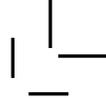


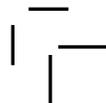
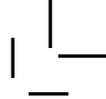


5 YEARS

OF CUBE 2020

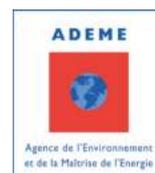
Feedback on the energy saving adventure leading us
to the energy transition in buildings





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SPECIAL THANKS



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EDITORIAL

Dear readers,

To celebrate the fifth anniversary of the CUBE 2020 energy efficiency contest in the tertiary sector and to honour the successful participation of several generations of candidate buildings, the French Environmental Ministry wished to summarise this adventure in a single report. The lessons learnt from these best practices, the list of identified actions and initiatives are provided as exemplary evidence that should inspire a whole sector and an entire profession in order to achieve our energy efficiency targets for tertiary buildings.

Reducing the consumption and emissions of these types of buildings is an important challenge. Although tertiary sector buildings represent only a quarter of the existing stock of buildings, they're responsible for a third of the sector's consumption. Therefore, ambitious objectives for this category of buildings were included in the "Tertiary Decree" published on 1st July 2019. This decree reflects the objectives of the Elan law and sets targets to reduce energy consumption in tertiary buildings by 40% by 2030, 50% by 2040 and by up to 60% by 2050, in relation to 2010 consumption levels.

In order to make progress straight away, and in all sectors, all owners and occupants can now implement simple actions that will result in significant savings and a quick return on investment. With these "low investment" actions, CUBE 2020 demonstrates what can already be achieved in all buildings, in order to simplify the first steps towards energy savings. For example, in just one year, some contest candidates achieve savings of more than 40%, which is the objective of the "Tertiary Decree" for 2030! The contest has now clearly demonstrated that effectively involving managers and users makes quick and significant progress possible.

This collective work compiles feedback from the four editions of the CUBE 2020 contest and reveals the conditions necessary for these approaches to be successful, which are illustrated by examples of awareness-raising actions that can be adapted to suit your buildings. It is intended to be a source of creativity and inspiration for anyone wishing to tackle the issue of energy efficiency in buildings, which, for the tertiary sector, is also a source of competitiveness with regard to climate issues!

Finally, I would like to thank our former, present and future "cubists" for your efforts, and ask that you continue inspiring us and showing us the paths that will lead us to a carbon neutral future.



Enjoy your reading!

*Emmanuelle Wargon, Secretary of State,
Environmental Ministry*

INTRODUCTION

The CUBE 2020 principle is very simple. It involves saving the maximum amount of energy in 1 year by implementing small gestures, improving the building's management and mobilising its occupants. Created in France in 2014, CUBE 2020 gives the impression of being a challenge between buildings. However, with precise performance measurement, the contest creates a unique collaborative framework that lasts for a whole year. Firstly, through a simple "hourglass" effect and secondly, through the mobilisation of occupants and their goodwill, this challenge removes barriers, motivates the entire company to find new ways of occupying buildings and helps us to achieve our objectives.

Participants that had already implemented their technical investments but had not yet mobilised users used CUBE 2020 either to launch a movement or to start their own energy efficiency story as a joint effort with building occupants.

THE CONTEST'S ROLE IS THREEFOLD 🏆

1

Achieving significant energy savings through a one-year "intensive" action programme, thanks to the mobilisation of the management and user teams, as well as a series of actions that offer a rapid return on investments.

2

Implementing the issue in a sustainable way as part of the company policy and vision of the occupants and managers of the sites.

3

Initiating reflection in order to go beyond the first 20-30%; to give more thought to future investment programmes.

Several sociological studies on the contest and its effects have noted that 87% of participants continue their energy efficiency efforts after the contest, either to continue improving their cubist initiatives or to target more ambitious actions and investments.

In 5 years, 670 buildings have participated in CUBE 2020, resulting in annual average energy savings of 12%, i.e. 85 million kWh. This year, some buildings have even exceeded 50% energy savings. The total surface area of the participating buildings exceeds 5.3 million m², with more than

320,000 people involved in the contest. There is no one single method for achieving CUBE 2020's targets, as the context is different for every building. There are many factors to be taken into account when implementing the CUBE 2020 approach, such as the condition of a building, the skills that can be mobilised and corporate culture. However, factors of success can be defined, and this work presents the ones that we have identified. Furthermore, we're convinced that the anecdotes, creative actions and collaborative ideas that have worked for candidate teams can inspire past, present, and future cubists. It

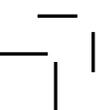
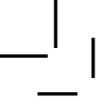
is often the creativity and out-of-the-box thinking of candidates that produces such good results!

As such, this work should not be viewed as a guide that must be followed to the letter, but rather as a means of sharing ideas and actions that can inspire us all!

oo.

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INTRODUCTION

5 YEARS OF CUBE 2020 IN REVIEW

12%

average
annual energy savings
(with a record of 57.4%)

670

candidate buildings

85,000,000 kW

of savings*

320,000

employees with increased
awareness

5,300,000 m²

of surface area involved

€12,460,000

in savings**

The equivalent of 7,658 tonnes of CO₂

saved, equivalent to 7,658 Paris-NY
round trips by plane, or 7,658 years of
gas heating for
a three-room apartment in Paris!

* The calculation of savings and the contest results are based on the final amount of energy consumed

** Total over 5 years

01.

CUBE 2020: A CONTEST THAT IS SUITABLE FOR ALL BUILDINGS

DIVERSITY OF CANDIDATE BUILDINGS



Due to its flexibility, CUBE 2020 is an energy saving contest that is suitable for all buildings. The diversity of candidates over these 5 years is indicative of this, with results that have no direct correlation with any particular type of building.

Although the typical candidate is an office building of about 7,700m², this average conceals a great disparity. For example, it would be difficult to find bigger usage, equipment and climatic condition differences than between an Orange phone shop and Papeete hospital, and yet, both of these candidates have achieved great performances with respective energy savings of 54.7% and 8.6%!

Universities, semi-industrial buildings, town halls, music schools, administrations, and private offices have all participated and benefited from the programme.

DIVERSE CANDIDATES

Buildings with surface areas ranging from 300 to 76,000m², with an average area of 7,700 m², • 🏠 built between 1303 and 2015 •

All configurations: tenants, user companies, owner occupants.

IN 2018,

113
companies
using their own
sites

99
institutional or-
ganisations

13
owner occupants

10
Energy
Managers

6
Property Man-
agers

6
international
participants
(Luxembourg,
Belgium)

**Based on the 247 candidates in 2018*

This contest isn't only for recent buildings in Paris! Only 35% of applicants are located in the Paris region, with the others being spread across all regions, the overseas territories (French Polynesia, for example) and the rest of Europe (Belgium, Spain, Poland, etc.).

This geographical diversity once again demonstrates the flexibility of the CUBE 2020 contest and the reliability of its calculation method, which considers both climatic conditions and workforce variations (see insert).

WIDE GEOGRAPHICAL VARIETY

WITHIN EUROPE,
Belgium, Spain, France, Luxembourg, Poland, Czech Republic

IN FRANCE,
Paris (35% of candidates) and the provinces, including overseas territories

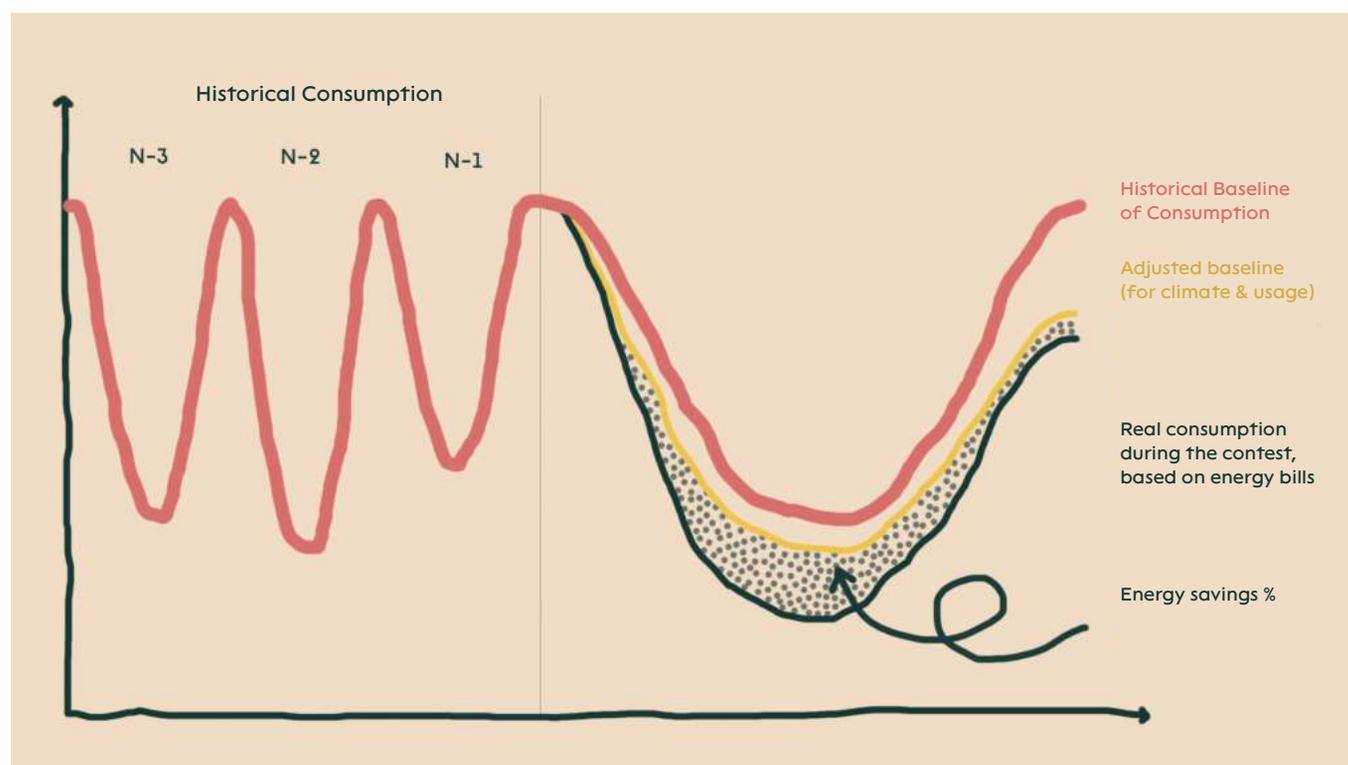
CUBE 2020 CALCULATION METHOD

Each CUBE 2020 candidate has access to a candidate space on the website <https://cube2020.org>, where the candidate provides a certain amount of data concerning the energy used in the establishment, and how it is used: type of energy consumed, heated and unheated surfaces, staff changes over 3 years, and monthly energy consumption over the last 3 years).

From this data, the IFPEB establishes a benchmark consumption level for each applicant. This benchmark consumption level corresponds to the estimated amount of energy used over one year, under average climatic conditions.

For the duration of the contest, each candidate uses this space to declare its monthly energy consumption.

The IFPEB corrects this consumption from the invoices according to climatic conditions and usage intensity. The cumulative monthly consumption calculated since the start of the contest is compared with the cumulative consumption of the benchmark level in order to determine the total percentage of energy savings obtained since the start of the contest.



OWNER, TENANT, OPERATOR, FUND OR PROPERTY MANAGERS, ETC.:



Everybody wins!

Whether the candidates are owners, tenants or even property managers, CUBE 2020 provides everyone with the means to reach their objectives!

- Tenant companies are interested because CUBE 2020 enables them to reduce their energy bills by implementing low-investment actions, which provides a quick return on investment.
- Owners register their buildings in order to create a stronger bond and genuine collaborations with their tenants. They often appoint an Energy Manager or a team in order to closely monitor and boost the cubist initiative of their tenants. An *Asset Manager* can encourage its *Property Manager* to get involved in CUBE 2020 in order to create an operational relay.
- *Property Managers* can also sign up in order to build stronger ties with their tenants and to enhance the value of their building monitoring and management missions with their clients (fund managers or owners). As such, CUBE 2020 represents a way to stand out within the market amongst owners, investors, fund and property managers and tenants.
- Energy managers, design offices or operators can also sign their clients' buildings up in order to optimise them, with the help of the occupants.
- Sometimes a company brings all of the components together, both the owner and occupants, which should theoretically make it easier to initiate CUBE-related changes. However, internal complexities (property management, general resources management, occupant services, etc.) can sometimes make things as complicated as they would be between several companies.

Similarly, various reasons were given for taking part in the contest. The Sociocube sociological study, carried out in 2016 on a sample of CUBE 2020 contest candidates, identified 4 motivations:

- Getting ahead of regulations: Going beyond regulations and anticipating them, rather than "putting up" with them. In principle, an action that results from a voluntary effort is always more effective, as well as being faster and easier to implement.

For example, Angers town hall wanted to register 3 schools in the CUBE 2020 contest, in view of the upcoming application of the obligation to reduce energy consumption (ELAN law, Tertiary Decree). The head of the Energy unit behind the candidacy wanted to prove that energy savings are possible without major investments, regardless of the building type.

- a financial approach, even if the energy bill is relatively low compared to rent or even the annual cost of work. However, in a difficult economic climate, with the contraction of traditional corporate markets or the decline of public funding, CUBE 2020 is an opportunity to look for new energy saving tactics.
- an image approach, serving as an example and even being an innovator, by promoting efforts made with regard to energy consumption and/or experimenting with solutions, that are tested internally before being validated externally. For some candidates, it's important to demonstrate their values, especially if the profession is closely or remotely related to energy.

For example, Cerema wished to participate in CUBE 2020 in order to experiment with new methods and to strengthen existing skills. Cerema is a public centre of expertise that notably works in real estate, both in terms of technical skills and the energy use component of buildings. Having developed methods as part of energy saving initiatives, and in particular through the involve-

ment of occupants in these initiatives, Cerema wanted to test these methods in the field, but also to set an example and demonstrate consistency.

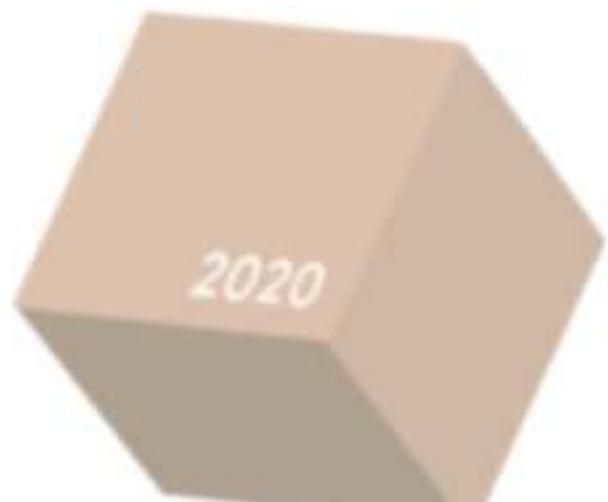
- A notion of heritage and space optimisation: improved comfort and a building's green value etc.

CUBE 2020 is of interest both to establishments that are new to sustainable development actions and to those that are already heavily involved in them. According to the SocioCube study, the CUBE 2020 contest offers an element of organisation as well as practical actions in order to work towards general objectives that can be difficult to achieve.

CUBE 2020 is of interest both to establishments that are new to sustainable development actions and to those that are already heavily involved in them. According to the SocioCube study, the CUBE 2020 contest offers an element of organisation and practical actions in order to work towards general objectives that can be difficult to achieve. In addition, other objectives are sometimes pursued: bringing about better relations between landlords and tenants (or between real estate services and occupying entities), improving well-being at work and team spirit within companies, participating in budget efforts while progressing in terms of brand image, etc.

With regard to energy management, CUBE can serve as a small first step; it can bring an element of "awareness" to a more technical trajectory, as a way of acting while avoiding or postponing works. With regard to budget management, CUBE can be initiated whenever major efforts are required from the organisation. The contest enables the Company to show results without having to make any major investments¹.

¹ Source: : SOCIOCUBE/ADEME, IFPEB, EDF Report November 2016



02.

FACTORS OF SUCCESS

An average of 12% energy savings in 1 year, with a record of more than 57.4%, how is this possible? Which factors contributed to this great success?

Two types of factors can be distinguished, human and organisation factors, and those related to technology, equipment management and technical skills. Of course, a combination of multiple and integrated factors will lead to the best results, and above all, the best sustainability.

A combination of both technical and human tactics will also enable other effects, that aren't necessarily visible in the numerical results, but can be perceived in the work environment, in the motivation of employees and in their involvement as citizens.

IN TERMS OF ORGANISATION AND THE HUMAN FACTOR



Taking part in CUBE 2020 and continuing with it for at least a year requires the rapid and productive involvement of all the stakeholders of an organisation. However, what is sometimes referred to as the "human factor" is often seen as a problem, a hurdle that is difficult to overcome, of which technicians remain skeptical, meaning that they tend to distance themselves from it.

Nonetheless, this human factor is also an asset and a resource. Candidates that have truly involved the occupants in the process have derived great benefits in many areas.

So how do we mobilise this human potential?
Certain candidates knew which tactics to implement.

SUPPORT GIVEN AND EXAMPLE SET BY THE HIERARCHY

When candidates were effectively supported by the hierarchy, the effect was clear to see! This is an essential factor of success, as it gives the initiative credibility! Without this credibility, it is impossible to motivate candidates to take part. If the initiative is not credible, why would they get involved or make an effort?

According to SocioCube, management teams provide the main impetus for joining CUBE 2020. However, once a dedicated steering team has been set up, management teams don't always realise the importance of publicly supporting the initiative through effective involvement, such as organising launches, speaking at employee information sessions, attending other events during the year, discussing these events with all managers on the Management Committee, and receiving regular implementation updates. Employees are generally aware of environmental issues, but spurring this awareness into actions is largely motivated by the feeling of a truly collective effort.

It is necessary for occupants to feel that the Management is behind this initiative, and that it is providing them with the means to carry it out, in order to avoid the impression that the initiative is just for the sake of image.

Rennes 2 University provides an original example of support and hierarchy. During an awareness-raising event for students, the director of the UIT demonstrated a "bicycle-blender"; a bicycle connected to a blender, to show how much human energy is needed to operate an appliance. The director of the UIT pedaled to power the blender. Although purely anecdotal, this action had a symbolic purpose: the Director made it clear that action was needed from everyone, and encouraged everyone to get involved! The example set by the hierarchy on a dai-

ly basis also contributes to the credibility of the initiative. Aligning your daily actions with your words shows that you practise what you preach.

Employees are generally aware of environmental issues, but spurring this awareness into actions is largely motivated by the feeling of being involved in a truly collective effort.

COHERENCE OF THE INITIATIVE

CUBE 2020 is about energy savings. However, employees will be more motivated if they feel that the initiative is part of a global reasoning that includes other environmental topics such as waste management, water management, travel, etc., in order to demonstrate that there's a real willingness to profoundly change all of the structure's environmental practices.

This is why many CUBE candidates have incorporated other topics, either at the start of the contest or in subsequent years, in order to keep things fresh and to revitalise the initiative.

Cerema Territoires et Ville also had the same approach, announcing at the beginning of the contest that it would be a progressive initiative: first energy, then waste the following year, so as not to frustrate occupants who would have liked a more global approach.

Therefore, the year after contest ended, Cerema expanded the approach under the name of TV'ert (Territoires et Ville Eco-Responsable au Travail): implementation of selective sorting and composting, while maintaining the participatory and convivial nature of CUBE 2020.

Another way of demonstrating the coherence of the initiative is to include it in the missions of the company or organisation:

As such, the South Corsica DDTM drew on its experience of participating in CUBE to support other entities in a similar endeavour.

Last but not least, a coherent initiative also involves internal restraints, for example, limiting the number of paper printouts, not using plastic cups during coffee receptions and not sending high numbers of e-mails with large attachments. Otherwise, occupants will notice the lack of internal limitations, which could discredit the initiative!

Coherency means, for example, choosing eco-designed gifts to reward staff or re-investing profits from energy savings in eco-friendly devices (presence detectors, more efficient heaters, etc.).

MOBILISING ENERGIES, INITIATING AND MAINTAINING A COLLECTIVE DYNAMIC

The CUBE 2020 contest's greatest successes are those that have been able to mobilise human energy!

This starts with the choice of the initiative's pilot and the set-up of a project team.

The choice of a pilot is important because this is the person who must win the support of the occupants and fully involve them in the process.

Pre-existing proximity to the agents is therefore an asset. Competence in technical building management is not absolutely necessary: it is especially useful that this person should know how to gather the skills needed for the project (operations, IT, communication, etc.) and to orchestrate these skills over time. Life skills as well as know-how are essential skills for a project manager! ▶

For example, at Cerema Territoires et Ville, the initiative's pilot was the head of Human Resources. They were familiar with the staff, had a dynamic personality and were well-liked. Their hierarchical position also provided the subject with legitimacy, which was reinforced by the presence of the deputy director as project director.

Although the choice of the pilot and set-up of a project team were essential for initiating collective momentum, this is not enough to maintain it and make it last. Those in charge of the CUBE 2020 initiative generally had little time available to devote to it. For this reason, many candidates try to involve other people in the project, in order to relay the "in the field" approach and to ensure that difficulties or good ideas are communicated in order to enrich the project.

Whether referred to as "ambassadors", "relay team", "green team", "reference people" or even "pioneers", creating such roles has proven to be a good practice, notably when these people participate in the choice of actions and their implementation.

There are many examples amongst the candidates. At the Toulouse University Hospital, the CUBE team went from room to room in order to collect good ideas on how to bring about even more savings.

At RATP, the energy manager met with the personnel on each site in order to inform them of new developments but also to hear their ideas for improving building management based on personal practices.

At Cerema TV, the team of volunteers known as the "green team" took part in meetings to reflect on the implementation of new actions, and then contributed to bringing about these actions: an appliance consumption game, decorating the staircases on themed days etc.

Candidates that set up teams of volunteer employees experienced many benefits: revitalising a waning initiative, increasing the action of the project team and greater

"day-to-day" contact with people, which avoids the initiative from becoming overly technical.

Finally, the voluntary involvement of employees in the process is the best way to generate motivation. The more room we leave for each other, the greater the appropriation of the initiative. Involving the occupants in the life of their building, rather than just feeding them awareness-raising messages, is a key to success!

SUPPORTING RATHER THAN CONDUCTING CHANGE?

By relying on the "behaviour" tactic, CUBE 2020 seeks to change the daily practices of employees.

This change, which was desired and driven by the project team, was often met with strong resistance within the departments. This resistance is a fairly normal phenomenon, and change is quite a long process. The project team's role was therefore to implement conditions aiming to facilitate this change.

Giving people the ability to act is one of the necessary conditions. The first step was to explain the operation of the building equipment over which they have control: heating, ventilation, opening and closing of blinds etc.

This then required the actual involvement of the staff, in order to ensure that this was a truly participatory process. Although the implementation of a team of reference people can meet this objective, this involvement can also take place very early on, as soon as the assessment is performed.

At the Haute-Marne DDT, a "walking" assessment was organised by a group of volunteer agents. The objective was to walk around the building with the technical manager in order to identify malfunctions. This assessment was particularly worth-

while as it gave the group the opportunity to see their building from another point of view. For example, the participants reflected on the continuous use of printers, and a hallway light that was on but the switch to turn it off could not be found.

It was a positive experience, illustrating that even without particular skills, the occupant can take part in the initiative. Many malfunctions can already be identified by taking a new, critical approach: this also enables occupants to take ownership of their building, to feel responsible for it, by giving themselves opportunities to act.

COMBINING ENERGY SAVINGS AND COMFORT

“ Saving energy doesn't necessarily mean reducing comfort. Quite the contrary! ”

In general, considerable energy savings can be made during periods when the building is unoccupied: powering down at night, adaptation of heating system operation times according to periods of presence, taking into account the building's inertia, for example.

Better still, many candidates have taken advantage of the CUBE 2020 initiative to think about their building management and to improve the comfort of occupants. For example, some candidates reviewed

the heating system operation times in order to improve comfort on Monday mornings. Others removed excess lighting that was detrimental to the visual comfort of occupants.

To uncover aspects causing discomfort, candidates conducted specific surveys with the occupants. Once areas of dissatisfaction were identified, technical solutions were found, which were often very simple.

At the Eure DDTM, one of the first actions set up by the project team was a questionnaire for agents, intended to serve as a comfort assessment. The questionnaire results provided a baseline for all subsequent actions. For example, advisory visits were organised in the offices of agents who had expressed dissatisfaction, with the lighting for example, in order to help them rearrange their office.

At the DDTM du Nord, discovery workshops on the notion of comfort were organised and carried out, notably through thermal camera testing, and a measurement of the operative temperature using a "black globe".

At Natixis, the setpoint temperature in winter was lowered in order to provide a "healthy and comfortable" level. In an effort to play down the subject of comfort and encourage employees to adapt their clothing to the winter season, Natixis took a humorous approach by distributing "ugly" sweaters.

When CUBE 2020 helps to improve comfort, it's much more motivational!

COMMUNICATING DIFFERENTLY

In an energy-saving contest such as CUBE 2020, creativity and humour are the order of the day!

Candidates quickly understood that in order to attract attention and make people want to get involved, their communications really had to stand out.

For successful communication, it's important to vary the media (e-mails, posters, animated images, films, visits etc.), and to vary the approaches in order to reach as many people as possible.

For example, some people will be more attracted by technical and rational communication (measurements with wattmeters, graphs, conferences) and others by more relational and emotional efforts (special advice, coffee receptions, fun activities etc.).

Positive, guilt-free communication will be more effective. Finally, meeting with the occupants and discussing their difficulties in small groups or individually remains the most powerful awareness and communication tool.

E-mails, posters, objects, slogans etc. There are many examples, here are some quite original ones:

- In the Limoges administrative complex, a large CUBE was made and positioned at the building's entrance, small cubes were hung from the ceiling, paper cubes recalling the eco-tips produced by the relay agents were distributed in the offices,
- Several candidates suggested that occupants should experiment with warmer clothing in the winter to avoid overheating the rooms. The Orne DDT organised a day entitled "1 sweater more, one degree less", as an experiment with lowering the heating temperature by one degree.

Poste IMMO created posters that included characters demonstrating eco-tips (somewhat exaggerated) and explaining their benefits. Posters of the same style and that followed the "life" of several Poste Immo characters were therefore displayed and distributed amongst the buildings and the various teams.



At Cerema Territoire et Ville, the project team made cardboard cubes in the centre's colours. Some were hung in the lobby. The biggest ones were stacked up like totem poles on days when a CUBE activity was taking place.

The idea was to decorate the space in order to make an impression and to bring the initiative to life, while paying special attention to the aesthetics of the object so as to elicit an emotional response. ▶

Here are some of the slogans created for CUBE 2020:

"Yes we cube!"

"put the watts to sleep while you're away"
• DDT52

"VIP eco-tips" [Volets, Informatiques, Portes des Toilettes] • DDT89

"Adopt a CUBE Attitude!" • DDT28

"One small step for man, one giant leap for the environment" • Natixis

"If you want to climb a mountain, you must first take the stairs"

"There is no waiting for the stairs!" (to encourage people to take the stairs instead of the lift) • Natixis



At Orange, the Orange Group Real Estate Department set up a number of communication tools for local project teams, to help them organise their initiative:

- supply of an activities catalogue for the project teams, to help them carry out activities locally;
- creation of a monthly communication with different topics each month in order to encourage employee involvement by bringing their day-to-day problems to light according to the seasons;
- use of a digital application (*Energic*) to support staff and launch an internal contest, with challenges every month on specific topics (ventilation, insulation, heating etc.).

In January, the challenge for staff was to sort through their inbox in order to limit the energy impact of storage.

The application also allowed everyone to access the monthly results and rankings, to share good ideas,

to know the number of people involved and the quantity of messages sent. In total, the application launched 14 challenges involving 42 teams (1,200 employees logged in), generating 3,900 ideas and more than 55,000 recorded votes, while raising awareness on 46,500 eco-tips (beyond just the subject of energy).

DON'T STAY ISOLATED, BE INSPIRED BY OTHERS

CUBE 2020 is built on a notion of competition, but also of cooperation! This is why the IFPEB set up a national club, with 5 meetings per year.

The regional clubs were strongly encouraged by the contest organiser, so that the candidates could discuss their difficulties, ideas, projects etc. with a healthy dose of rivalry.

For example, a club in Normandy was set up during the 3rd edition of CUBE 2020. Four meetings during the year enabled candidates to benefit from methodological contributions on both technical aspects (technical analysis of their ranking) and human aspects (change support), to share their experiences, difficulties and good practices, and to benefit from the lending of small equipment such as watt-meters, etc.

In South Corsica, the DDTM took advantage of its candidacy to launch a dynamic effort with other local actors (ADEME, Prefecture, Corsican Local Authority, cities of Bonifacio and Ajaccio, University etc.) by encouraging them to get involved in the contest. After this, regular moments of exchange were organised between challengers. This collaboration between technical services, which was fully in line with the DDTM's mission to promote energy transition, was mutually beneficial. At the end of the contest, the DDTM put its experience to good use with another government service, the DIRECCTE, a candidate for the next edition.

IN TERMS OF TECHNICAL ACTIONS



An initial observation that can be made is that many candidates were faced with a lack of information on their energy consumption:

Absence of submeters on a large site, general meter not accessible, no monthly bills etc.

They rely on the "gut feeling" of the users and often confirm it with a professionalised mission (such as back-commissioning, a more complete energy audit, etc.). It's very rare for the sole focus of the contest to be on "eco-tips".



The first responses to the contest were activities and technical actions to improve or strengthen the performance of the participating buildings.

Activity and incentive campaigns as well as technical actions vary enormously from one candidate to another, depending on each one's specifics (type of organisation, use, activity, size, workforce, etc.) and therefore on each building's optimisation needs.

Some participants were already involved in an overall energy or sustainable development strategy, while others were just starting to write one up, or to think about it for in the near future.

There were many types of technical actions, with varying kinds of interventions (remember that the contest only lasts for one year), though sometimes actions had been programmed:

- Pure energy control measures as part of eliminating a consumption source: turning off the heating or lighting in unneeded areas, removing energy-intensive individual coffee makers in favour of a "coffee corner"

- Steering / adjustment measures: takeover of the building management system (BMS),
- Hardware replacements: replacement of conventional bulbs by LED bulbs, production or distribution systems,
- Replacement of priority building elements: a poorly sealed door, exterior lighting, etc.,
- Introduction of presence sensors, lighting timers and programming of temperatures and ventilation rates, amongst other things.

Each of these technical actions required the occupants to participate in order to ensure proper adjustment and its acceptability.

All too often, candidates realise that the meters used to optimise their heating system have not been working for years or have never been customised (fixed time slots, actual comfort needs of users etc.).

To this end, applicants very often stressed the need to establish a strong link with the site maintenance staff in order to determine priority optimisations, and to ensure their follow-up after implementation.

Service and maintenance contracts are resources that are often used by Cubist can-

didates to monitor technical optimisations and improvements, as well as their evolution over the long term (changes of time slots according to needs, for example).

A general conclusion from these observations is that it's important to address each of these areas for improvement!

These small gestures and technical improvements can lead to considerable savings simply by adjusting the tools that have been available for many years, requiring very little investment.

Many CUBE participants make the most of their experience by going even further and more accurately identifying future optimisations that can be targeted after the contest, in the field of active systems or the building.

A large majority of participants continue their efforts after the contest through CUBE actions combined with other modest investments. Actions organised for the long term are very often set up, even outside of the contest framework.



03.

OTHER BENEFITS OF CUBE 2020

CUBE 2020 was created and developed in order for tertiary buildings to generate energy savings and therefore financial savings. However, CUBE 2020 has many other beneficial effects of which the candidates are not always aware when they sign up for the contest!

CUBE 2020 PROVIDES AN OPPORTUNITY TO RETHINK BUILDING MANAGEMENT



CUBE 2020 provides for a review of the knowledge of the building and its "equipment" by managers, but also more generally by its occupants.

For example, the "walking assessment" carried out by the Haute-Marne DDT enabled agents to rediscover their building, the location of switches, and so on. Other candidates prepared operating instructions, particularly for using the heating thermostats, to help the occupants make better use of equipment, improve their comfort and take action to save energy.

The implementation of the CUBE 2020 approach also led to improved building management:

- by identifying breakdowns or anomalies during the assessment performed in connection with CUBE 2020. For example, candidates identified the lack of heating system insulation or the breakdown of HVAC motors etc.
- by identifying where to invest.
- by identifying training needs. For example, some candidates trained their managers to make better use of the BMS.
- by improving comfort. There are many examples. One example is the feedback from the ADEME in Sophia-Antipolis, that modified the heating programming timetables in order to improve comfort while generating energy savings: starting up earlier on Monday morning and shutting down earlier in the evening.
- by installing previously non-existent sub-meters in order to better monitor consumption.

This improved building management benefits everyone, and the results are palpable, both in terms of comfort levels and energy savings. However, results aren't always as expected at the end of the contest. This doesn't matter, because the overhaul of building management was necessary in any event!

CUBE 2020 PROMOTES THE ROLE OF TECHNICAL AND MANAGEMENT SERVICES



Many candidates found that getting involved in CUBE 2020 enabled them to promote the role of General Resources, that often perform work that goes unseen by the occupants. Their image is often tarnished, as they are blamed when occupants complain about equipment malfunctions and inadequate comfort levels.

As such, it's important for the technical services to be involved in the project, and for everyone to be able to see their daily actions, whilst promoting what has already been done.

For example, at Cerema Territoires et Ville, the "coffee round" organised by the

project team centered on a meeting with the agents in their coffee room in order to explain the operation of the heating system. This presentation was made with the technical manager, which increased his visibility with the agents.

Some technical managers admitted to having renewed interest in their work, thanks to CUBE 2020, changing from an attitude of complaints and breakdowns to one of anticipation and discussion with occupants in order to improve their comfort.

This is the case of the City of Angers, that entered three schools in the contest. The technicians had nothing but praise for the contest: moving from troubleshooting to anticipating, meeting the needs of the occupants, proposing ideas for improvement... Thanks to Cube 2020, they can be active participants in the energy-saving initiative. They greatly benefited from meeting with the occupants.



CUBE 2020 TRANSFORMS WORKING RELATIONSHIPS



The success of an approach such as CUBE 2020 requires significant human involvement: project teams, relay teams, working or brainstorming groups, etc. However, this human involvement isn't only beneficial for the environment; the whole company and working relationships can be transformed! By encouraging the implementation of a fun, friendly and participative approach, CUBE 2020 leads to collective dynamic efforts by some candidates: increased familiarity between staff members, significant collective moments, interdepartmental relations etc. These benefits can be sustainable and bring about a transformation of working relationships: an improved working environment and a desire to continue this work transversally can lead to other actions. For example,

at Cerema Territoires et Ville, CUBE 2020 introduced a new dynamic, and a lot of communication creativity. Subsequently, during other cross-departmental projects, staff referred to CUBE 2020 by saying "for this project, we could do the same as we did for CUBE!".

Finally, CUBE 2020 also further motivates those involved. CUBE 2020 sometimes felt like a breath of fresh air for the people in the project team or serving as ambassadors: it's solid, it's fun, it's a change from ordinary work, even though the use of this time isn't really recognised by the hierarchy!

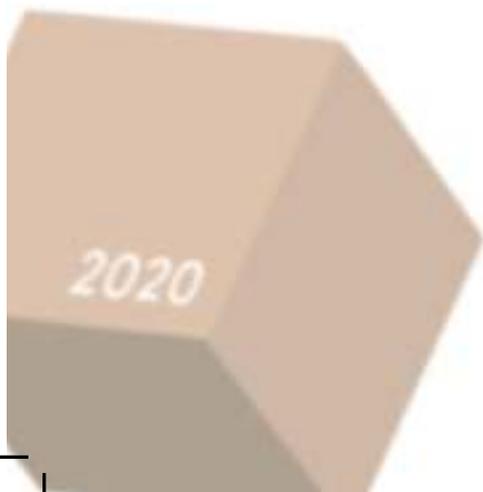
The sociological study carried out by Gaëtan Brisepierre and Anne Desrues³ demonstrated the phenomenon of the transfer of environmental practices from home to work by certain individuals referred to as "transferors". Their primary motivation: the search for well-being in the workplace.

Their aim is to reduce the gap between their vision of the world and their work practices, as well as promoting more enjoyable professional relations, for which environmental practices can be a factor.

As such, CUBE 2020 can be a response to employee expectations and improve the quality of life at work.

³In the framework of the TRANSPHERES project led by the IFPEB, the sociology firm GBS, the social psychology laboratory EPSYLON and Delphine LABBOUZ, psycho-sociologist associated with LAPPS





04.

AFTER CUBE: HOW TO GO EVEN FURTHER?

ORGANISING THE SUSTAINABILITY OF THE INITIATIVE



How to make "CUBE" actions last over time?
First observation: one year is often not enough. Two scenarios.

CANDIDATES START WITH CUBE 2020

Several sociological studies on the contest and its effects have noted that 87% of the participants continue their energy efficiency efforts after the contest, either to continue improving their efforts or to target broader actions and investments.

A year is both very long and very short when it comes to implementing the necessary actions, especially if there are contracts

to be signed with external companies (heating, air conditioning, ventilation, electricity, measurement, etc.).

CUBE awakens a strong sense of mobilisation and commitment amongst the teams with regard to the environmental and energy issues of the building and in their daily practices.

What to do after CUBE?

At the very least, it's important to continue monitoring energy consumption and communicating internally so as to avoid the "rebound effect". Some candidates proposed the organisation of annual meetings with their teams in order to keep

up motivation after the contest. Others participate in the contest several times in order to reach their desired internal goals! Others instruct their energy manager or CUBE manager to continue generating and maintaining attention after the contest with fun activities and actions. These managers reported that in order to do so, these tasks must be included as part of their job descriptions. It is also possible to create the position of an energy adviser (or "Energy Manager"), included in the team, in order to maintain the rhythm and motivate the troops.



It's then possible to have a dedicated design office (assistance for the project owner) carry out a back-commissioning mission⁴ that will detect priority actions for future savings. Otherwise, the operator, as part of their duty to advise, will help the project owner with priority measures.

Of course, these actions will prompt the candidate to plan more or less major maintenance work over the medium to long term, if the building is deficient and renovation is planned.

WHEN THE CANDIDATE IS ALREADY TECHNICALLY PROFICIENT, CUBE MAKES IT POSSIBLE TO "SEARCH FOR USERS"

CUBE awakens a strong sense of mobilisation and commitment amongst the teams with regard to the environmental and energy issues of the building and in their daily practices.



Better knowledge of energy consumption and performances will in time make it possible to intervene on buildings as part of enlightened property management.

MOVING ON TO THE NEXT STAGE: WORK, RETROCOMMISSIONING / RETROFITTING, ETC.



What role do low-investment actions play with managers and occupants in our journey towards carbon neutrality? They may not appear to be in proportion. However, the message is that the first step, 20 to 30% across the entire national tertiary sector, can be attained very quickly.

To go further, the following steps can be taken according to available budgets and the real estate cycle, using:

- Back-commissioning, for example an adjustment of all or part of the active and/or passive management, that may involve more substantial operational investments.
- Financing, in intracting contracts,
- More ambitious energy performance contracts,
- Consideration of these actions in real estate projects of any kind.

With the conviction that the first step strongly conditions the next.

CUBE 2020 is a first step for launching or strengthening a sustainable approach, one that can be enhanced and improved as a commitment to the energy transition

⁴In connection with the TRANSPHERES project led by IFPEB, the sociology firm GBS, the social psychology laboratory EPSYLON and Delphine LABBOUZ, psycho-sociologist associated with LAPPS

O5.

5 YEARS OF FEEDBACK FROM CUBISTS!

CUBE 2020 IN ANGERS' SCHOOLS

Actions that are as close as possible to users' needs



DEMONSTRATING THAT ENERGY SAVINGS ARE POSSIBLE WITHOUT GREAT INVESTMENT

Angers, a city of 160,000 inhabitants, has about 50 schools. In the summer of 2016, in anticipation of future regulatory obligations to reduce energy consumption, the city decided to enter 3 schools in the Cube 2020 contest:

- an art school in a very large, old building;
- the recently built Nelson Mandela education complex;
- the Jules Verne school group built in the 1970s in a multicultural neighbourhood.

For the head of the Energy unit that submitted the application, the aim was to prove that energy savings were possible without major investments, regardless of the building type.



RELYING ON THE CONSUMPTION EXPERTISE OF OCCUPANTS

It very quickly became obvious that it was best to rely on the knowledge of the occupants regarding their building: malfunctions, comfort issues etc.

Resource persons were then identified on each site, people such as caretakers or extracurricular managers in permanent contact with users.

The next most recurring actions included: regulating presence detectors for lighting, adjusting the heating curves and fine-tuning the heating and air treatment schedules as well as removing lighting and installing door closers.

KEY DATA

PARTICIPANTS OF THE 3RD EDITION

Candidate type: community • Status: owner

Art school

🏠 Building from 1841 • Area: 6700 m² • Staff: 1400 • ⚡ Energy: Electric domestic hot water, gas heating • 📊 Results: 21.4%

Jules Vernes school group

🏠 Building from 1975, renovated in 2010 • Area: 5,120 m² • Staff: 420 • ⚡ Energy: Electric domestic hot water, heating network • 📊 Results: 5%

Nelson Mandela education complex

🏠 Building from 2012 • Area: 4,780 m² • Staff: 500 • ⚡ Energy: Electric domestic hot water, gas heating and domestic hot water • 📊 Results: 28%



03

CREATING A LINK BETWEEN OCCUPANTS & TECHNICIANS

In this way, the Cube 2020 initiative created a link between the occupants and the city's technicians. Site visits provided a better understanding of the discomfort issues experienced by the occupants.

For example, discomfort because of too much ventilation despite the temperature being correct, or a temperature sensor too close to a heat source (photocopier) etc. not all of these things can be detected at a distance! For their part,

the occupants report discomfort problems or malfunctions earlier, which enables the technicians to respond quickly before a breakdown occurs.

04

PROMOTING TRADES AND IMPROVING INTERDEPARTMENTAL RELATIONS

The technicians had nothing but praise for the contest: moving from troubleshooting to anticipating, meeting the needs of the occupants, proposing ideas for improvement etc.

Thanks to Cube 2020, they can be active participants in the energy-saving initiative. They benefited greatly from meeting with the occupants. Cube 2020 also helped improve coordination between the community's various departments (Building department, Communication department, education department, etc.).

05

COMMUNICATIONS ADAPTED TO DIFFERENT AUDIENCES

In this way, the Cube 2020 initiative created a link between the occupants and the city's technicians.

It quickly became clear that it was necessary to raise the awareness of directors and teachers, canteen and activity staff, but especially of the children.

Awareness-raising amongst students involved displaying and distributing reusable stickers, with a quartet of energy superheroes as mascots. The aim was for the children to take the stickers home in their schoolbags, along with a range of good practices that they could replicate at home.

For the adults, the support covered multi-media aspects (turning off the computer etc.), lighting, heating and air conditioning.

06

A LONG TERM VISION

Cube 2020 made it possible to improve the current operation of the buildings, but also to identify malfunctions that will require subsequent work.

The contest also highlighted the need for better support for occupants when buildings are put into service, for example, the Nelson Mandela school, although the newest building, had high energy consumption because of poorly adjusted systems. Cube 2020 is therefore only the first step towards continuous improvement of the construction and management of municipal buildings.

Based on this analysis, the city of Angers once again signed up for a new Cube 2020 season with two administrative buildings.





CUBE 2020 AT NATIXIS:

Green Team diversity for greater savings

01

A SHORT HISTORY OF 47 QUAI

Natixis is a financing, management and financial services bank. 47 Quai is a special tertiary building, as it has nine trading rooms requiring extensive and specific use of computers (some employees may have up to ten screens!)

02

ORIGINS OF THE CUBIST APPROACH: ARRIVAL OF THE NATIXIS GREEN TEAM!

Natixis was therefore already involved in a sustainability and energy saving initiative with regard to its technical installations.

CUBE 2020 provided impetus for this new commitment. An ambassador team was created: dynamic, creative and known by everyone, made up of contact people from various CSR, real estate, communication and IT departments, as well as other committed employees.

That being said, the entire team contributed with high levels of motivation and through the monitoring of actions, that enabled them to understand the energy issues and to become personally involved in the energy transition.

This "green team" also makes sure that all screens and computers, outside of the trading room, are put on standby, as are all multifunction printers.

Standby mode is now automatic after a period of inactivity (from 15 minutes to 1 hour depending on the hardware) as well as during time slots between 8 PM and 7 AM.

Strategic information points were also identified: near printers (information on paper consumption), in meeting rooms (information on electricity savings), in keeping with day-to-day business, the posters are changed and adapted in order to have more of an impact. In addition duplicate individual printers are gradually being eliminated.

03

SOME OF THE ACTIONS CARRIED OUT BY THE TEAM

A "Take the stairs!" contest organised by the team was a great success with the employees, with the winners receiving, amongst other things, a book on... cubism!

The occupants were encouraged to take the stairs with the help of signs on the floor that lead them from the lifts to the stairway doors, decorated with the image of a pedestrian!

04

CUBESQUE INNOVATIONS

Since January 2019, cooling units are enough to keep the building cool in the winter and mid-season, thanks to the installation of a bypass: savings of between 400 and 600 Megawatts per year.

04

BRIGHT IDEAS FOR TRADING ROOMS

On the stairs, motion detectors control the lights. Furthermore, since February 2019, fluorescent tube lighting has been replaced by LED strips, providing the employees with indirect and less aggressive lighting.

This means a saving of 145 MW per year. Every second light on the façade, in the passageways and in the trading room is no longer in operation, again saving 24 MW per year.

KEY DATA

PARTICIPANT OF THE 4TH EDITION



Candidate type: private •
Status: tenant

- 🏠 Building from 2003
- Area: 22,402 m²
- Staff: 1715
- Activity: offices
- 🔌 Energy: Electricity, heating network, chilled water network
- 📊 Results: 19.8% energy savings 16.7% energy savings

05

SEASONAL INSPIRATION

Over the Christmas period, the use of sweaters reduced the need for heating. To keep everyone motivated, the team communicated the updated rankings on these occasions.

Questionnaires and quizzes were also distributed to employees in an effort to identify those that were interested and initiate a dialogue with them. One of the strengths of Cubist dissemination at Natixis: original, funny and memorable communication!

06

AFTER CUBE

After CUBE, the team organised a successful "Low-Energy Day": one day to save as much energy as possible (without endangering user health or comfort). The teams took pictures of one another holding the sign: "I'm committed", a slogan that was also used in communications.

Even the newly arrived manager of the company restaurant got involved on Low Energy Day, by serving cold dishes!

For the ambassador team, one of the contest's key lessons was the need to "identify a team chosen from amongst the employees, in order to talk about actions and current events, and to highlight consumption levels within the office".

The team emphasized that communication without placing blame and actions aimed at giving occupants responsibility enable the adoption of eco-friendly gestures.

Finally, the Natixis example shows that, despite an already efficient system and past savings, there is still room for improvement provided that all stakeholders get involved!



CUBE 2020 AT THE CITY OF BORDEAUX HEADQUARTERS:

Leading by example to encourage action

01

CUBE 2020: A FIRST STEP TOWARDS LIMITED ENERGY USE

Since 2015, the Metropolis has been responsible for supporting energy management actions, which has resulted in the implementation of the tertiary component of the metropolitan Climate-energy charter. The commitment is actually older, dating back to the 2009 "Climate-Energy Academy".

This academy is a collective project intended to reduce consumption in community buildings by influencing behaviour and energy usage. It relies on "energy correspondents" who help the Buildings Division to combat energy waste and to disseminate best practices.

For the Buildings Division, the registration of the Metropolitan HQ in the fourth edition of the CUBE 2020 contest was a first step in getting this building to join the Academy.

Throughout the contest, the project team, consisting of the Buildings Division, the Energy Division and an external service provider specialising in energy management, led the search for energy savings.

KEY
DATA

PARTICIPANT
OF THE 4TH
EDITION



Candidate type: community •
Status: owner

- 🏠 Building from 1978, rehabilitated from 2008 to 2013
- Area: 44,210m²
- Staff: 750 agents
- Activity: offices
- 🔌 Energy: electricity and heating network
- 📊 Results: energy savings of 19.8%



O2

AN ASSESSMENT TO BETTER UNDERSTAND YOUR BUILDING AND ADAPT THE SYSTEMS TO ITS USE

Based on the expertise of the maintenance team and the external service provider, several technical actions were implemented such as automating night-time shutdowns, adjusting the temperature settings, maximising output, adjusting the hydraulic balancing of the heating system and even programming existing water fountains to avoid unnecessary consumption during unoccupied periods.

As the operating team was replaced at the beginning of the year, the system regulating actions were not implemented until February. However, these low-investment actions helped to maintain user comfort while testing new and more energy efficient settings.

In particular, the start of the contest was an opportunity to raise awareness amongst occupants.



O3

CREATE A NETWORK OF REFERENCES TO LEARN MORE ABOUT YOUR BUILDING AND DISSEMINATE BEST PRACTICES

Building on the experience acquired through the Climate-Energy Academy, the project team naturally turned to the occupants to bring the approach to life within each department.

A request was therefore made to appoint a reference person per floor, in charge of disseminating best practices and discussing with colleagues, for a better understanding of the building.

This newly formed team joined the initial project team to expand the appraisal by means of a tour of the building. It also met several times, creating a link between the floors and sharing any difficulties faced. The dissemination of best practices by the reference people was reinforced by the implementation of an intranet community and the installation of an "Idea Cube" at the building entrance.

It was sometimes difficult for these reference people to make themselves heard by their colleagues whose roles are not related to the building's energy use.

A lack of involvement on the part of certain departments made it impossible to make CUBE 2020 a real project for the whole building, however convivial it may have been.

A lack of involvement on the part of certain departments made it impossible to make CUBE 2020 a real project for the whole building, however convivial it may have been.

Nevertheless, the contest introduced the occupants to an intranet-based tool for reporting previously unknown technical problems, which helped to improve their comfort while reducing intervention times

O4

RE-REGISTERING FOR CUBE 2020 TO CONTINUE THE EFFORTS AND GO EVEN FURTHER

A period of one year for a contest is not very long! As the project team was unable to implement all of the actions, partly due to the change of operating team during the year, it decided to re-register the Metropolitan HQ in the next edition of CUBE 2020, so as to enable the best practices and system settings to have effect.

Now better prepared, they hope to be able to continue the technical actions with the new maintenance team and to bring about a meeting between the reference people and the users. The organisation of information and discussions over coffee on each floor has already been organised in order to involve as many agents as possible.

CUBE 2020 AT CEREMA TERRITOIRE ET VILLE:

A fine human adventure!

01

THE MOTIVATION OF CEREMA TV: A DESIRE TO SET AN EXAMPLE

The Cerema Territoires et Villes is a centre of expertise in many areas of sustainable development. Wishing to ensure consistency between their missions and daily practices, the study leaders suggested to their Management that it would be a good idea to sign up for the third edition of the

CUBE 2020 contest, from January to December 2017. Recognising the benefits of such an approach, the Management of Cerema Territoires et Ville informed all of the agents of its commitment to the contest and its intention to involve everyone in this convivial initiative.

02

THE IDEAL ORGANIZATION: A TEAM EFFORT WITH THE HIERARCHY VERY MUCH INVOLVED

To properly carry out the initiative, a complete and structured team was set up. At its head, the project pilot, the human resources manager, was supported by the Deputy Director.

The team also included the manager, the Communications Manager and a representative of the IT department.

Due to the specifics of Cerema, the project team was reinforced by study managers specialised in energy consumption and buildings. The project manager's dynamism and interpersonal skills were important factors for the success of the initiative.



KEY DATA

PARTICIPANT OF THE 3RD EDITION

Candidate type: private establishment • Status: tenant

- 🏠 Building from 1972 and 2012
- Area: 5,618 m²
- Staff: 150 staff members
- Activity: offices
- ⚡ Energy: electricity (air-water heat pump)
- 🏆 Results: 23.5% energy savings Gold CUBE in the category of Government buildings

03

FINDING ROOM FOR IMPROVEMENTS WITHIN A WELL-MANAGED BUILDING

Before the contest started, a quick assessment was performed. At first glance, the building was well managed, with very little room for manoeuvre.

However, by asking common sense questions, it's always possible to find some! As such, the most important consumption item was the heating system. However, decreasing the comfort of the occupants was out of the question!

As such, the manager tweaked the time slots in order to better adapt them to the times when people are present. An intermediate mode for the off-season was also introduced, with the building being heated for half the day.



04

RELYING ON THE CONSUMPTION EXPERTISE OF THE OCCUPANTS

Since the occupants are present in the building on a daily basis, they also have expertise that can be used to complete the assessment. They were therefore queried during a "post-it" activity focusing on observed malfunctions and on their good ideas.

The results were extensive, and the compilation of ideas provided the project team with a roadmap for the initiative.



05

THE "COFFEE ROUND" OR THE NEED FOR TRUE SUPPORT

The agents expressed a need to better understand the operation of the heating system, so operating instructions were produced for each type of fan coil unit. To improve their understanding, a meeting of the agents was organised in each of the coffee rooms, in the presence of the manager, in order to carry out on-site demonstrations.

This "coffee round" was very beneficial as it provided for very informative exchanges between the agents and the manager.

06

GRADUAL INVOLVEMENT OF OCCUPANTS

Following these coffee rounds, a team of volunteers was set up.

The project team's relay with all of the occupants is known as the "Green team".

It provided the project team with the expectations, needs or difficulties expressed by their colleagues. The Green team's involvement in the initiative gradually increased, with proposals and the implementation of actions such as the Easter quiz (with chocolate, no less!), a staircase day or an activity focusing on the consumption of electrical appliances.

The green team thus enabled the project team to multiply its efforts, while targeting the sustainability of the initiative over time.

07

AFTER CUBE: GOING FORWARD WITH THE INITIATIVE

The initiative is still in progress today, with monitoring of energy consumption and a new action on waste management: the implementation of selective sorting, encouragement to stop using plastic cups, composting, activities and workshops on "zero waste" etc. •



DALKIA EUROPE TOWER:

A great Cube 2020 pioneering tower

01

THE DALKIA HEAD OFFICE CUBIFIES

The Europe Tower at La Défense is the headquarters of Dalkia, an EDF subsidiary specialising in energy services and energy production.

As an expert in promoting local renewable energies and energy savings, the tower participated in the 3rd edition of CUBE 2020 between 2016 and 2017. The building has 26 floors, all HQE (high environmental quality) certified, and the building is also IGH (high rise building) certified.

02

A CUBIST TEAM IS BORN

The project team, made up of 6 representatives from the communication, operations and marketing sectors, coordinated and brought energy to the contest, while interacting with the IFPEB.

As such, 18 ambassadors (2 per floor) were appointed, with 4 Ambassador meetings held during the year (role, technical operation of the installations, energy-related use of the space, feedback, help with arguments to be put forward etc.)

03

ACTIONS: RAISING AWARENESS ON BEST PRACTICES

Occupants were provided with access to a suggestion box that the ambassadors then used to pass on technical optimisation ideas.

The results of the CUBE contest were shared regularly, as well as other communications on a monthly basis, such as displaying posters in the printer areas, in the cafeteria and on the elevator screens, as well as other areas.

Temperature readings were taken during two periods, and the occupants of each individual or shared office were made aware of the "ideal" temperature setting, ventilation speed, the closing of doors to avoid activating occupancy sensors, etc.

Several awareness-raising meetings on certain floors were also organised for employees.

04

A BUILDING-WIDE CONTEST TO MOBILISE OCCUPANTS

The actions included launching an internal inter-floor contest.

The 3 floors with the best energy savings over the month finished on the podium. The inter-floor contest helped to identify which floors consume the most energy, so as to launch targeted actions.

Some simple but very effective technical actions were also implemented, such as programming the automatic shutdown of photocopiers, removal of certain lights in the corridors (compensated by the tower's safety lighting) and the adjustment of presence sensors in the cafeteria, corridors and meeting rooms.

05

SAVINGS DONATED TO AN ASSOCIATION

The target for 2017 was set at energy savings of 10%, equivalent to the CUBE 2020 Bronze Medal

The financial savings were intended for Roland Jourdain's Fondation Explore, "an incubator for exploration with a positive impact on mankind and the planet. »

After a year, the results were clear: savings of 6.7%, and a €4,000 cheque for Explore!



KEY DATA

PARTICIPANT OF THE 3RD EDITION

Status: tenant

- Building renovated in 2012
- Area (dalkia private): 9,000 m²
- Staff: 450 Activity: offices
- Energy: Electricity, heating network, chilled water network
- Results: Energy savings of 7.6%



06

COMMUNICATING THROUGH THE BUILDING-FLOOR AMBASSADORS

Communications for the 450 employees were organised around the inter-floor challenge.

Results at the end of the contest: good involvement of the teams per floor and attentive supervision by the ambassadors. They played a major role in the involvement of their colleagues, while regularly checking that the recommended actions were being applied by each of them.

07

CHALLENGES MET AT THE END OF THE COMPETITION

The biggest challenge for the tenant was that the "cubesque" perimeter focused on measured energy consumption, in other words "private" energy consumption: supplementary heating (hot batteries of fan coil heaters), lighting, IT and telecom systems.

On the first day of the contest, the savings assessment became more complex due to the owner's decision to lower the air conditioning temperature from 22°C to 18°C. This 4°C reduction on the common expenses increased private heating consumption.

CUBE 2020 recommends that before implementing such a change, users must at least be informed beforehand, and at best, their opinions must be considered so as not to impact their daily comfort (or lead to overconsumption to make up the difference!).

As well as this challenge, impacting employee perceptions and behaviours was not easy, especially due to the size of the company and the building: more than 25 floors and large employee teams.

Nevertheless, the results at the end of the contest were clear, and participation in the CUBE 2020 contest led to new actions being envisaged for the future, including: air flow adjustment, presence and brightness detection settings for lighting in the offices and bathrooms.

CUBE 2020 AT THE SOUTH CORSICA DDTM:

Participating in CUBE to better disseminate the initiative

01

A DESIRE TO SET AN EXAMPLE THAT ALIGNED WITH THE EXPECTATIONS OF THE AGENTS

As the energy transition is an integral part of the public policies promoted by the DDTMs, it seemed logical for the DDTM 2A to get involved. Also, in January 2018, the implementation of the "Exemplary Administration" initiative was then integrated as

an objective of the DDTM 2018 - 2021 Strategic Orientations Document.

CUBE 2020 therefore provided an opportunity to get involved in emerging missions and to respond to the expectations of examples to be set by agents

02

NOTHING TO LOSE AND EVERYTHING TO GAIN WITH CUBE 2020

The CUBE 2020 initiative was launched in 2017, with the assistance of CEREMA.

Management was convinced of the benefits of this contest: potential energy savings of 10%, while enabling the technical department to get involved in new missions and encouraging the cross-functionality of departments.

A project team was set up, with a project director, a CODIR member, a project manager from the Buildings Unit, and a small team (staff from the Buildings Unit, the DDTM SG and the DREAL (co-occupying department)).

KEY DATA

PARTICIPANT OF THE 4TH EDITION

Candidate type: Decentralised services of the Environmental Ministry – multi-occupant site •
Status: owner

- 🏠 Building from 1958, extension from 2014
- Area: 2,101 m²
- Staff: 101 agents
- Activity: offices
- 🔌 Energy: fuel and electricity
- 📊 Results: energy savings of 11.24%

Other skills (IT, logistics, reprography) were added to the team, including a dozen relay agents, all volunteers, responsible for disseminating the initiative within each department.

03

TWO STEPS BEFORE THE CONTEST: APPRAISAL AND TRAINING

Before the launch of CUBE 2020, the team was mobilised in order to have a better understanding of the building's consumption (working with the maintenance agent, monthly meter readings and analysis of the recommendations in the equipment energy audit report in order to identify specific tactics).

To successfully carry out its awareness-raising actions, training was organised on "Involving occupants in energy saving measures", as well as a search for communication kits and feedback from former candidates.

The DDTM took advantage of the contest to generate momentum with other local actors (ADEME, Prefecture, Collectivité de Corse, University, etc.) to which it presented the contest, and that entered the contest that same year.

Regular exchanges were organised between challengers and the technical services which were mutually beneficial.

04

RAISING AWARENESS AND TAKING ACTION

In order to set up an action plan, the project team relied on a brainstorming session with the agents, based on the ideas of the agent in charge of building maintenance and the equipment audit.

As such, 104 actions were identified and prioritised. To raise awareness and communicate, various activities were set up: a coffee round in each the department to present CUBE, creation of a dedicated mailbox, a quiz / brainstorming activity, "CUBE morning" newsletter, distribution of brochures on eco-tips, measurement campaign with a wattmeter, regular assessments, etc.

The strong involvement and motivation of the relay agents as well as the solid support of the Management helped these actions to succeed.

At the same time, several technical actions improved occupants' comfort levels: the purchase of LED bulbs for desk lamps, repair of the double-flow ventilation system, application of solar films on certain windows, insulation of certain heating pipes, review of the default operating settings of the systems, and of the temperatures during unoccupied periods etc.

The investment of €3,800 led to a saving on the candidate building's energy bills of €2,200, in the 1st year!

05

HIGH PARTICIPATION LEVELS AND A PROMISING RESULT DESPITE OBSTACLES

The occupants were very receptive to the launch of the initiative, even though a certain pullback appeared over time. This demonstrates the need to regularly reinvigorate the initiative, and therefore to be able to free up time on a daily basis. However, the results speak for themselves : energy savings of 11.24%!



06

AFTER CUBE: GOING FORWARD WITH THE INITIATIVE

After CUBE, the DDTM 2A wished to extend its actions to other areas such as composting or waste sorting, while continuing its energy saving efforts. As such, the challenge was to keep the momentum going.

Finally, one of the objectives of DDTM 2A was to create an initiative and tools that can be replicated for other administrations and collectivities.

DREAL promoted the DDTM's experience to the regional managers of the Government's real estate assets, and the DDTM 2A has already begun putting its experience to good use with another Government service, the DIRECCTE, a candidate for the next edition! •

CUBE 2020 AT THE EURE DDTM:

Savings through energy consumption!

01 MOTIVATION OF THE DDTM 27: REDUCING ENERGY CONSUMPTION

The Eure Departmental Land and Sea Division (DDTM) is a decentralised Government service that deals with sustainable development issues across the department, carrying out Government missions and advising local authorities on various topics : housing and habitation, urban planning, agriculture, water protection and management, natural and forest areas, etc.

As early as 2010, the DDTM27 began a process intended to reduce its main building's energy consumption.

After an audit, a building management system (BMS) was installed to manage the temperature and heating schedules, and the switching on and off of the CMV and the lighting. In 2015, the Management wished to go further, and asked for the support of its Sustainable Building unit, that proposed low-investment efforts and actions.

02 CUBE 2020: CONTEST PARTICIPATION PROMOTED BY THE MANAGEMENT

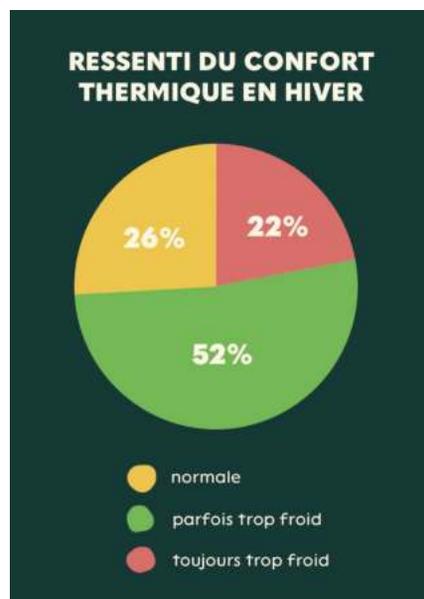
To launch the initiative, the Division mobilised a team consisting of two technical and coordination representatives, the assistant to the directors, the head of

the territorial support and advisory service, a representative of the general secretary, the communication officer, the manager of operations / maintenance, and the manager of the energy transition component.

An internship created at this time then became a permanent position within the DDTM, with CUBE-related missions included in this person's job description.

03 A QUESTIONNAIRE TO COMMUNICATE WITH AND GET INITIAL FEEDBACK FROM USERS

The Management supported the project from the outset and throughout the entire process, as a stakeholder in the information provided to users.



One of the first implemented actions was a questionnaire for the agents, intended to serve as a comfort assessment and to help orientate the initial actions accordingly.

The results of the questionnaire, that had a high response rate (76% of staff), provided a reference point for all the subsequent actions. For example, advisory visits to the offices of staff members who had expressed dissatisfaction, for example, with the lighting, were organised.

04 A FUN APPROACH THAT HAS BEEN KEPT UP OVER THE LONG TERM!

A decision was made to coordinate the overall initiative in a fun way, with constant exchanges between the project team and users. As such, the results of the comfort questionnaire were communicated to the agents at a CUBE Café, during which the first eco-tips were presented.

After this, an eco-tips section was created on the intranet and a sheet presenting an eco-tip was sent to all agents every Tuesday. Wherever possible, eco-tips were presented in an amusing way.

Two "Who wants to save watts" sessions were proposed by an Energy Info advisor, with questions on energy savings in general and especially at home. The "CUBE spirit" gradually spread throughout the building, and it was not uncommon to hear "you've left your light on, that's not CUBE!".

KEY DATA

PARTICIPANT OF THE 3RD EDITION

Candidate type: Environmental Ministry - multi-occupant site •
Status: owner

- 🏠 Building from 1991
- Area: 4,676 m²
- Staff: 160 agents
- Activity: offices
- ⚡ Energy: electricity (BMS system)
- 📈 Results: energy savings of 5.64%



05

AN APPROACH FOCUSED ON ENERGY CONSUMPTION

With no specific allocated budget and few possibilities for replacing equipment, the project team turned to managing energy consumption.

The building's good initial condition as well as the dynamic approach of the project team made it possible to involve a large number of agents. According to the project team, the results could have been even better if a budget had been allocated to make small investments or offer rewards etc.

06

POST-CUBE: GOING FORWARD WITH THE INITIATIVE!

The CUBE initiative is still ongoing, notably by monitoring electricity consumption and by communicating eco-tips to new staff as part of their orientation.

It was also extended to other topics, with eco-tips being sent out each week, always with an element of humour whenever possible: "changing suppliers for green electricity", "eating organic

is no longer just for hipsters," "I'm reducing my armada of household products by using white vinegar," and many others.

The CUBE spirit is therefore still very present, and the question of changing the name "CUBE" to make it more appropriate to the many issues that are now being addressed has arisen. The DDTM27 is thinking of keeping the acronym for continuity, but using it differently: "Club des Usagers du Bâtiment Ecologique" (Ecological Building Users Club).

Good levels of involvement in the initiative and use of its name enable it to be developed even further! •

FONDS BELVAL:

an already functional system can still be optimised!

01

CUBE 2020 FOR CONTINUOUS IMPROVEMENT

The Fonds Belval is a public institution created in 2002 to rehabilitate the former brownfields of Belval, in the community of Esch-sur-Alzette.

As part of a legislative drive to encourage public buildings to expand their sustainable development strategy, the CUBE 2020 candidacy was presented to the management.

There were no major problems at the time, the systems were operational, the technical management was efficient and

the installations were sound; it would have been easy just to carry on as they were. However, thanks to a desire for continuous improvement and a constant desire for more savings, the management validated this project and, at the same time, set aside time for the various stakeholders to carry out the project.

In the end, however modest the financial and human means, the results are clear.

02

MANAGING SPECIFIC NEEDS: A MAJOR CHALLENGE THAT WAS BRILLIANTLY MET

An initial analysis of the building made it possible to define three classic optimisation axes: heating / cooling, lighting and ventilation.

On this last point, a particular feature of the building is that it houses more than 2,000 m² of mechanically ventilated laboratories that have to operate without interruption, and that require specific hygiene, humidity, light and temperature standards.

KEY
DATA

PARTICIPANT
OF THE 3RD
EDITION

Candidate type: Semi-industrial building •
Status: owner

- 🏠 2009 - 2012 building
- Usable floor area: 11,200 m²
- Staff: 249 agents
- Activity: offices
- 🔌 Energy: electricity and heating network
- 📈 Results: energy savings of 32%

03

COMMUNICATING WITH MULTIPLE TYPES OF OCCUPANTS

In addition to specific and technical needs, it was necessary to communicate and raise awareness regarding energy saving issues, even though each section is very different and that identifying the right contact people wasn't always easy.

To overcome this potential roadblock, a meeting of all occupants was organised in order to present CUBE 2020 and what it meant for them, together with an explanatory letter.

The real challenge was to ensure good internal propagation, even though the team was not in contact with everyone. Despite this, the results were clear.

When assessing the building, the team noticed that the office corridors had sufficient sunlight in the summer, partially due to the glass doors.

As a result, the decision was made to deactivate the automatic lighting detection.

However, deeper laboratories are only illuminated by a small window. In addition to the discomfort of the laboratory workers, a lack of lighting prevented the internal cleaning team from doing its work properly.

Very reactive, the team therefore implemented a different setting suited to the laboratory occupants. The resulting lesson was that these adjustments and attention to comfort should systematically be at the centre of actions in order to avoid opposition.

The initial recommendations were exceeded thanks to the implemented actions.

And the settings adopted during the contest have been maintained: bills are monitored each month to ensure that there is no over-consumption or rebound effect.

Very satisfied with the outcome of this contest, the engineer in charge of CUBE 2020 claimed that:

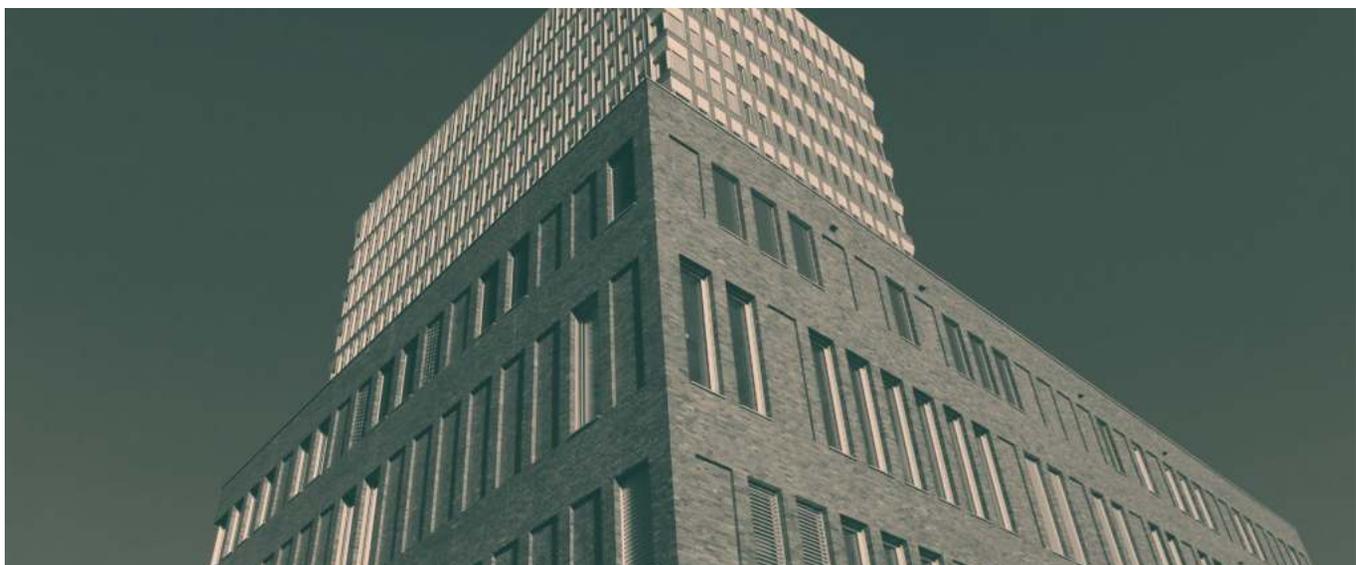
“ Every company, above a certain number of employees, should have a person dedicated to the building's energy efficiency. ”

04

OCCUPANT COMFORT IS OF THE HIGHEST IMPORTANCE

05

POST-CUBE, VIRTUOUS ACTIONS REMAIN ONGOING



CUBE 2020 POSTE IMMO RENNES:

A maintenance operation initiative

O1

A LONG-STANDING COMMITMENT TO REDUCING ENERGY CONSUMPTION

Poste Immo is a subsidiary of the La Poste group, in charge of property management.

For image, financial and sustainable development reasons, Poste Immo has long been committed to limiting the energy

consumption of its buildings. The group has worked to implement the successive thermal regulations as soon as they came out. Registration for the CUBE 2020 contest therefore seemed inevitable.

O2

CUBE 2020: PARTICIPATION DRIVEN BY THE GROUP'S HEAD OFFICE

From the contest's first edition, Poste Immo's objective was to put forward two buildings in each of its 12 regional divisions.

At the Rennes branch, the maintenance inspector put forward their building and took the process in hand.

For them, CUBE 2020 was an opportunity for greater awareness of the behavioural impact and monitoring of equipment on a building's energy consumption.

This building took part in the contest for two years.

KEY DATA

PARTICIPANT OF THE 1ST AND 2ND EDITIONS

Candidate type: Poste Immo, in charge of managing the La Poste real estate portfolio
Status: owner

- Building from 1974
- Area: 18,000 m² Useful Floor Area (SUL)
- Staff: 550 agents
- Activity: offices
- Energy: electricity (BMS system) and urban heating
- Results: 24% energy savings in the first year (January to December 2014) 25% in the second year (July 2015 to June 2016)

03

THE IMPORTANCE OF RELYING ON A PROJECT TEAM

The project pilot set up the project team with 9 representatives for 12 services.

They were able to rely on volunteers to help them involve people who were undecided about the contest. They notably performed electricity consumption measurements on their devices in order to then better guide the awareness-raising and communication efforts.

The approach focused primarily on raising employee awareness and proposing eco-tips. For example, an event run by a service provider helped to raise the awareness of 150 agents around user-friendly information stands, along with a questionnaire to be completed before drawing lots and awarding prizes.

In addition, a breakfast meeting on the subject of energy was organised each year of the contest in order to raise awareness in a friendly setting.

The project team recognised the importance of consulting with occupants so as to propose actions suited to their energy consumption that are sustainable over time. Two examples can be noted:

- Presence detectors were installed in the hallways.

However, the project team quickly realised that this measure was taking responsibility away from the occupants, whereas the idea was for them to make their own efforts to limit energy consumption. An alternative solution was then found, with the installation of timers that can be switched off manually.

- Without consultation, the project team decided to change the heating system settings, with the system being restarted on Monday morning instead of on Sunday. Some occupants who felt uncomfortable resorted to using plug-in heaters.



04

SUCCESSFUL TECHNICAL ACTIONS

Before taking action, the team studied the building's operation and its consumption by energy use category, so as to identify the necessary actions.

CUBE 2020 was an opportunity to identify "invisible" malfunctions that do not affect comfort, and to improve the management of the premises according to their use. The most pronounced case is that of the car park: minimum 14°C temperature discontinued and CO and CO₂ sensors installed to adapt the ventilation.

Ceiling lights originally equipped with several 18W tubes were replaced by LEDs that use much less energy.

At the same time, more careful monitoring of equipment maintenance was introduced, a fair compromise between unsatisfactory corrective maintenance and preventive maintenance. For example, HVAC filters were changed as soon as necessary.

Identified as obsolete during CUBE 2020, the HVAC system was replaced with a new and much more efficient system after the contest at the end of 2017.

05

AN EFFICIENT INITIATIVE WITH LASTING EFFECTS

The implemented actions led to a reduction in energy consumption by 24% in the first year and 25% in the second.

As such, the initiative was very efficient and the team members put a lot of time and effort into it: about half a day per week just for the project manager and regular involvement of the maintenance provider's technician.

The assessment phase was particularly time-consuming: For example, it was necessary to go around the building and list all on-site equipment before doing anything else. However, this is an indispensable part of good building management!

Finally, the process ended with the CUBE 2020 contest.

Although energy consumption has risen slightly compared with the contest years, it's still much lower than during the reference years. •

RENNES 1 UNIVERSITY:

A long term initiative

01

CUBE 2020: AN EXPERIMENT TO PROMOTE RAISING AWARENESS

Rennes 1 University, which welcomes more than 28,000 students over 9 different sites, did not wait for its participation in the second edition of CUBE 2020 to get involved in the field of responsible property management. Its initial commitment to sustainable development goes back a long way, and notably resulted in an Agenda 21 approach (2009), launched by the University's Sustainable Development Officer, an Energy-Water master plan (2013) to better control consumption and improve living conditions on campus, as well as using an innovative financing method: intracting (2015).

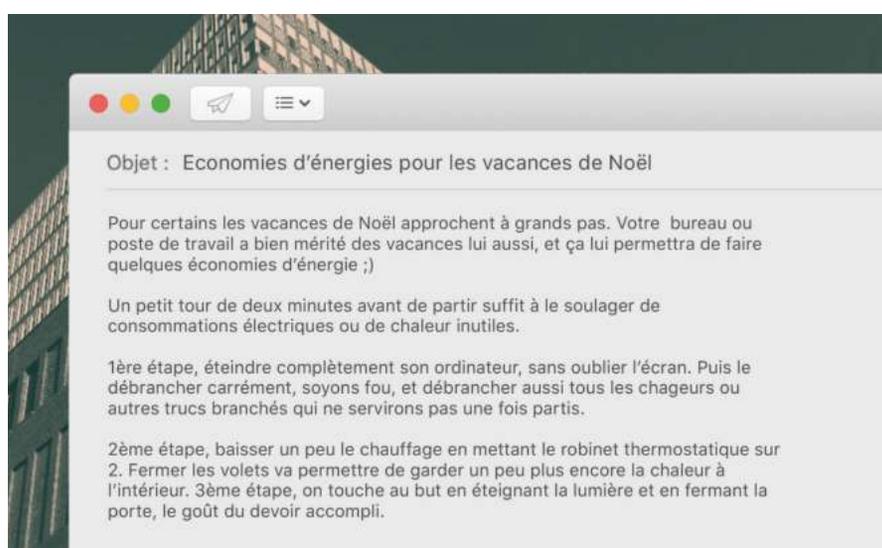
These different initiatives, piloted by the head of the "Building Energy and Environmental Quality" division, with the help of the communication department, were accompanied by a desire to involve users in raising awareness and decision making.

In order to increase involvement, the decision to create the position of "energy coordinator" within the EQEB division was taken in 2014.

The creation of this position, and of all of the previously established partnerships, led to the development of the "Let's take action for a sustainable campus" initiative and registration for the CUBE 2020.

02

MULTIPLE COLLABORATIVE ACTIONS TO RAISE AWARENESS AND REDUCE CONSUMPTION



One of the first actions implemented by the energy coordinator and the head of the EQEB division was to send an e-mail to all staff, suggesting that they carry out a few simple eco-tips before leaving on holiday. The central printing office was then asked to test switching off the machines in the evenings and at weekends, which reduced electricity consumption by 20%. This simple and powerful action motivated users.

The high point of the initiative undertaken up to this point was the eco-tips campaign "Let's take action for a sustainable

campus", presented and voted on by the University's Board of Directors.

Thanks to the collaboration of many departments of the Rennes 1 and 2 Universities and the involvement of students, a mascot was created in order to disseminate eco-tips in a non-judgmental, fun and snappy way, in line with the students' state of mind.



KEY DATA

PARTICIPANT OF THE 1ST, 2ND AND 4TH EDITION

Candidate type: University •
Status: owner

- 🏠 Building from 1966, renovated in 2011
- Surface: 6,030 m²
- Activity: education
- 🔌 Energy: electricity and heating network
- 📊 Results: energy savings of 29%



The CUBE 2020 contest, in which two University buildings were entered, was seen as a way to experiment with new awareness-raising actions and, above all, to evaluate them. Therefore, in the context of the contest, the following were organised:

- Convivial breakfasts held in order to talk about the initiative and raise awareness of eco-tips;

- Activities such as the "bicycle blender" that makes you aware of the energy needed to make a fruit juice, and in which even the director of the UIT participated.
- The installation of extension cables with switches on each workstation, with thought given to their positioning to ensure that they are easily accessible.

03

THE IMPORTANCE OF CONTEXT IN RAISING AWARENESS



Though the impacts are not always easy to measure, the energy facilitator believes that these various approaches have helped to disseminate an energy saving culture throughout the University.

One of the candidate buildings managed to achieve its target of 10% energy savings. On the Jean Macé site, the reduction only amounted to 0.5%. This low result was nevertheless instructive.

It was noted that comfort was difficult to ensure in this building due to the dilapidated heating installations, which hindered the involvement of its occupants. Moreover, this building is only a transit point, which is almost never used. This can teach us a lot about the importance of context in such initiatives!

To add to the dynamism of these initiatives, Rennes 1 University entered six new buildings in the third edition of the CUBE 2020 contest.

The idea here was to move towards a more "bottom up" approach in which students and teachers were integrated from the outset in order to reflect on the actions that could be implemented.

With this experience, the time needed for change appeared to be a determining factor •

CARMINE S.A.:

The first SME winner
of CUBE 2020!

01

AN SME WITH STRONG SUSTAINABLE DEVELOPMENT VALUES

Carmine S.A. participated in the 1st edition of CUBE 2020 in 2014

It's an SME in the building sector involved in finishing work (painting, masonry, thermal insulation, amongst other things). Created in 1927, it's still a family business, based in Bobigny.

As an SME, Carmine is highly committed to sustainable development: RQE (Environmental Quality Research) label, Chantier Zéro Carbone (Zero Carbon Worksite) label etc.

Both Management and the employees are therefore very aware of these issues and so it seems also natural that Stéphane Carmine, President, wanted to participate in the CUBE 2020 challenge.

02

AN EXTERNAL ASSOCIATION TO SERVE AS THE "CUBE PROJECT TEAM"

Carmine is a member of the Association RQE, that facilitates the integration of sustainable development actions within SMEs.

Based on the principle that an initiative is better received if it's proposed by someone from outside the company, the company director approached the association to help him raise awareness amongst employees (who were implementing the practices on a

daily basis) and to organise meetings to provide them with more information.

As the RQE team was already accustomed to organising themed meetings, the organisation and management of the Cubist initiatives were very simple.

In this way, Cube was complementary to Carmine's CSR strategy, since the overall idea was to reduce consumption caused by "unnecessary" practices or those that could easily be improved, without requiring greater efforts from the employees.

KEY DATA

PARTICIPANT OF THE 1ST EDITION

Candidate type: private painting, restoration and thermal installation company •
Status: owner

- 🏠 Building from 1978
- Area: 2,500 m² On-site staff: 18
- Activity: offices
- ⚡ Energy: electricity
- 📊 Results: energy savings of 12%

03

CUBE ACTIONS AND MUCH MORE!

Once employees were made aware of the energy consumption of devices on standby, the ambassador team purchased outlets with switches in order to be able to turn off printers, computers and other electrical devices every night; these simple actions led to considerable savings.

The building dates back to the 1970s, so some of the lights were very old and had to be replaced with LED bulbs.

In layout terms, furniture and locations were changed in the south-facing office in order to intelligently improve employee comfort by retaining heat in the winter and cool air in the summer. Staff were kept informed during the contest by means of meetings and through communication materials, notably to monitor their ranking.

The scope of the cubesque initiatives was extended to include other sustainable development topics and issues - leaking taps were all repaired, for example, and carbon-oriented studies were set up for construction sites. The contest made it possible to carry out a space assessment and to identify problems that would require little investment and that would lead to quick and considerable benefits.

Other actions deployed and inspired by the Cubist spirit include:

the search for partnerships with local suppliers of materials, the organisation of a pooled collection of building site waste, the purchase of two zero waste tool cleaning units, the organisation of a sustainable building conference with outstanding guests and, finally, a carbon offset proposal following the completion of the carbon footprint audit, amongst a variety of other initiatives.

04

CUBE 2020, FOR BETTER EMPLOYEE COHESION

In terms of raising employee awareness on construction sites, many initiatives had already been implemented in the SME.

However, no training had been provided to office employees.

CUBE has therefore made it possible to transfer this awareness, while helping to strengthen the social link between the company's different departments.

Thanks to the CUBE initiative, a stronger feeling of camaraderie was created between the different teams, thereby increasing the sense of involvement of people who had felt less concerned.

05

LESSONS TO REMEMBER FOR FURTHER PROGRESS

With the Winner's diploma still hanging in the meeting room as a sign to inspire the troops, participation in the contest in 2014 continues to motivate the employees even today.

An annual awareness-raising exercise is now recommended in order to renew everyone's commitment and prevent bad habits from returning to the office.

Participation in the contest in 2014 also inspired ideas on broader topics that have yet to be developed, such as working on the carbon footprint audits of worksites, in an effort to improve them. •



