely in the last five years. Currently, and generally across all of Europe, we can observe an upward price trend in large cities that seems to have no end.

As a result of these upward trends, which help property developers increase their profits, the **commercial surface area increased by 14% in the United States in 2015**:



The managers of these large portfolios of American buildings have opted for energy efficiency measures in new builds. Despite the aforementioned 14% increase in the surface area available for rental, **these new buildings have "only" increased energy demand in the sector by 7%**.

Moreover, the facility management sector represents 6.4% of Spanish GDP, with a turnover of more than €70 billion annually, according to <u>IFMA data from 2016</u>. This association has also calculated that a facility manager can achieve a saving of between 20% and 30% for the company. Within this saving, energy is included as just another item.

7%

Increase in commercial space available in 2015 by the United States



of the Spanish GDP is represented by the facility management sector What challenges are being faced by the real estate and construction sector? At a macroeconomic and operating level, the following stand out:

1. A change in the needs of tenants: searching for **buildings that are green**, healthy, provide **comfort** and make their employees happy.

2. Increasingly restrictive legislation (emissions, energy consumption, etc.).

3. The need for **process simplification** to be able to better analyse business data. The amount of paperwork involved in property management and the **number of tasks performed by a facility manager** also mean less time available for analysis..

4. Finding technology that is helpful and not difficult to use

According to <u>recent studies</u>, we are increasingly sensitive to the buildings in which we work. Much of our satisfaction or dissatisfaction with our job (and our employer) depends on environmental conditions. Employee comfort is one of the key factors through which the performance of the facility management company is assessed.

Another transformation in the sector is driven by **legislation**. The European Union, for example, is speeding up procedures so that its Member States can force buildings to:

- Emit increasingly fewer **greenhouse gases**, progressing towards NZEB.
- Publish accurate and verified data on the energy performance of their buildings.
- Not only certify the energy performance of the building, but also have an energy management plan for it.

In some countries, such as the United Kingdom, the legislator is proposing measures that go much further. For example, **companies with fleets must, by 2040, migrate all their vehicles** to electric vehicles by law.

This is a sector that needs to strongly invest in technology to **simplify processes**. According to Deloitte's report, 2019 Commercial Real Estate Industry Outlook, the real estate sector has been slow to adopt technology compared to other business sectors. Many companies still manage their contracts, rentals, tenders, etc. on paper, or they work with Excel spreadsheets to monitor expenses. The problem with continuing with these practices is **the difficulty in performing an advanced analysis of the data in that context**. If we want to analyse operations from one year, we have to go to the filing cabinet, search for a specific sheet from each contact, scan it, extract the information, etc. We are wasting valuable time for the company.

However, technological progress and its incorporation into the real estate market is unstoppable. Utilities have forced the implementation of certain technologies that real estate and facility management companies can take advantage of to start offering energy management services.

This is the case with **smart meters**. For example, over half of all American households and businesses have a smart meter installed. In <u>Europe</u>, almost **80% of electricity meters will be smart by 2024**.

The existence of these meters on the market is an example of how there is an interesting window of opportunity for real estate companies to **enter new business areas with a relatively low investment**. For many customers, there will be no need to install meters that did not exist before: smart meters will cover their measurement needs.

We cannot forget that **technology must always be a friend, not a foe.** Employees of real estate and facility management companies want easy-to-use and intuitive technologies that help them with building control and energy analysis.

We are talking about a very fragmented sector, with different types of companies focussing on different things:

- Real estate companies. These may own complete office buildings, industrial buildings and even residential buildings.
- Facility management companies. These are dedicated to managing everything the building needs, which is outsourced. From changing toilet paper to remodelling areas of the building and adapting them for a new business unit.

Despite their differences, the key challenge is the same: **the energy management of 10s, 100s or 1,000s of points and locations**.



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ECO-CUSTOMERS

Whilst studies show that we are increasingly influenced by the building in which we work, customers are looking for buildings that are green, NZEB, etc.

LEGISLATION

The trend is for the legislator to demanc an increasing number of certifications, reports, emission declarations, etc. and this will not change in the near future.



SIMPLE PROCESSES



The sector must accept the new technologies that help it to forget about paper processes.

DATA ANALYSIS

Due to the complexity of the processes it is still difficult for real estate companies and facility managers to perform an advanced data analysis.



EASY TECHNOLOGY

Energy management is just another task: the ideal situation is to have a simple technology that the user adopts quickly.



The Energy Challenge for Real Estate and Facility Management Companies

Your business structure in real estate or facility management generates a series of specific energy challenges for your business and your sector:

Having a plan that tackles the relentless increase in energy prices. 01. Finding a truly specialised solution in energy management in building 02. portfolios and/or for facility managers. Being able to integrate a new building (or all the ones you have) 03_{-} simultaneously and without losing data. That is, without problems of incompatibility with a BMS, BAS or new meters. Having an energy management platform that is scalable and helps to ΠΔ implement the project in the portfolio's buildings in stages. It is smarter to first work on the buildings with the greatest potential savings and then migrate the rest without any problems. ------Having technology that allows control tools to be integrated into the 05. energy management plan: control of the lighting system, communal areas, HVAC, etc. ______ Ensuring that energy management becomes a way of attracting new $\mathbf{06}$ tenants. In this way, you can generate more business thanks to being able to offer guaranteed energy savings, advanced control, a detailed analysis to make better decisions, etc. ______ Finally, and especially for the facility manager: energy management 07

must be carried out through an intuitive and easy-to-use technology. With the number of tasks you have, it is logical to think that an energy management technology should help you to save time, not waste it. As a company that manages the energy of various buildings, the energy challenge is not to be underestimated. As we already mentioned in the introduction, **energy prices continue to increase**. You need to have an energy management plan and some energy management software that helps you to "protect" your energy cost.

So, no matter how much the kWh price goes up, you can be sure that it will not affect your rental margins or your facility management services.

However, this is difficult for the manager of building portfolios or the facility manager, because in reality, there are few solutions on the market that are truly specialised in dealing with your needs and challenges.

For example, few platforms offer the **possibility of being able to integrate a new building (or 10, 100, 1,000) automatically and without losing data**. Or, without having to invest thousands of euros again in meters.

This occurs firstly because **many technologies are "tied" to the meters of one manufacturer or another** and, if you purchase a new building for your portfolio that does not have these meters, you cannot integrate it.

It is also because they are closed systems in company servers, difficult to connect to other systems. Ideally you should rely on an energy analysis tool that can communicate seamlessly with a BMS natively or through an open **API**. If you do not know what this is, you can **read this article**.

Scalability is essential for your building portfolio. You might grow tomorrow and want to add new users to the energy management plan (preferably a tool that does not charge per user, right?). Or, add new buildings or new energy measurement variables. That is scalability. Can the platform you have support this? If the answer is no, you may have a problem with data loss, synchronisation, etc.

When you manage 10s, 100s or 1,000s of properties, energy management is an important investment. Scalability is key in order to be able to start with a number of buildings whose cost you can afford and then, as you recover the money from the investment through energy savings, you can add new properties to your energy management plan.

There is another key challenge in the energy management of building portfolios; **the issue of interoperability with other assets**.

It is likely that your properties already have various BMS-type systems, or perhaps SCADA-type systems if it is an industrial building. It is important to **read this article** to understand the ideal relationship between an Energy Management System and these systems.

However, it is easy to simplify this issue as follows: your challenge is to be able to integrate your energy management system with those control tools.

We cannot ignore the fact that **energy management** is a strategic business investment for your company. Therefore, **it should have an impact on your business**. It should **help you to achieve new facility management contracts or attract new tenants to your building**.

Customers are becoming increasingly concerned about occupying buildings with Iower energy consumption. This is logical as they pay the bills and it takes a big bite out of their business margins.

However, this is also because the **legislation is increasingly strict in terms of emissions that are harmful to the atmosphere** (emissions of CO2 and other greenhouse gases).

In addition to all this, your ultimate challenge is that your time is limited. As a real estate company, energy management is probably just one of your business variables. Not to mention what it means for the daily work of the facility manager.

As you can only spend part of your time and resources on energy management, you want scalable, intuitive and easy-to-use tools that encourage collaboration in your team.

The Residential Sector

Until now, energy management on a "global" scale has not had a great impact on private housing within the property sector. However, this is changing.

More and more legislation is forcing developers of private housing to provide details, dashboards and access for the user to their detailed energy consumption. Plus, tenants want their landlords to be proactive when promoting energy saving measures. At DEXMA, we have already seen and worked with housing projects that provide the tenant of a rental property with sub-metering and try to increase their awareness to help them save energy.

On top of this, **the integration of solar energy** into new buildings is also growing (required by law in many European countries). Therefore, the ability to monitor solar

- View any possible faults or breakdowns in real time
- Identify whether solar energy meets the demand needs of the building
- Show tenants and other stakeholders the greenhouse gas emissions savings associated with using this renewable energy

Portfolios of Buildings that Consume Energy Intelligently

What does smart energy management look like when you take care of several or thousands of buildings? The key here is energy analytics, with its first basic steps to detecting the greatest potential savings, and advanced analysis tools to achieve the level of detail that we want.

Energy Analytics for Building Portfolios

Energy analytics is the **ability to perform an analysis on the consumption of any energy source** (water, gas, fuel, electricity, thermal energy, etc.) and at all levels. From a **generic overall level to the smallest detail**, this means managing to analyse what has happened with each kWh consumed.

Energy analytics has three essential steps:



1. Detecting savings as quickly and with the least investment possible.

2. Advanced analysis with tools to calculate KPIs or ratios, analysis of activity times, consumption on public holidays, estimated consumption and costs at the end of the month or quarter, analysis of **renewable** sources, etc.

3. Optimising this process to ensure anomalies are found automatically and energy efficiency measures can be implemented across whole build portfolios.

These three steps answer important questions when managing the energy of a portfolio of buildings: How far do I have to go with the energy management plan? Do I install solar panels on all my buildings? Does it make sense to do this in all of them?

The answer to these questions is different for each company, but it helps to visualise **the concept of the energy efficiency pyramid:**



In this pyramid we see that **the more sophisticated we want to be (renewables, HVAC** system replacements, etc.) the more investment will be needed.

However, on the other hand, the investment return will not only be greater, but also faster. As soon as you install the improvement in the highest part of the pyramid, you start to save, usually in a linear way.

Always bear in mind that once you reach the target set in your particular energy efficiency pyramid, you must demonstrate to your managers that you have reached that level of the pyramid to guarantee the project's ROI (return on investment).

Therefore, it is vital that you have measurement and verification tools in your EMS, such as:

- Being able to automatically and quickly show the project's results globally across teams.
- Showing, in % values, the saving achieved compared to the targets set.
- Automatic configuration of the measurement and verification of savings tools.
- Aggregate the total savings and tracking against baseline for multiple sub-projects.



Detect Potential Savings in Building Portfolios with Minimum Investment

Until now, **the process for detecting potential energy savings was lengthy and expensive. Versions of energy audits** were carried out, building by building, to see what was happening and where improvements could be made.

For the real estate or facility management company, this meant a high financial cost and it was also costly in terms of time (the results are not immediate).

Added to this factor is growing governmental pressure for transparency and comparative benchmarking between buildings.

Thanks to Big Data technology and artificial intelligence algorithms, **there are now** other ways to detect potential energy savings in building portfolios.

Let us use the example of **management having decided to reduce the global energy consumption of our portfolio by 15%**.

Where do we start? Which buildings have the most potential for improvement? Will I be able to achieve the 15% target?

Until now, the most common thing was to begin with an energy audit of the entire property portfolio. An **energy audit** is a report that analyses consumption by properties and detects potential improvements.

The costs can vary from €0.50 to €1 per square metre analysed, and the time it takes can fluctuate between 15 days and 6 months, depending on the detail we require. If we have a portfolio of 20,000 m2, we will have spent at least €10,000 and waited 6 months before we have enough information to start making decisions and we will still not have saved anything.

Fortunately, the world of **Big Data and artificial intelligence** has arrived in energy management and as a result of the large volume of data available, now there are tools that speed up the detection process, **scanning the entire portfolio en masse**, **reducing costs by 90%** compared to traditional audits, and **detecting improvements in 24-48 hours**.

The best thing is that they work with just the monthly data from energy bills.



8 Advanced Energy Analysis Tools for Building Portfolios

1. Analysis of Multiple Energy Sources

Your energy management technology must **take into account ALL energy sources** consumed in your properties.

If you choose a tool that is limited solely to the analysis of electricity **you cannot minimise your costs and consumption of**:

- Water
- Gas
- Thermal Energy
- Fuel tanks
- Biomass

You also cannot include in your analysis the impact of generation with **renewables**, which is an issue if your building portfolio has solar panels or geothermal technology, for example.



Figure 1. Total electricity usage has increased more than the other energy sources since 2003

Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey.

This graph shows the consumption of buildings in the commercial sector in the United States. We can see how the cost of electricity has not stopped rising, and how other energy types influence the energy mix in this type of building.

At DEXMA, we are very aware of this. Therefore, our energy management technology for building portfolios provides advanced analysis tools for:

- Electricity
- Water
- Gas and thermal energy (you can <u>see how we do this in this video</u>). If you have any questions about how to measure gas, **this article** may help you.
- Fuel tanks
- **Solar** generation and energy storage, thanks to our Microgrids app.
- Biomass: there may be systems in the building that operate with biomass, for example boilers (in this <u>article</u> you can see what biomass is and how to analyse it)

2. Calculating Associated Costs and Comparing them with Monthly Bills

Energy bills arrive at your purchasing department with differing frequencies. Unfortunately, your financial manager wants an estimate of costs for this month (or quarter, or year) as soon as possible.

In addition, your colleague who is responsible for purchasing wants to be able to compare the bill received from the supplier with what was actually consumed.

How much work would this be for the person responsible for purchasing energy if they had to read the values from the meter, creating an Excel spreadsheet, downloading data from the platform of each utility company, etc.? Just imagine.

The ideal solution for real estate and facility management companies is to automatically generate a bill simulation for each building with a click, or have it delivered automatically to your inbox every month.

When you see this example, you will have a better understanding of the estimated bill mentioned above, which is created automatically:



In this case, we can see a report with an editable title (1), the range of dates (2) for the data included in the report and basic information about the building and/or tenant (3). Number (4) shows us the daily energy cost by tariff period. Each colour is a tariff period (peak, off-peak, etc.).

(5) indicates the total cost of the bill (excluding tax) and the next figure is the total energy consumed (6).

(7) gives us more information about cost and energy (average daily consumption, hourly cost, etc.). The table that occupies most of the left area of the report is the breakdown of cost by item (8).

It also includes the peak power consumption in each period, showing the values from each tariff period. This is important when working with buildings in countries with penalties for excess power.

The graphs (10 and 11) add more information about the cost and use of energy by period, month by month, with the baseline, etc.

The DEXMA Platform allows you to generate this simulation on demand or automatically for the period that you determine. And, as it is a multi-energy source platform, you can also generate it for water and gas.

This functionality is also ideal for helping you to retain your tenants and customers. It helps them to be prepared, to compare the bill from the utility company with their actual consumption, etc.



3. Calculating and Monitoring Energy Indicator Ratios

What metrics do you use to find out whether your buildings are efficient? There are a number of energy ratios that may help you:

Ratios per parameter

For example in the corporate office building, the ratio per floor area in use.

Constant ratio

In the same office building, it would be the ratio but calculated for the whole building. Regardless of its occupancy rate.

Key figure by date range

For example, employees of a company. This is a variable ratio, which can increase or decrease by periods.

Calculating and monitoring these indicators **helps to standardise consumption** and therefore discover **which Energy Performance Indicators (EnPIs)** or KPIs (Key Performances Indicators) **are important** for your company.

With the DEXMA platform, you can calculate and activate unlimited EnPIs.

But what can you use them for? Some examples are to benchmark the consumption KPI divided by surface area and degree day to know whether your buildings in London are more or less efficient than those in Manchester.

Or, maybe your tenants or customers would like to know the energy they consume per employee.

Another challenge that the facility manager or owner of buildings finds almost all of the time is to ensure the proper functioning of the global HVAC system. How can this be done? The key here is to be able to create performance reports using regression. These reports calculate the regression between the outside temperature and the consumption of the HVAC system for a given period, for the cooling and heating zones. The reference temperatures set for the location are taken as the base. Inefficiencies or anomalies are quickly detected in this way.

With the DEXMA platform, these reports are created **on demand** (whenever you want and need them) **or automatically based on a location**.



4. Measurement and Verification with IPMVP

When you are a real estate or facility management company and you offer energy management services, **how do you charge for them**?

Most agreements usually have part of the remuneration linked to results. That is, **to the** savings you generate.

And how do you agree with a tenant or company about the value of the savings that you have generated? The **IPMVP protocol** is very useful in these cases. These initials stand for the International Performance Measurement and Verification Protocol. It was developed by the Efficiency Valuation Organization (EVO).

The key to the IPMVP protocol is that it proposes **4 measurement and verification options to apply in each of the energy improvements** that you propose to your customers.

These measurement options allow you to verify the savings for each energy saving measure, individually. That is, working by project.

In your specific case, **the advantage of the IPMVP protocol is that it can reach the greatest level of detail, but also easily aggregate totals**. Wouldn't it be interesting to be able to separately verify your savings after investing in solar energy and a new HVAC machine? And building by building across those in your portfolio? With the DEXMA platform, you can do this, since it offers you a specific IPMVP module for monitoring energy saving by project or action:



Working with the protocol requires the creation of **follow-up reports**. As we have seen, with the DEXMA platform, reports can be created on demand, with the configuration you need for your properties.

5. Consumption Prediction

Do you remember how one of your challenges is to be able to **"protect" yourself from** the ups and downs of energy prices?

The possibility of **predicting energy consumption (and cost) is the key** to achieving this. And no, it isn't magic. It's mathematics, algorithms and having a powerful technological engine in the background that does the work for you.

The DEXMA platform has an **advanced forecast** module **that allows you to forecast the consumption** of your buildings based on different variables.

This function becomes even more important if we consider that it is increasingly expected that buildings will continue to have low energy consumption even in extreme weather conditions.

Extreme weather events are a concern for everyone managing buildings in areas where these frequently occur. Hurricanes, tornadoes, torrential wet seasons, and so on, will affect the operation of the building.

Using forecasting tools can help you make a building more resistant to extreme weather. In fact, many analysts are saying **that by 2050 buildings may be our first defence against extreme weather events**.

This is of interest not only to the facility manager but **also to the Finance Director who wants to be able to finish their forecasts for cash, balance sheets, etc. as soon as possible**. And if it is possible to "fine tune" and **use figures that are as realistic as possible**, then even better.

With an energy consumption forecasting tool, you will achieve this provided that:

It is smart and proactive. It must be able to dynamically feed changes back into its model, which also learns the behaviour of the building.

It works in **real time** (such as with four hour data reads).

Both features are available with the DEXMA Platform.

6. Consumption during Public Holidays and Outside Business Hours

What happens in your building when you're not there? This is one of the biggest concerns of the facility manager.

If we think about an energy manager who is managing **ten office buildings spread across several countries** from a central office, the concern multiplies.

Thanks to technology, you no longer need to do the typical tour of the building to see what is happening. With real-time consumption monitoring and the DEXMA platform, you can always know what is happening wherever you are.



This advanced analysis will also **help you retain your tenants**. You can set up alerts that notify them when there is consumption in their office outside their working hours. Or, create **a customised report** that tells them how much is consumed at weekends.

This can be an added value that you add to your services for your properties.

7. Calculation of Carbon Footprint

We have already mentioned **the legislative factor** a couple of times. This is an important challenge for real estate and facility management companies.

Although responsibility for compliance with the law may not fall 100% on these companies, their customers are obliged to comply.

And **the first person they are going to ask about how to do this is you**, the person reading this guide.

Your energy management software should be able to help you to:

- Convert the energy consumed into greenhouse gas emissions
- Propose emissions reduction targets and track them in real time
- Generate reports on carbon emissions automatically (that you can customise by building or customer).

At DEXMA, a while ago we started examining the needs of all those who must comply with this type of law so, with the DEXMA platform, you can analyse the emissions of all your buildings.



8. Customised Reports

As we have seen in some of the previous analysis capabilities, it is **no use being able to do all of this if you do not communicate it**.

The ability to generate customised reports through energy management software is vital for real estate and facility management companies.

First of all, these reports are useful for your own team and company. This will help you to:

- Keep all your staff aligned
- Make the work you do more visible

Integrate Energy Analysis across your whole Building Portfolio

So, now that we have seen all the benefits and tools of an EMS, let's see how we scale this across your entire building portfolio.

Having to install new hardware for each building or performing laborious manual set-up of software for each site just isn't practical.

Let's explore how the DEXMA Platform allows you to quickly and easily use the software en masse.

Interoperability in your Buildings

Using your Energy Management System with existing BAS, SCADA and BMS.

BAS (Building Automation Systems), BMS and SCADA-types systems are usually responsible for the control and automation of large loads in your building - they are NOT the same as an EMS. We are talking about two types of technology with completely opposite DNA.

But opposite does not mean to say that they are not complementary. The ideal situation is to have an EMS such as the DEXMA platform which **is integrated with BMS**, **BAS or SCADA type systems through an API**.

What is an API?

API stands for Application Programme Interface. It is basically **code that allows computer programmes to talk to each other**.



Software development changed forever when the REST and SOAP standardisation protocols reached the market about 20 years ago. In the energy sector, this change had a massive impact. Suddenly we could send and receive standardised information from any energy distribution company device or meter, in real time.

If an API is "open", it means that it is published on the internet and anyone can use it to build applications "on top" of it or integrate existing applications to extend the original functionality of the platform with new tools.

For example, DEXMA's energy management software is one of the few that offers an open API to analyse energy and other data. This means that not only can you connect real time data coming from energy meters and devices (such as inverters, etc.), but you can also connect to your corporate CRM (customer resource management) or ERP (enterprise resource planning) software with the **DEXMA Platform**.

Detect Issues in 1000s of Buildings Automatically

Analysing consumption is fine when you have a few buildings, but what about when you have 1000 buildings?

Thanks to the advanced tools in the DEXMA platform, you can spend less time in front of a screen searching for issues like a needle in a haystack, and more time on what matters - fixing any problems and finding solutions to improve energy efficiency and reduce energy costs. Remember, each meter records 100,000+ readings per year - so let the software automate the process of finding anomalies for you.

Powered by artificial intelligence, the tool automatically calculates a baseline for every parameter of every meter, and creates a list of anomalies that deviates too far from the norm.

The tool even considers degree days using local weather data, as well as local public holidays, in its analysis. Just think, that's the manual work of many energy managers around the clock, 24/7, to help your customers along their energy management journey. But it doesn't end there: you can help your team further by choosing parameters around the sensitivity of what is considered an "anomaly" and when you find those problems, they can be assigned to a particular team member to create a "to do" list.

Plus, since the tool continually learns from consumption patterns, once an issue is fixed, it can tell you how much you've saved and use the new patterns as a basis for a new energy baseline.



Involving the Tenant and User for Better Results: Gamification

After more than 10 years of analysing behaviour and energy consumption data in more than 80,000 buildings around the world, we have discovered that the reason why **we don't save more energy is because we don't want to**.

Are we talking about you? No, we already know that you want to save as much as possible and reduce the energy cost of your buildings. That will increase your margins. And we want this too.

We are talking about **all the users or "inhabitants" of those properties**. So why don't we save? Well, energy efficiency is usually the lowest priority for a tenant or office worker.

Thanks to **gamification**, we can change this pattern and convert efficiency and energy savings into something entertaining. Gamification consists of the application of game and competition dynamics to a group of users to **encourage the use of a technology and the adoption of new habits**.

Gamification will be vital for real estate and facility management companies that want to apply energy management plans and encourage their tenants to follow them and save energy.

The idea is simple. According to DEXMA data, **in corporate buildings, it is possible to save between 8% and 15% simply by applying behavioural improvements**, which also have a virtually zero cost.

How can we induce this **behavioural change**? We could go through many examples but they all centre around motivating staff and tenants, thereby making them compete with each other for mutual benefit. That is, gamifying their energy behaviour.

Advanced Energy Management for Banking

- Scalable and robust: reads +32 million data per day
- + Centralizes savings detection, monitoring and control
- + Optimise your energy use and make good decisions

ENERGY CONSUMPTION: OPTIMISED

GET STARTED for FREE



About DEXMA

DEXMA provides an energy analytics platform for companies that need to measure, analyse, understand and reduce their energy consumption. The platform is a set of powerful cloud-based tools with which companies can make the right decisions to reduce the energy they consume without affecting their productivity or business.

DEXMA was founded in 2007 in Barcelona and was acquired by Spacewell | A Nemetschek Company in 2020. DEXMA already serves over 4.000 organisations in 30 countries after consolidating its expansion through a comprehensive network of partners.

After more than thirteen years working in the energy sector, DEXMA is leading its own initiative to share knowledge on energy efficiency, to promote best practice and educate energy professionals. Check out our free learning resources <u>here.</u>





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