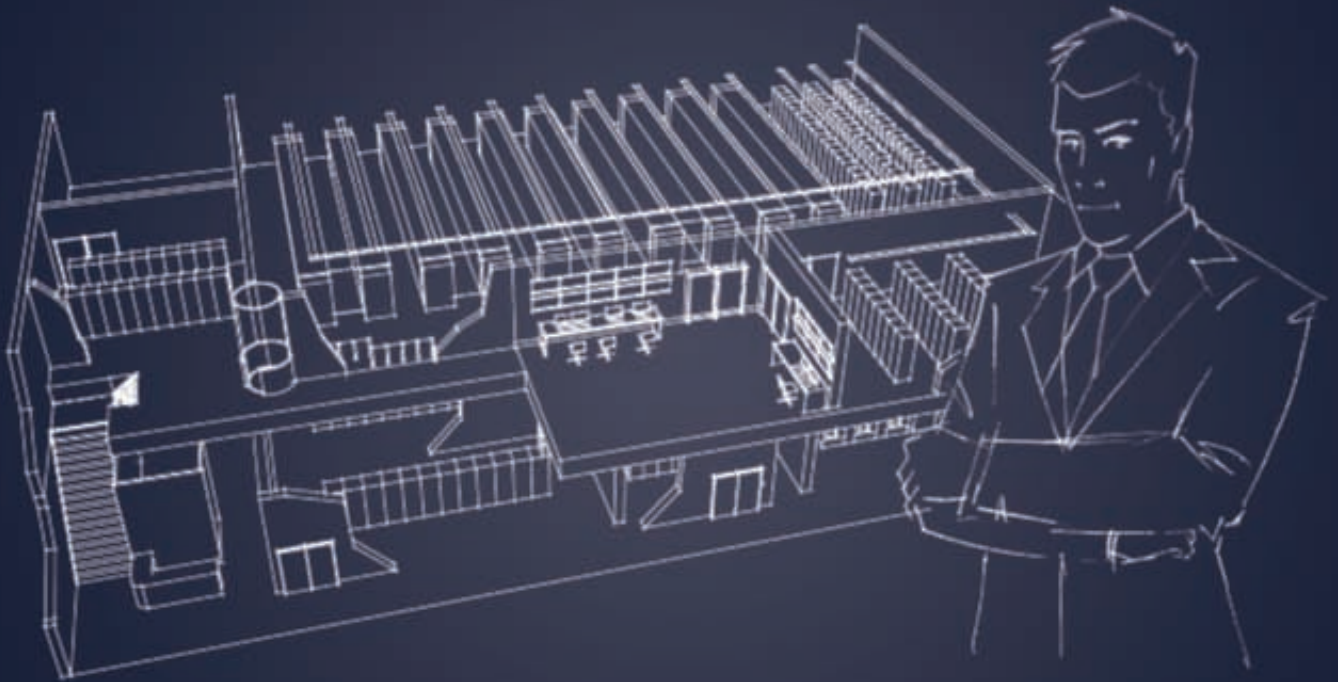


# Data Center

## Integrated solutions



# PERFORMANCE AND RELIABILITY AT THE HEART OF DATA CENTERS

**The growing number of business and technical demands placed on data centers today are becoming increasingly critical:** features such as cloud computing, storage capability, reconfiguration of installations, reliability, reconfiguration of existing systems and monitoring of operating costs all need to be considered.

In order to achieve high performance in all areas, as well as outstanding reliability, rigorous dimensioning is required right from the outset, in the electrical installation design stage. **Legrand is at your service throughout the world to help guide you every step of the way.**



## WORLD RENOWNED

As a global specialist in electrical and digital building infrastructures, Legrand offers a complete range of systems for setting up electrical installations and information networks tailored to all types of project across the globe.

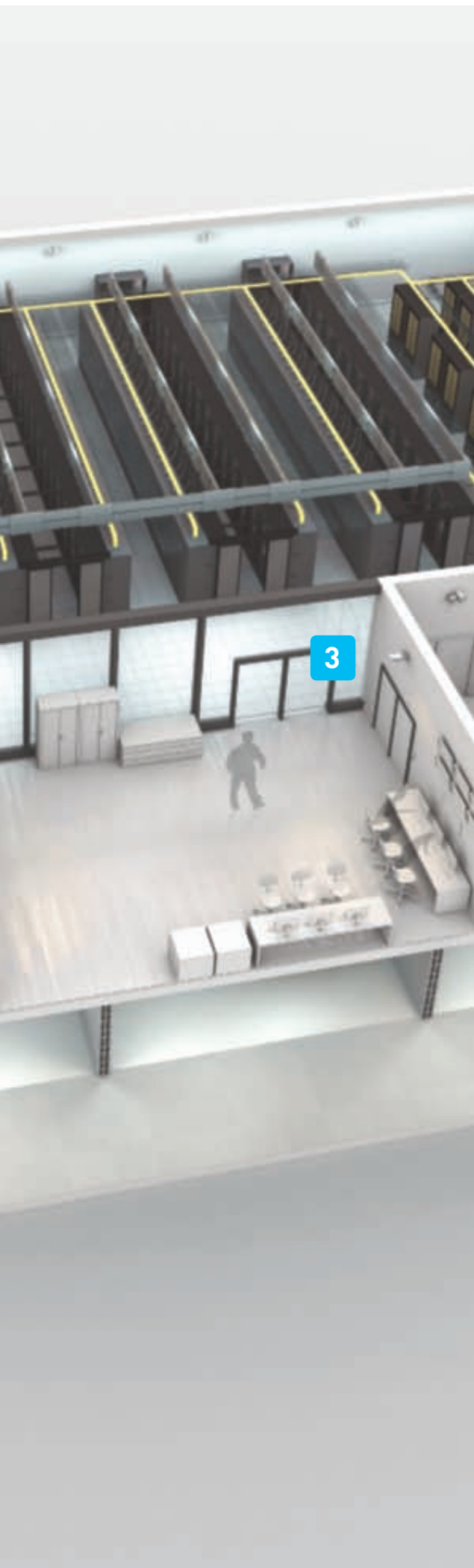
In total, Legrand offers an impressive 170,000 catalogue items and boasts more than 4,800 active patents.

**70** subsidiaries and offices,  
sales in close to **180** countries

**31,000** staff members  
throughout the world

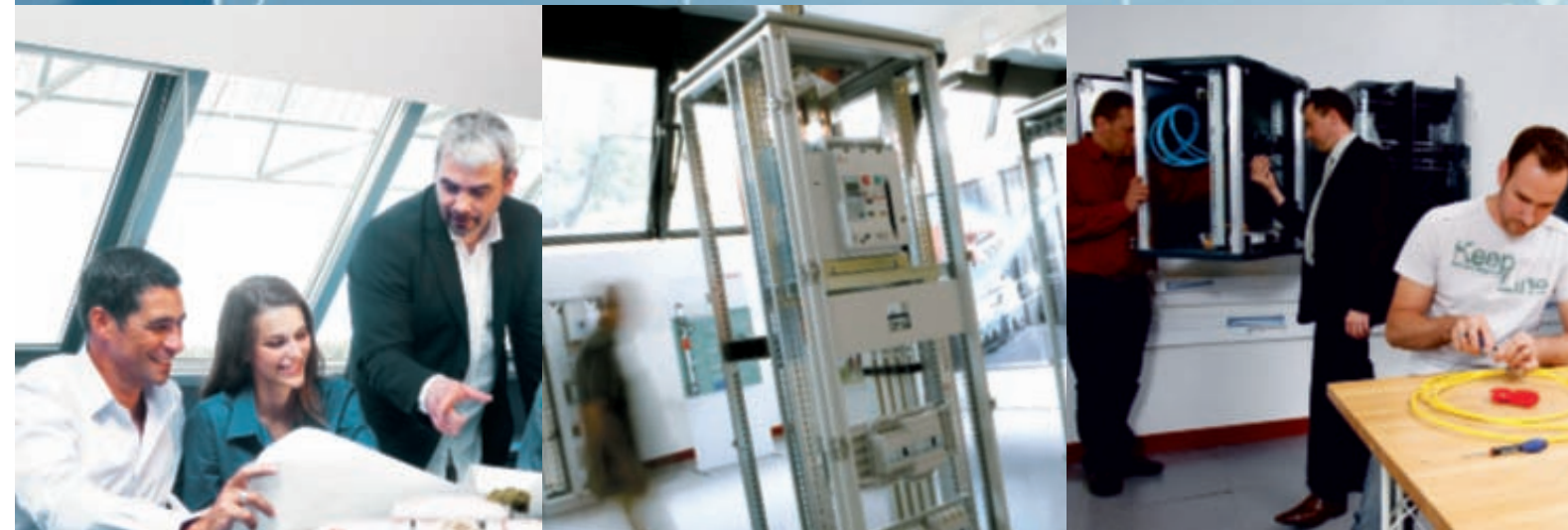
**€ 3.89 billion**  
net sales in 2010





## SERVER ROOM

The server room - the hub of the data center. Cooling the servers is critical to optimising operation.



Daily support, a specialist design office, extended warranties for products

Showrooms and products in real-life scenarios throughout the world

Presentations and training provided by professionals

### LEGRAND AND SUSTAINABLE DEVELOPMENT

For many years, Legrand has been committed, with its customers and partners, to a process of continuous improvement to ensure profitable, long-term and responsible growth for its business.

The Group thus intends to respond to the environmental, economic and social issues of today and the future.

#### 1. A global approach for sustainable development

Legrand's sustainable development approach covers three areas: social responsibility, the environment and governance.

To find out more, visit [www.legrand.com](http://www.legrand.com)

#### 2. Reducing the environmental impact of the Group's sites

Since 1996, Legrand has integrated management and protection of the environment into the way in which it operates its industrial sites.

#### 3. Controlling the use of chemical substances

When manufacturing its products, the Legrand Group systematically seeks out technical solutions to substitute the use of hazardous products.

#### 4. Eco-friendly products

Legrand implements an ecodesign approach to limit the global impact that products have on the environment throughout their entire life cycle.



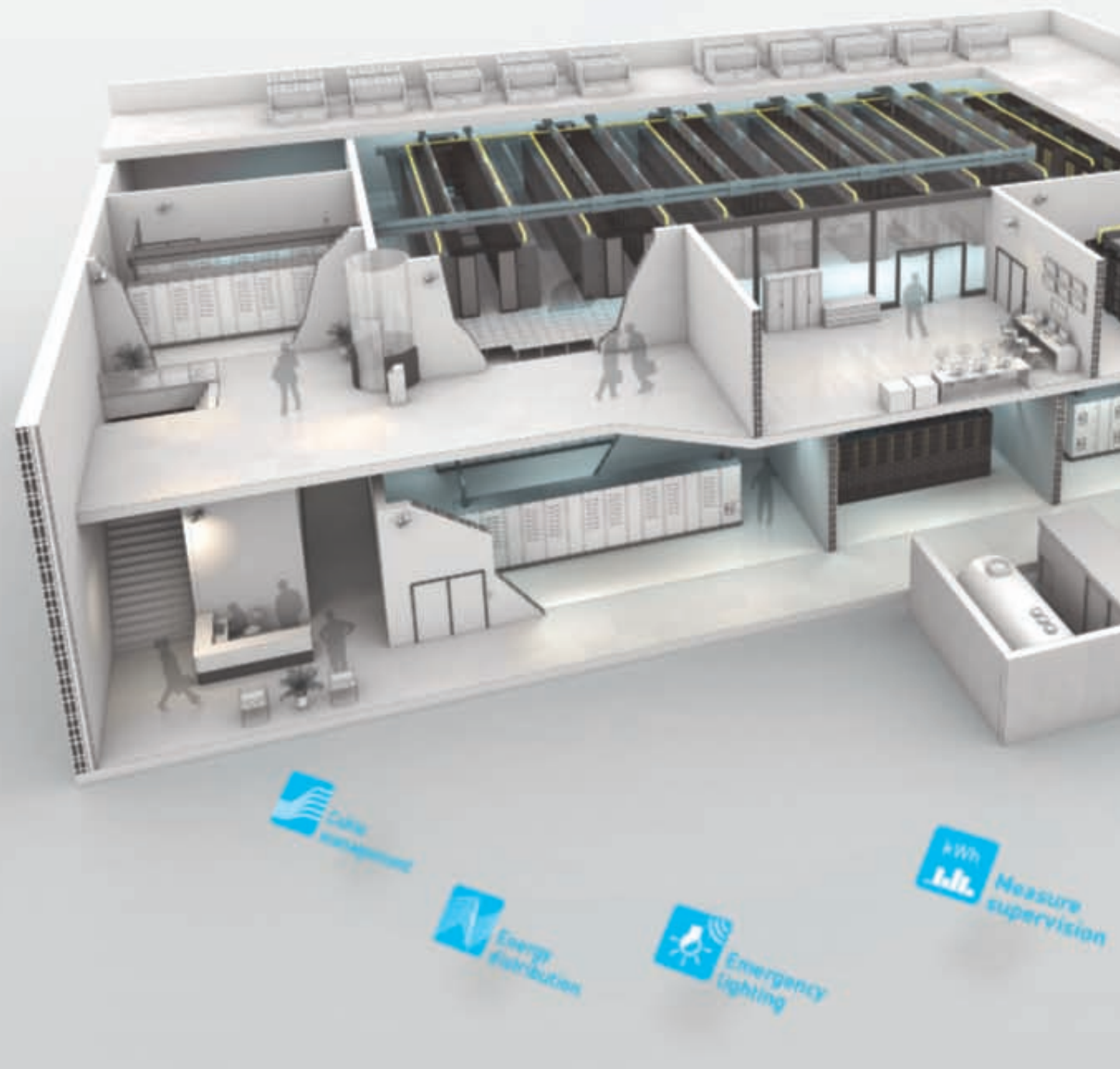
WE SUPPORT

#### Corporate Social Responsibility

Voluntary initiatives such as signing up to the Global Compact or meeting the stringent social and environmental criteria of the FTSE4Good and the DJSI\* indexes form part of an overall policy of transparency highlighting Legrand's determined commitment to Corporate Social Responsibility.

\* Based on evaluation 2010 and subject to annual re-evaluation





## ENERGY EFFICIENCY

Data centers consume vast quantities of energy. The resulting ecological footprint has become increasingly significant. Energy efficiency is thus becoming a necessity and a primary concern in the drive to reduce costs.

**Energy efficiency criteria must be taken into account right from the outset, at building design stage.**

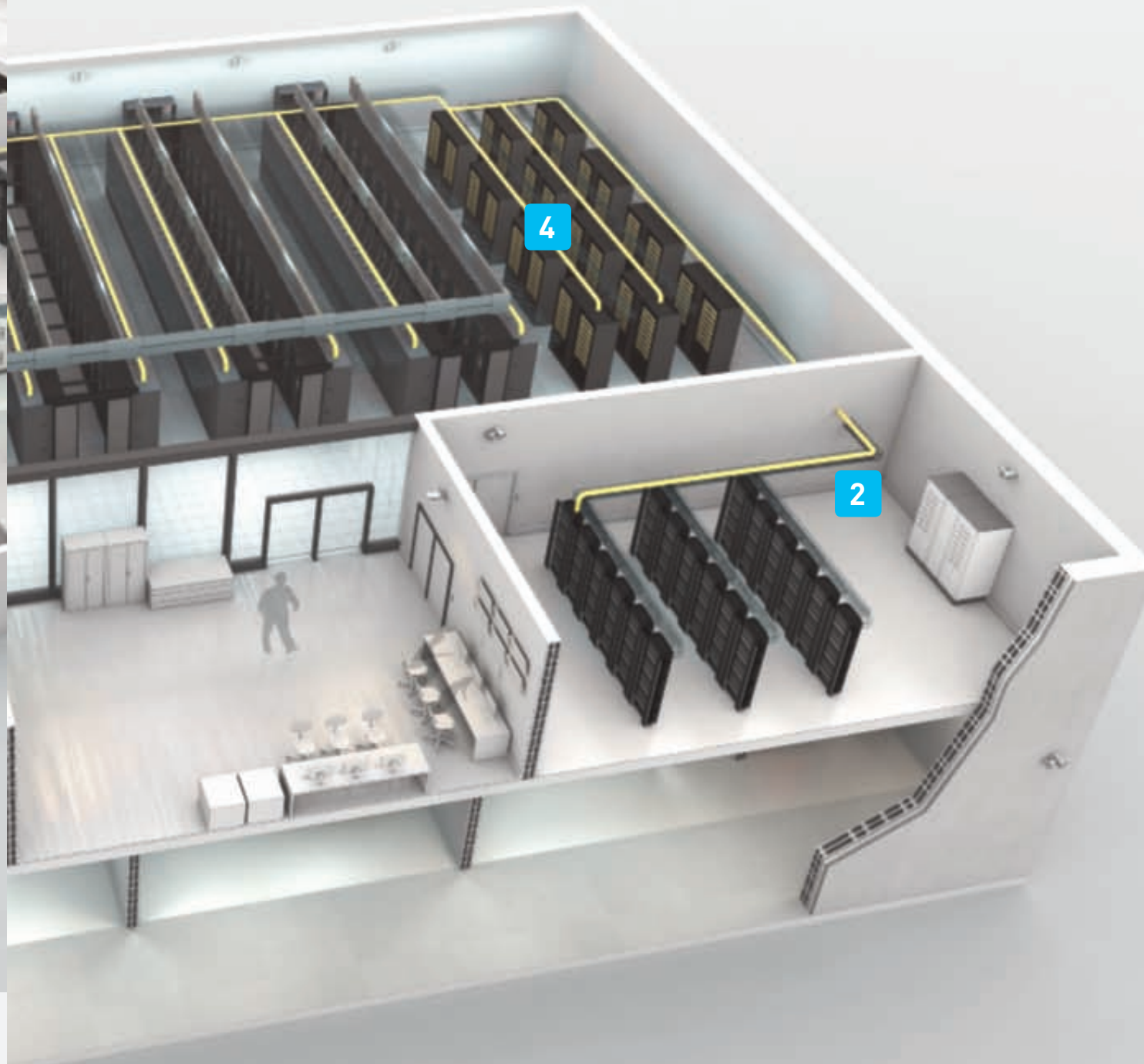
Measuring daily consumption is an absolute must. Legrand offers high-performance equipment to support you in achieving this goal. Legrand is part of the Green Grid <sup>(1)</sup>.

## ENERGY MANAGEMENT

In addition to the need to limit greenhouse gas emissions, increasing energy costs are requiring data center managers to **invest in efficient power and cooling solutions and so reduce their energy bills.**

At the same time, servers are becoming increasingly powerful and energy-consuming, **meaning that optimising installations to meet requirements has become crucial.** Installations need to be optimised from end to end. First and foremost, an audit focusing on an analysis of network behaviour is necessary. And this is where Legrand's equipment and services come in to their own.

## SERVER ROOM



### 1 CONTAINMENT

Legrand offers cooling solutions to maintain hot and cold environments.

The IT cooling solutions have a cooling capability of up to 30 kW per enclosure and are able to withstand up to 1,200 kg.



IT cooling solutions

### 2 CABLE TRAYS

Legrand cable trays and ducts are available in sheet steel and wire mesh for all uses.

World leader in cable trays, Legrand offers complete ranges that are safe to install, in sheet steel and wire mesh for copper and fibre optic cables. These solutions combine excellent mechanical and electrical performance.



Cablofil wire mesh cable tray



Fibre optic cable tray

### 3 SECURITY [CCTV & ACCESS CONTROL]

Data centers are sensitive areas, where safe and efficient security solutions are essential.

With its high performance and scalable access control and video surveillance solutions, Legrand offers a complete solution to securing access and monitoring technical rooms or server racks.



Fingerprint reader



CCTV camera

### 4 CABLING SYSTEMS

Ranges designed to optimise data center performance.

Legrand offers complete solutions with performance guarantees up to 10 Gbps for copper applications, and 40 to 100 Gbps for fibre optic applications.



Integrated physical support solutions



### 5 BUSBARS

Busbar trunking provides a safe and reliable solution for high power distribution.

Legrand offers complete distribution systems for currents up to 5,000 A.

Whether used to connect transformers to the main LV distribution board, supply power to the server racks or lighting, busbar trunking is quick to install and offers a high level of flexibility should reconfigurations be required.



HR and SCP busbars

<sup>(1)</sup> The Green Grid is an international body whose mission is to increase the energy efficiency of data centers.

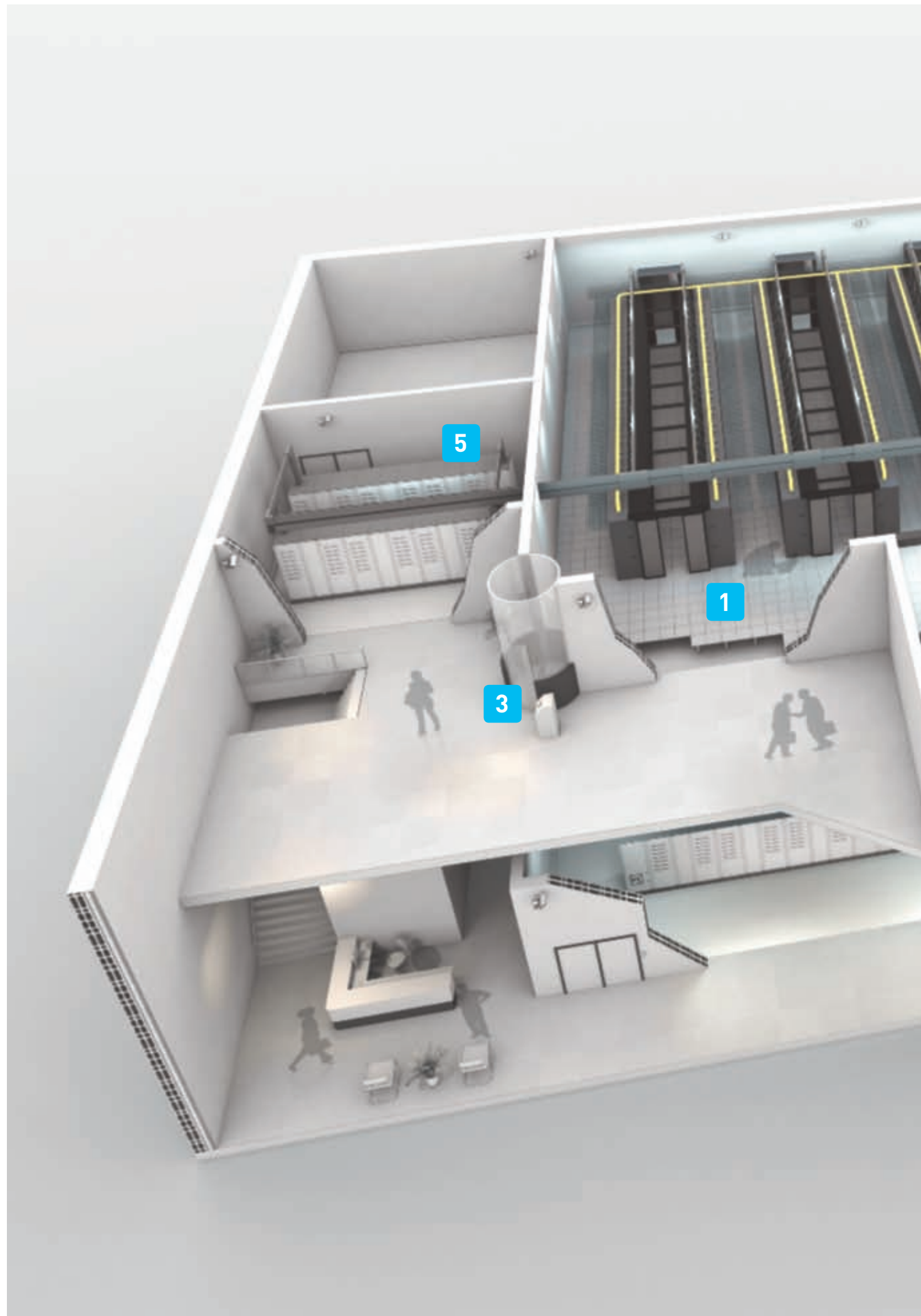




## TECHNICAL ROOM

The technical room, an essential part of the data center, must be dimensioned to distribute and protect a building's entire electrical infrastructure, right up to the servers, yet still take account of energy quality and lower energy consumption considerations.

05 | 06  
 TECHNICAL ROOM | SERVER ROOM



Lighting management

Access control

Energy quality

CCTV

Containment

### BUSINESS CONTINUITY

Legrand is a one-stop shop when it comes to monitoring projects, handling all processes and services, such as research, production, deliveries and customer services. **A network of carefully selected partners means that Legrand is on hand every step of the way, delivering a wide range of services.** A unique range of offers and reliable solutions from end to end, all guaranteed by a world leader in the electricity sector.

### SUPERIOR PERFORMANCE

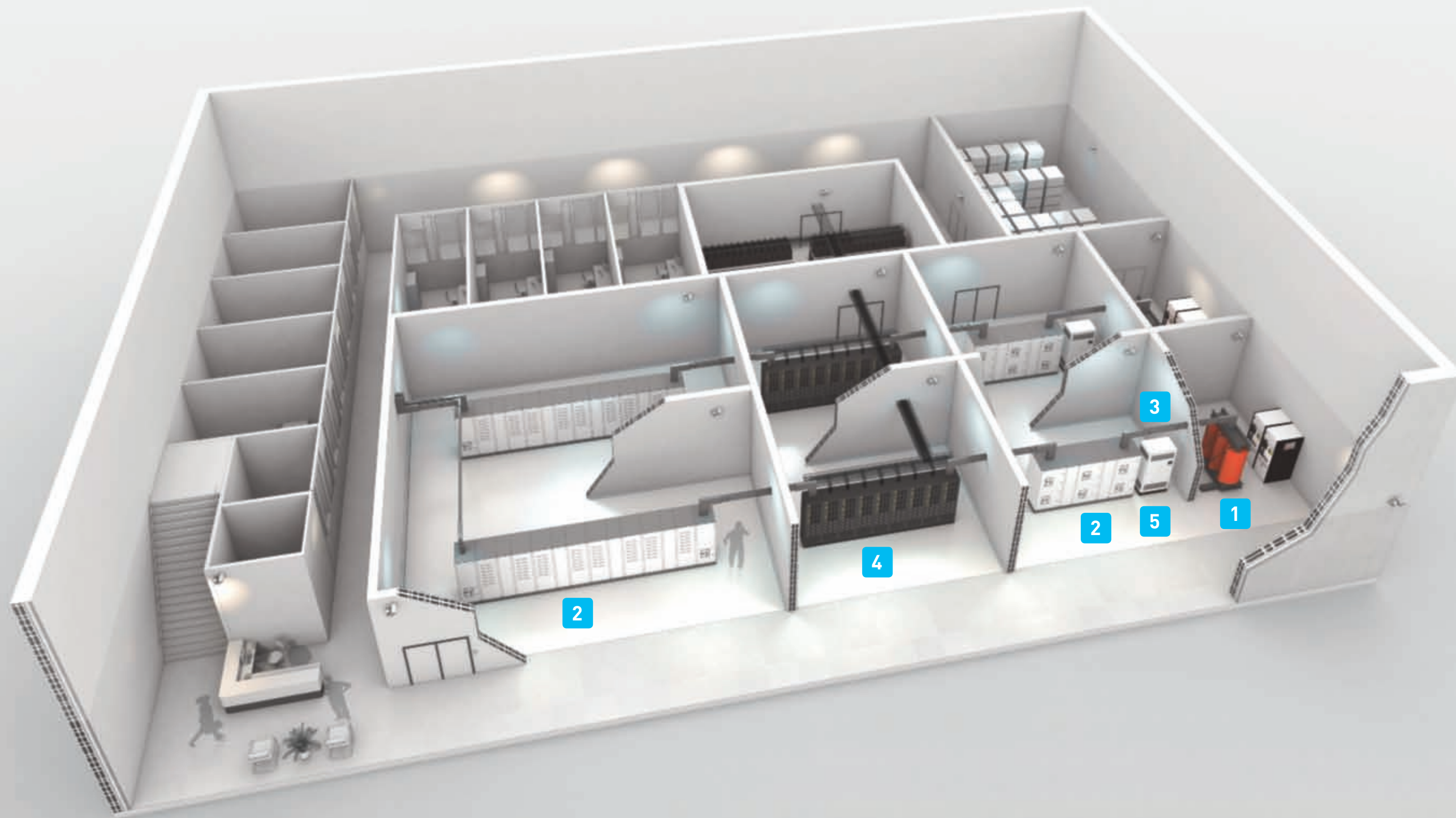
With its diverse ranges of products and solutions, including cabling systems (up to Cat. 6A), power (6,300 A), busbars, UPS, transformers, capacitor banks and containment, **Legrand provides the high level of durability and performance necessary for data center installations.**

## DATA CENTERS CONCENTRATED EXPERTISE

The efficient urbanisation of data centers, whether during implementation or reconfiguration, requires dedicated technical solutions. Installing an entire range of products from the same brand provides a high level of security. Legrand has both the product range and the expertise necessary to accomplish this.



## TECHNICAL ROOM



### 1 DRY TYPE TRANSFORMERS

Legrand offers reliable, high-performance transformers which meet the exacting requirements of data centers.

Compact and easy to use, the HV/LV dry type transformers available up to 20,000 kVA optimise consumption during phases where the building is inactive. They offer excellent resistance to short-circuits and reduce maintenance costs. Since they can be recycled, they are also non-polluting.



EDM transformers

### 2 CIRCUIT BREAKERS

The role of MCCBs: to ensure the safety of people and property but also continuity of service.

DX, DPX, DMX<sup>3</sup>, Legrand's range of circuit breakers covers all breaking capacities, as well as all currents up to 6,300 A. Guaranteeing the highest levels of performance, they facilitate operation, maintenance and installation upgradability. DMX<sup>3</sup> air circuit breakers with integrated measurement monitoring meet the specific needs for safety and energy control.



Power enclosures - XL<sup>3</sup>



DMX<sup>3</sup>, DPX and DX

### 3 MEASUREMENT AND MONITORING

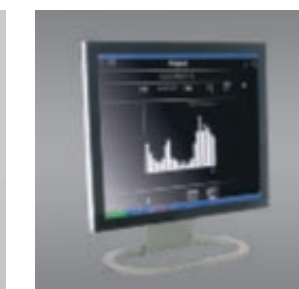
Measurement provides direct access to information concerning consumption. By implementing corrective actions, energy expenditure can be reduced.

The intelligent central readout stations and power meter protection devices integrated in the main LV distribution board enable power consumption to be monitored and analysed.

They help improve the electrical performance of data center applications by implementing corrective actions. Monitoring is possible using a PC or central readout station.



EMDX<sup>3</sup> central readout station



Legrand supervisory software

### 4 UNINTERRUPTIBLE POWER SUPPLY

Correct dimensioning and high efficiency of UPS, both modular and conventional, are essential.

The UPS product offers enable electricity consumption to be reduced. They also improve overall efficiency, achieving levels of 99% in ECO mode and 95% in online mode.



Modular and conventional UPS enclosures

### 5 ENERGY QUALITY

Reactive power compensation systems optimise electrical installation performance.

Legrand capacitor banks help reduce energy consumption and improve the power factor of an installation, while extending its service life.



Reactive energy compensation



Alpes Technologies analysers

## AT YOUR SERVICE THROUGHOUT THE WORLD

**Legrand is on hand to provide meticulous guidance and support from the initial idea right up to implementation and operation.**

At each stage in the design of your data center project, Legrand has a certified network of partners to guide you along the way, who can provide you with technological expertise and the support you need around the clock.



Various support documentation – catalogues, technical brochures, web site...



Software for dimensioning installations and commissioning products.



Certified products – LOVAG – ACAE, IEC 60439-2 certification



**Headquarters**

128, avenue de Lattre de Tassigny  
87045 Limoges Cedex

France

Tel. : + 33 (0) 5 55 06 87 87

Fax : + 33 (0) 5 55 06 88 88

[www.legrand.com](http://www.legrand.com)