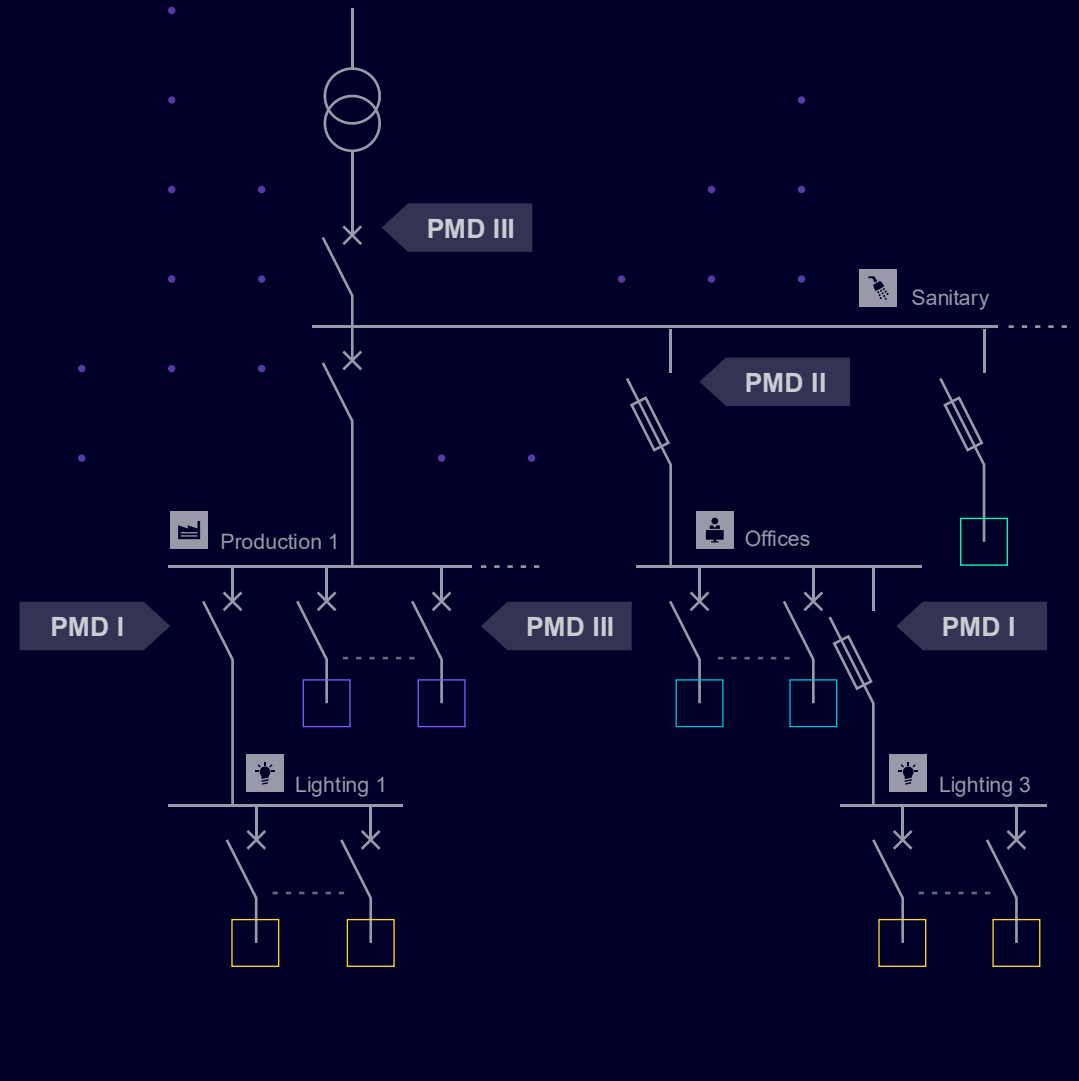
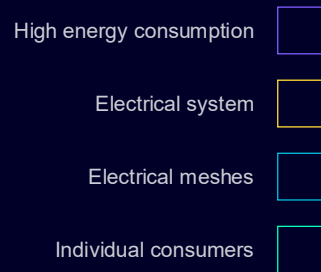


# Maximum transparency via a well-thought-out **energy measurement concept**



# Recommendation: Use of high-quality devices with extensive measurement functions close to the infeed as well as for critical consumers

Depending on the application and requirement, energy measuring equipment must be installed in the system.

The classification of measuring equipment is regulated in IEC 61557-12:

**PMD-I**

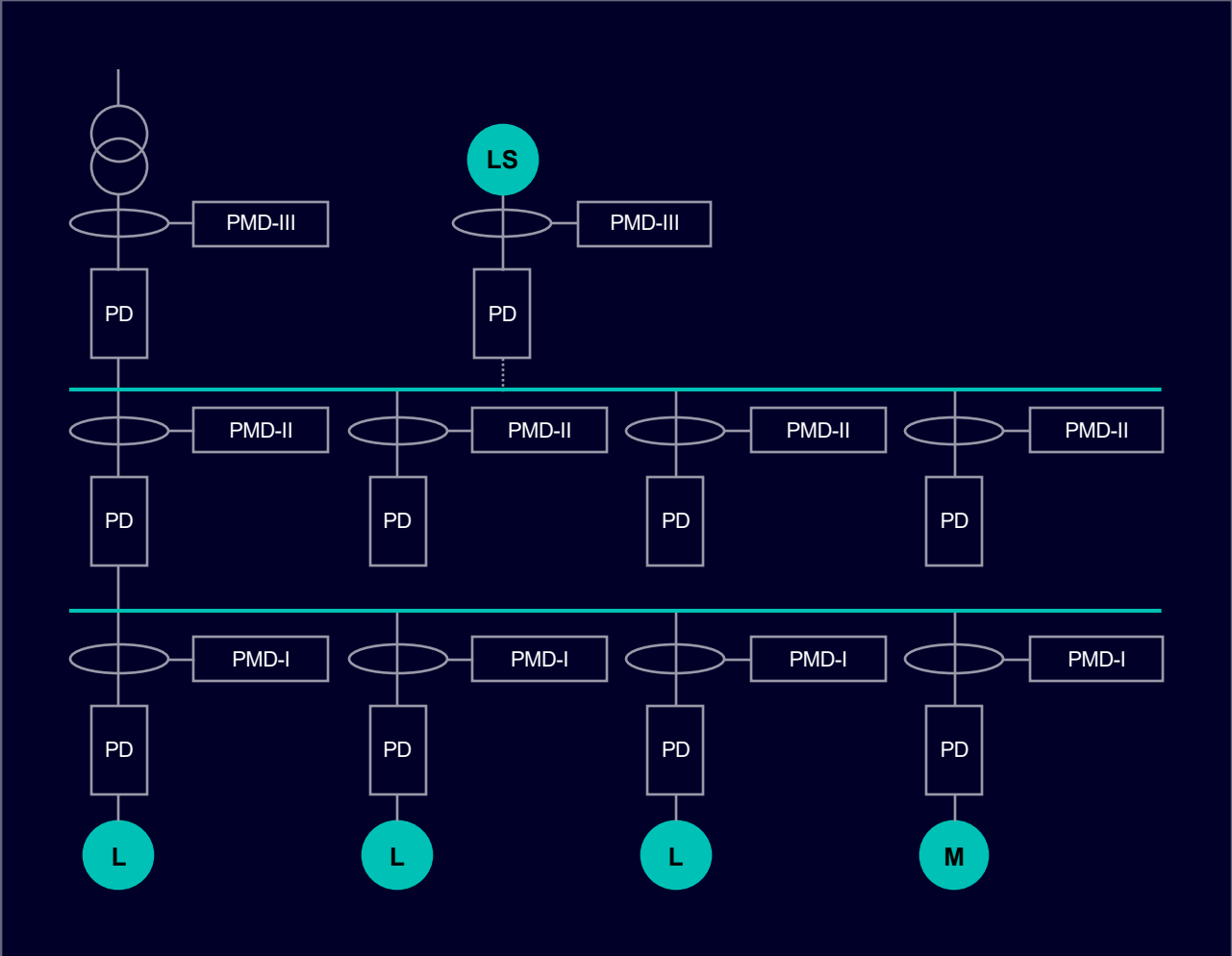
Energy usage measurement for evaluating energy efficiency

**PMD-II**

Basic power monitoring for monitoring and controlling the electrical power distribution

**PMD-III**

Advanced power monitoring and monitoring of the network performance



PMD: Power Metering and Monitoring Device PD: Protection equipment with disconnecting function M: Motor L: Load LS: Local power supply (e.g. PV, wind turbine, generator)

# Example of a consumption measurement with consideration of zones and meshes

The aim is to be able to assign the largest possible share of the total annual energy consumption to the consumer groups.

1

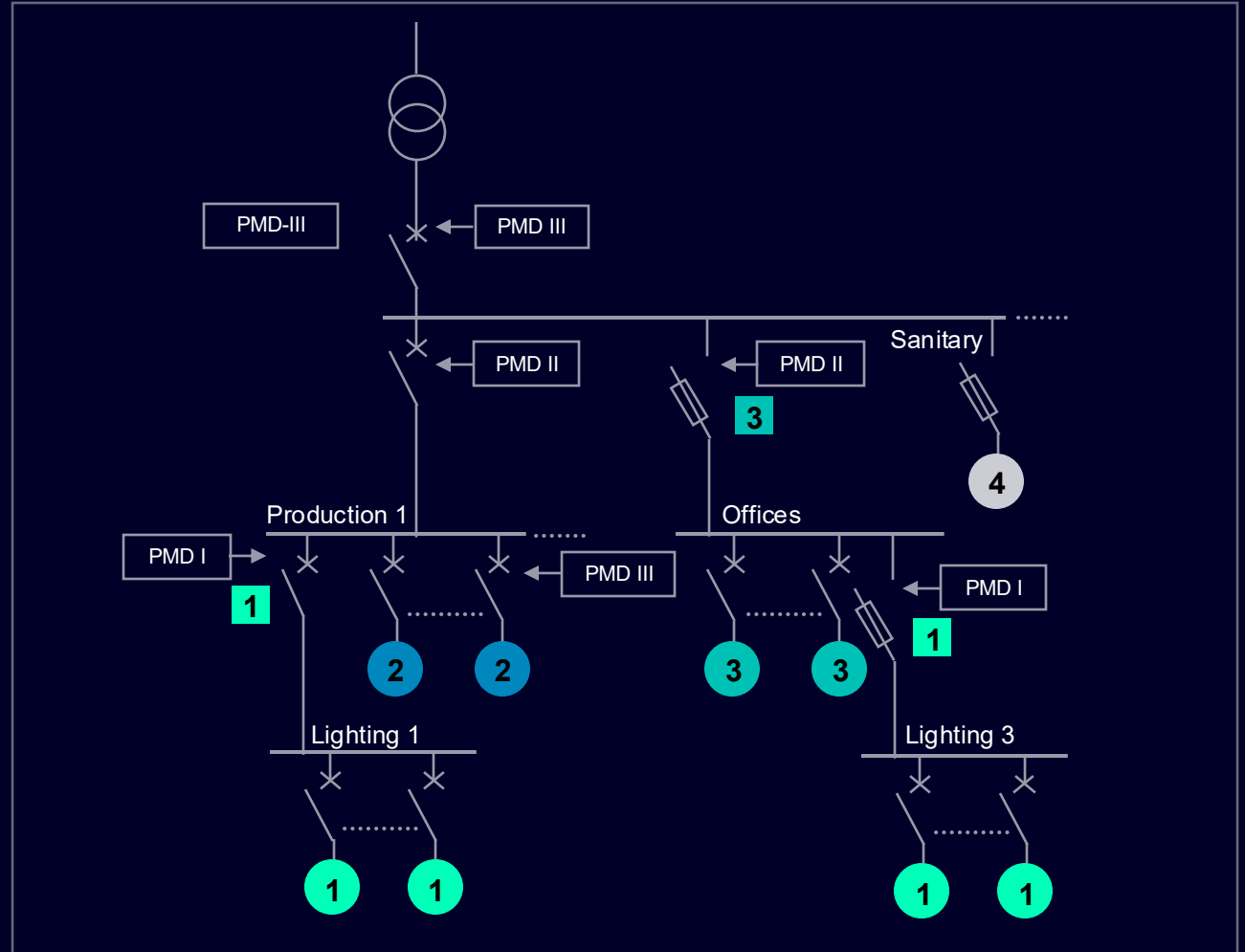
Systems with **high energy consumption**\*, such as large drives 2, cooling systems, heating systems, etc. should be **permanently** monitored, as they have a great impact on the efficiency of the overall system.

2

It is adequate to measure the energy consumption **at the feed point** of the electrical **system** and feed point of the **meshes**. 1 3

3

In the case of forward planning of a measurement concept, individual consumers can also be calculated. 4



\* More than 10% of the annual energy consumption of the overall system