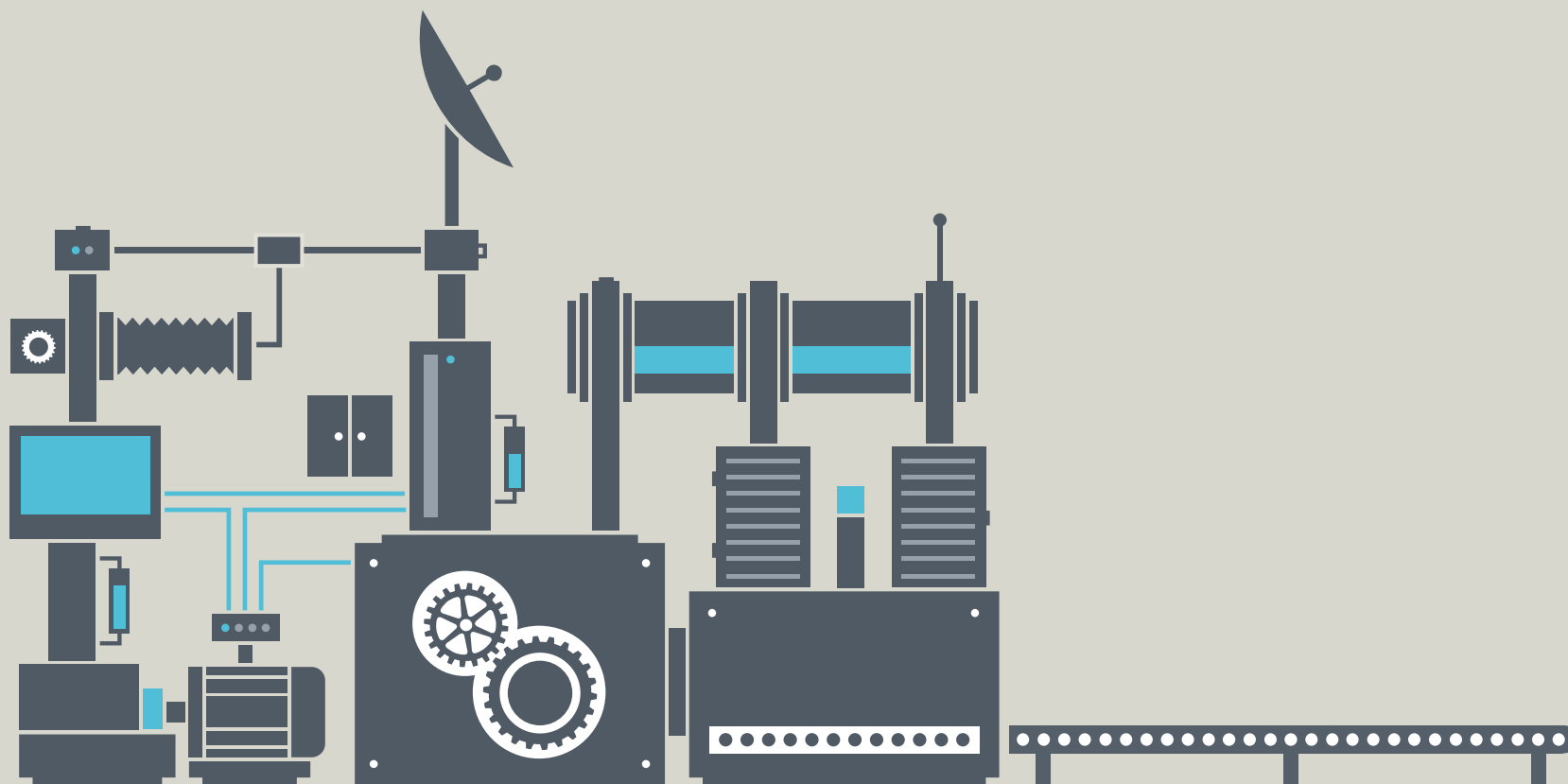
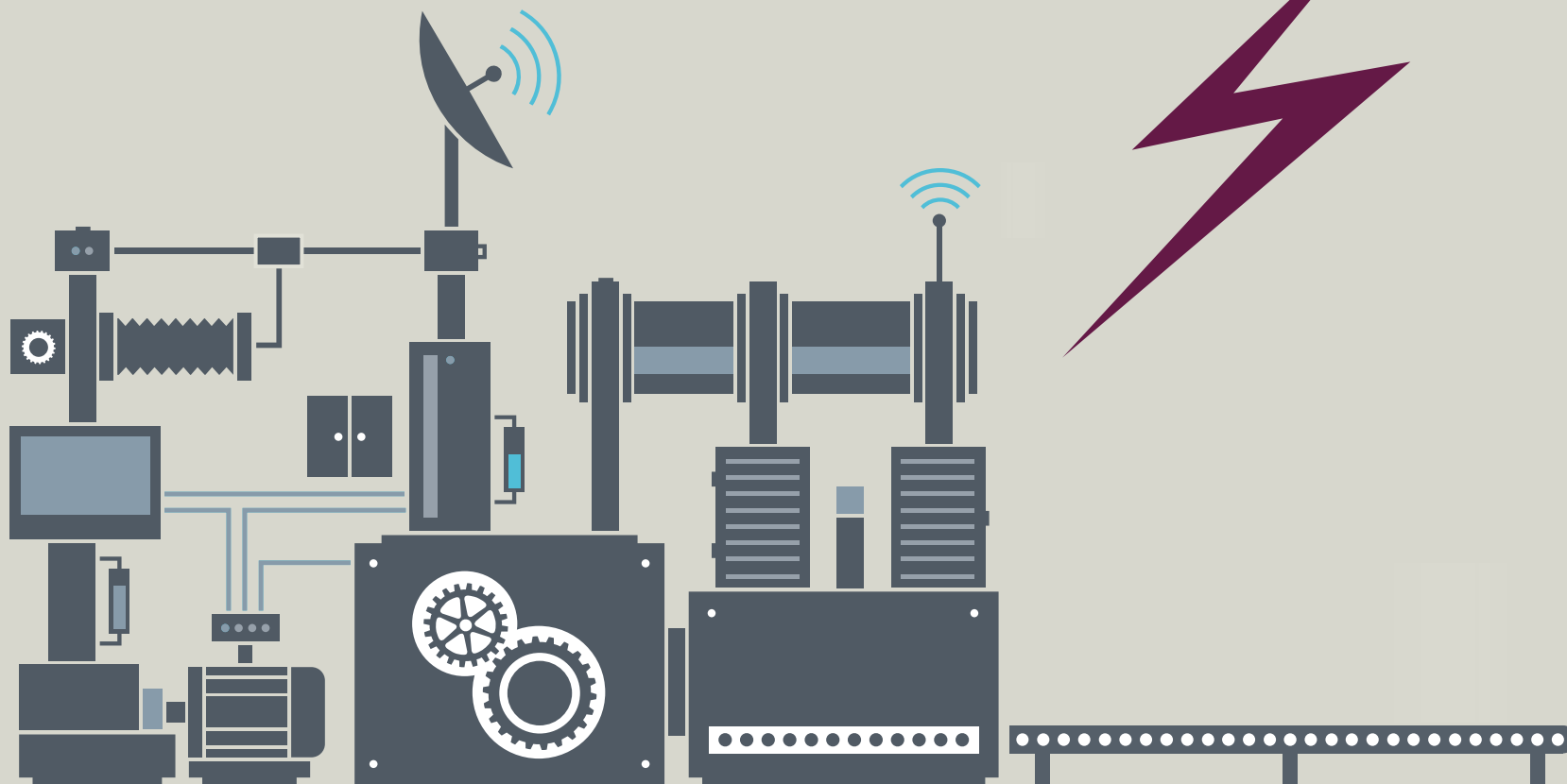


Power Matters Totally Integrated Power

reliable. safe. efficient

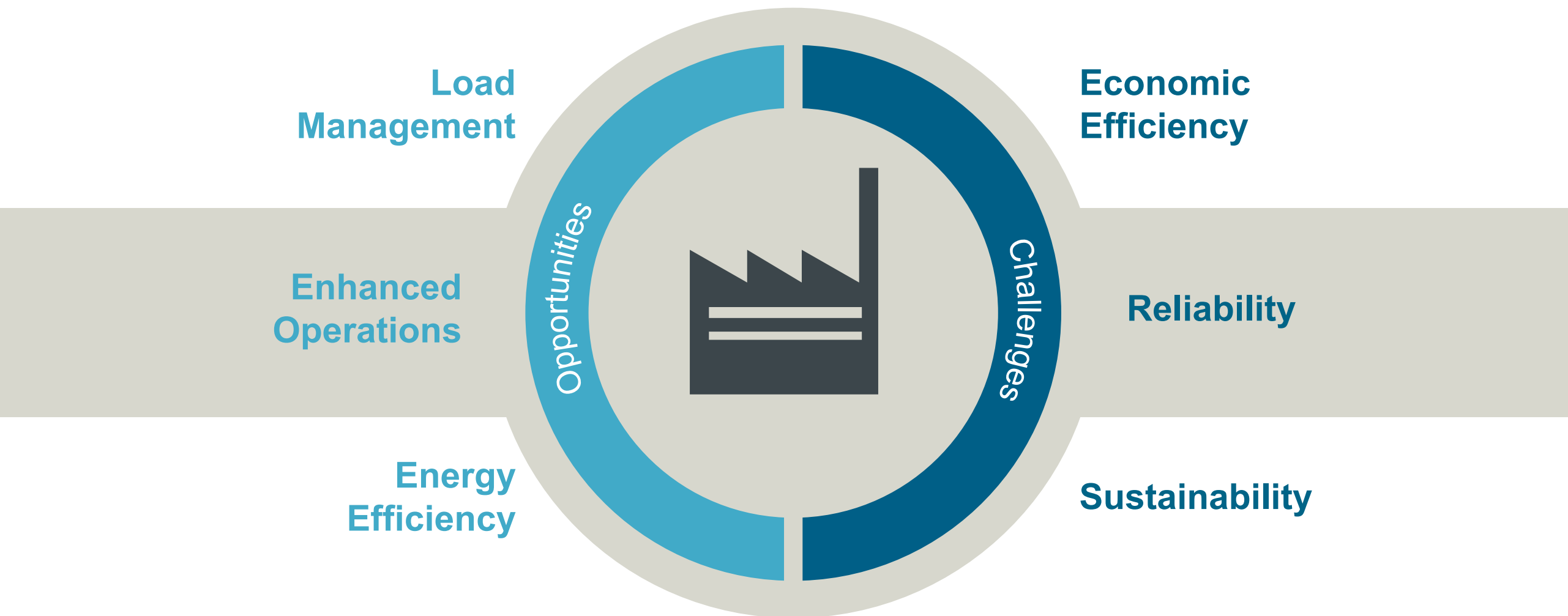
[siemens.com/tip](https://www.siemens.com/tip)





Power matters

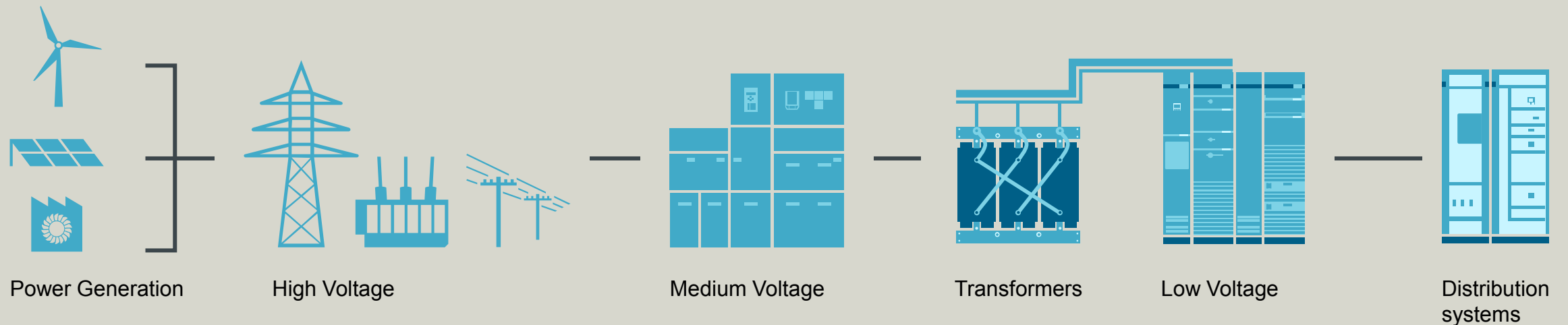
Challenges and opportunities for industrial power supply



Our answer:
Totally Integrated Power – Reliable, safe, efficient

SIEMENS

End-to-end power supply – our strength



Totally Integrated Power (TIP): Optimum interlink to industry- and building automation

SIEMENS

Digitalization



Grid control



Grid applications



Big data

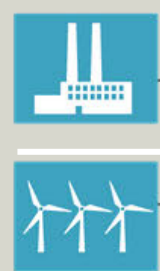


Planning and simulation

TIA

TBS

Automation Electrification



Power grid automation



Open communication standards



Power automation for industries and buildings

Open communication standards



Consulting, planning



Engineering, network design



Project management



Ordering, delivery



Installation, commissioning



Operation and after-sales service



Services, modernization

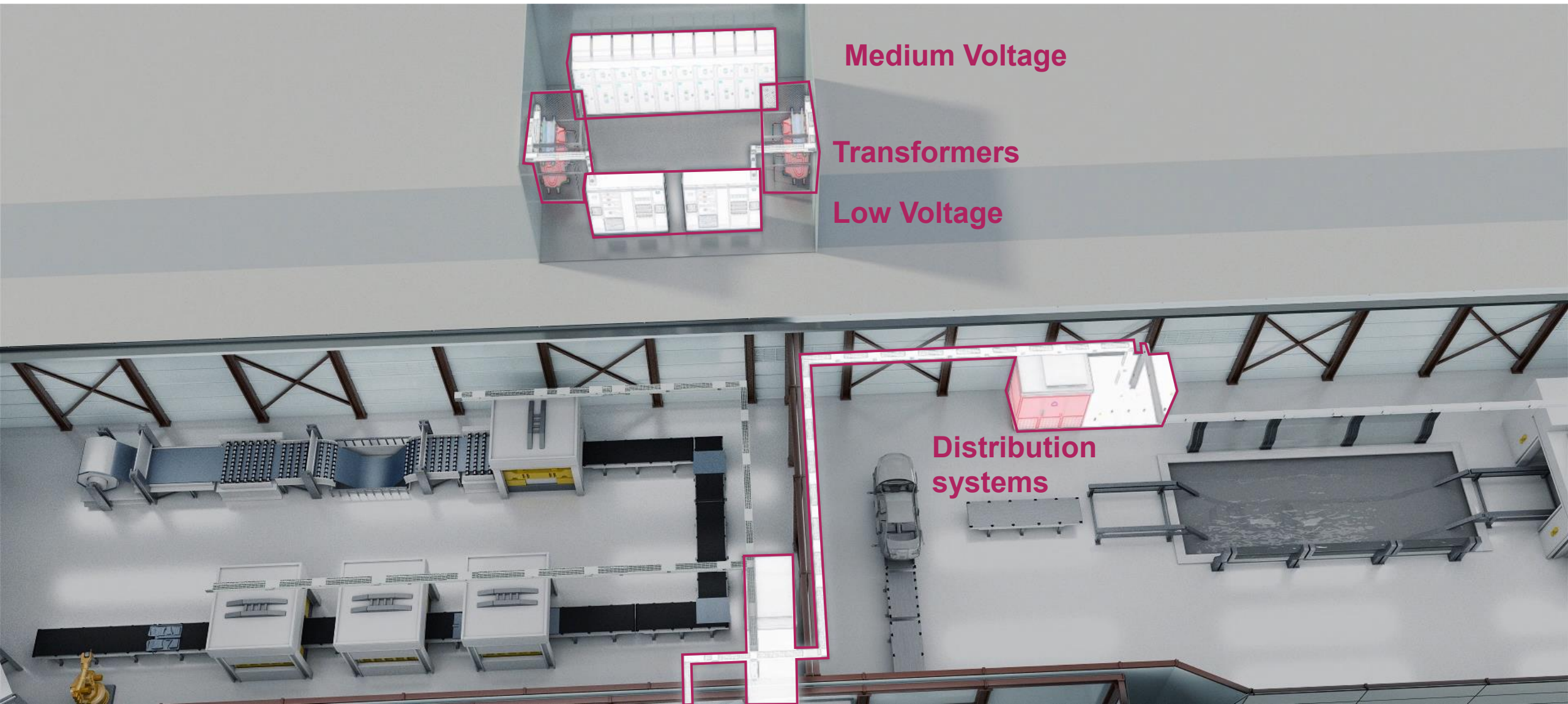
Totally Integrated Power (TIP): For industry, buildings, and facilities

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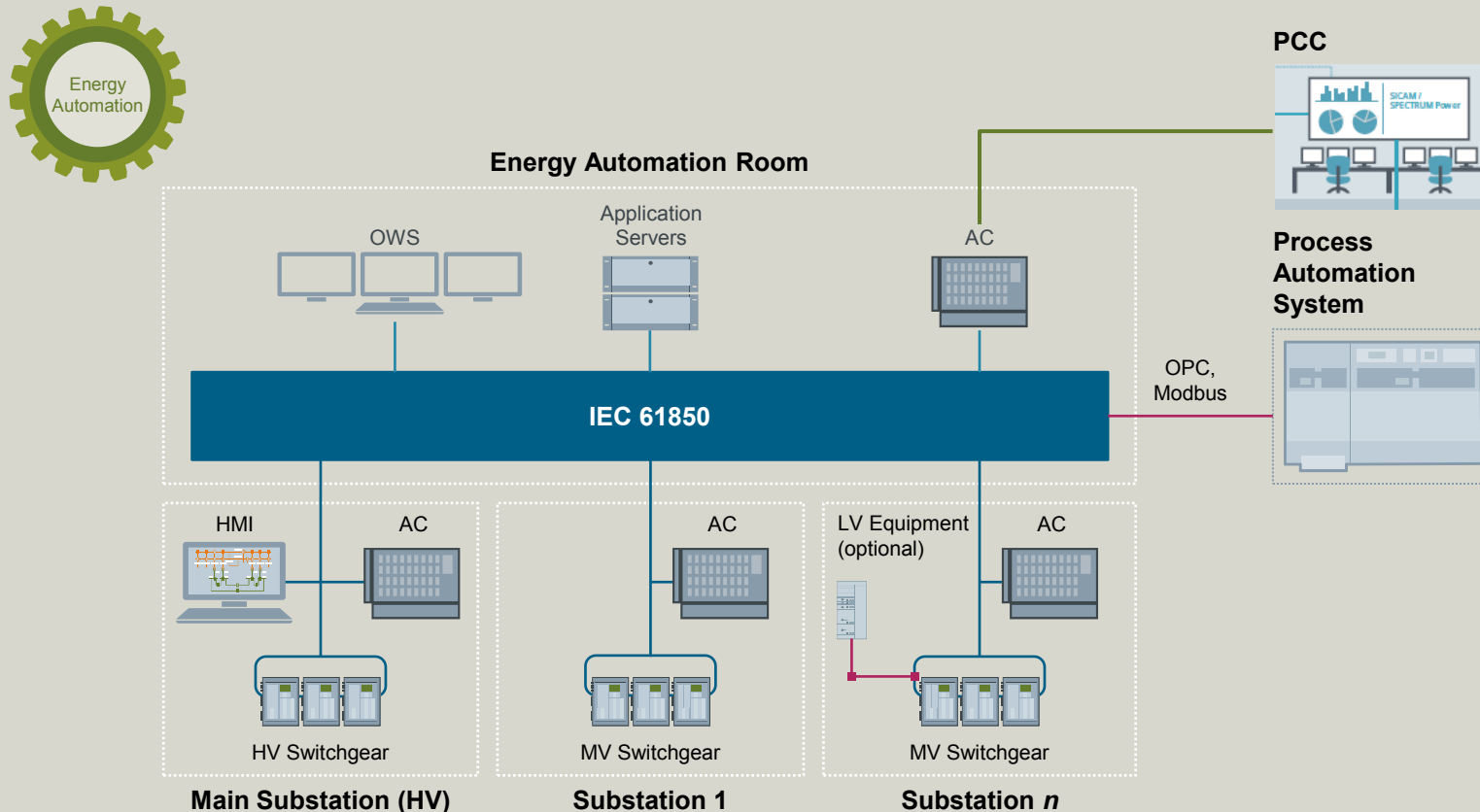
Totally Integrated Power (TIP): Flexibility, modularity, outstanding integration capability

SIEMENS



Totally Integrated Power and Totally Integrated Automation: Perfectly interlinked

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OVS: Operator Work Station; **AC:** Automation Controller; **HMI:** Human Machine Interface; **OPC:** OLE for Process Control

Benefits

- In line with IEC 61850 Standard
- Open interfaces for integration of different applications and vendor systems
- In line with regional standards
- Prevent power outages
- Reduction in down time
- Saving in energy costs as a result of automated consumption reports

Example: Efficiency improvement – Step by step

SIEMENS

Measuring

Collect energy data

Machine/Field Level

e.g. SICAM, PAC, 3VA, SIPROTEC

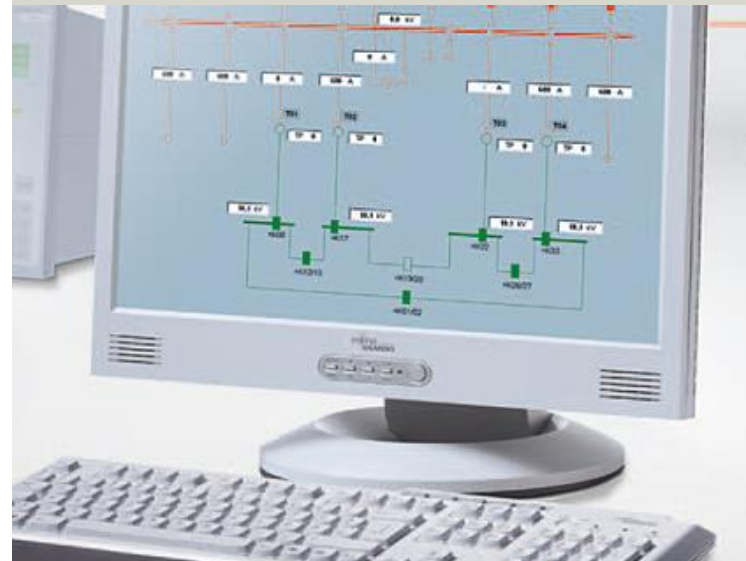


Monitoring

Display and review energy data

Control Center Level

e.g. SICAM PQS, SENTRON powermanager, SIMATIC Energy Suite



Managing

Manage energy consumption

Management Level

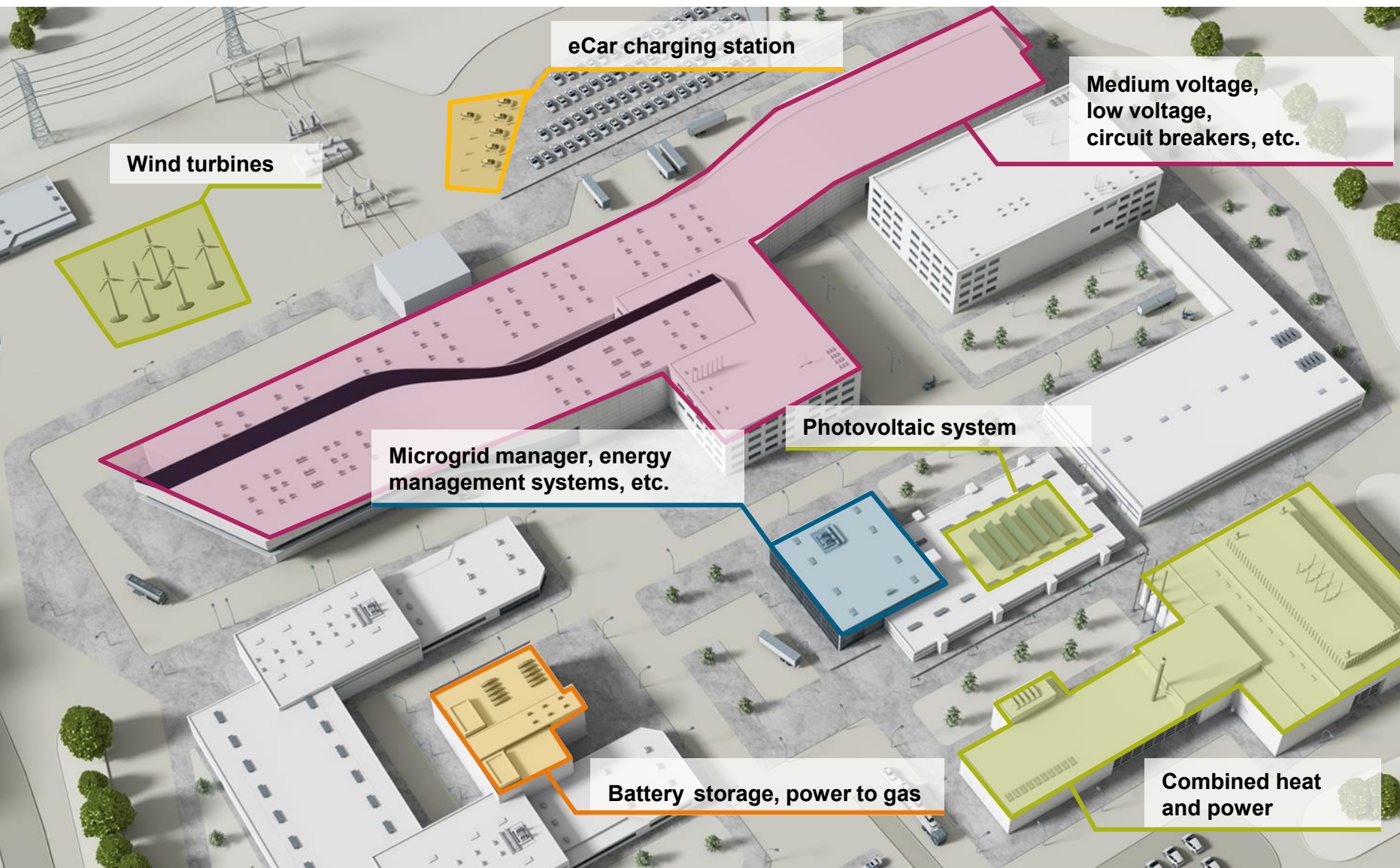
e.g. SIMATIC Energy Manager Pro



From data acquisition to energy management

Enhanced business opportunities: Example industrial campus

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Distributed energy systems (DES)



Distributed generation



Storage solutions



Electrical equipment and power electronics



Energy automation and management, software

Reference projects demonstrate the broad range of different prosumers

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Battery storage system safeguards power supply at VEO



- Black start capability of power plant's gas turbine at any time and without feeding in power from the public grid
- This island network keeps the critical production processes at the steel mill operating

Data analytics decision-making support for GESTAMP



- Real-time monitoring via web portal
- Early detection of machinery failure and inefficient processes
- Customized reports
- Worldwide implementation possible

Integrated solution for safe power distribution for the City Cube - Berlin



- Electrical planning support for entire power distribution system
- Complete delivery of electrification equipment from medium voltage infeed to low voltage distribution
- Installation of power supply system executed by regional electrician and two franchise partners

Intelligent microgrid for Savona University



- Highly energy-efficient conventional and renewable sources are controlled in real-time
- The campus can generate enough electricity and heat to satisfy its needs autonomously

Totally Integrated Power – Key take aways

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Safe and intelligent power supply

Flexibility

Quick and easy
modification
or expansion
of the systems



Consistency

The basis
for automation
and digitalization
in challenging
environments



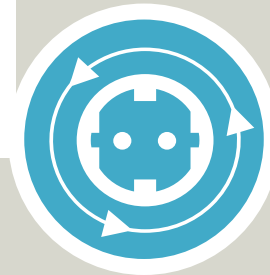
Safety

Portfolio compliant
with the highest
safety standards



Reliability

Customized solution
packages ensuring
24/7 power supply



Efficiency

Effective energy
management
to optimize energy
consumption



Get ready for the digital future

Profit from TIP