



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



Smart solutions.  
Strong relationships.

**CG Automation BU** is dedicated to the design, manufacture and marketing of digital protection, control, metering, communications equipment and systems for generation, transmission and distribution electric utilities, industries and EPC contractors worldwide; and automation systems for transit and water utilities.

- CG Automation headquarters located in Bilbao, Spain, host the center of excellence for the development of **CG's smart grid solutions commercialized under ZIV® brand.**
- CG Automation business unit offers to the market a complete **Substation Automation System** portfolio (ZIV SAS) and **Distribution Automation Solutions** (ZIV DAS)
- A portfolio based on **in-house developed technologies** and a unique mix of knowledge and experience in protection & control, communications and metering technologies.





## One of the world`s leading engineering corporations

CG is a multinational, multi-product, multi-solutions and multi-services company.

## Provides end-to-end solution

helping its customers use electrical power efficiently and increase industrial productivity with sustainability

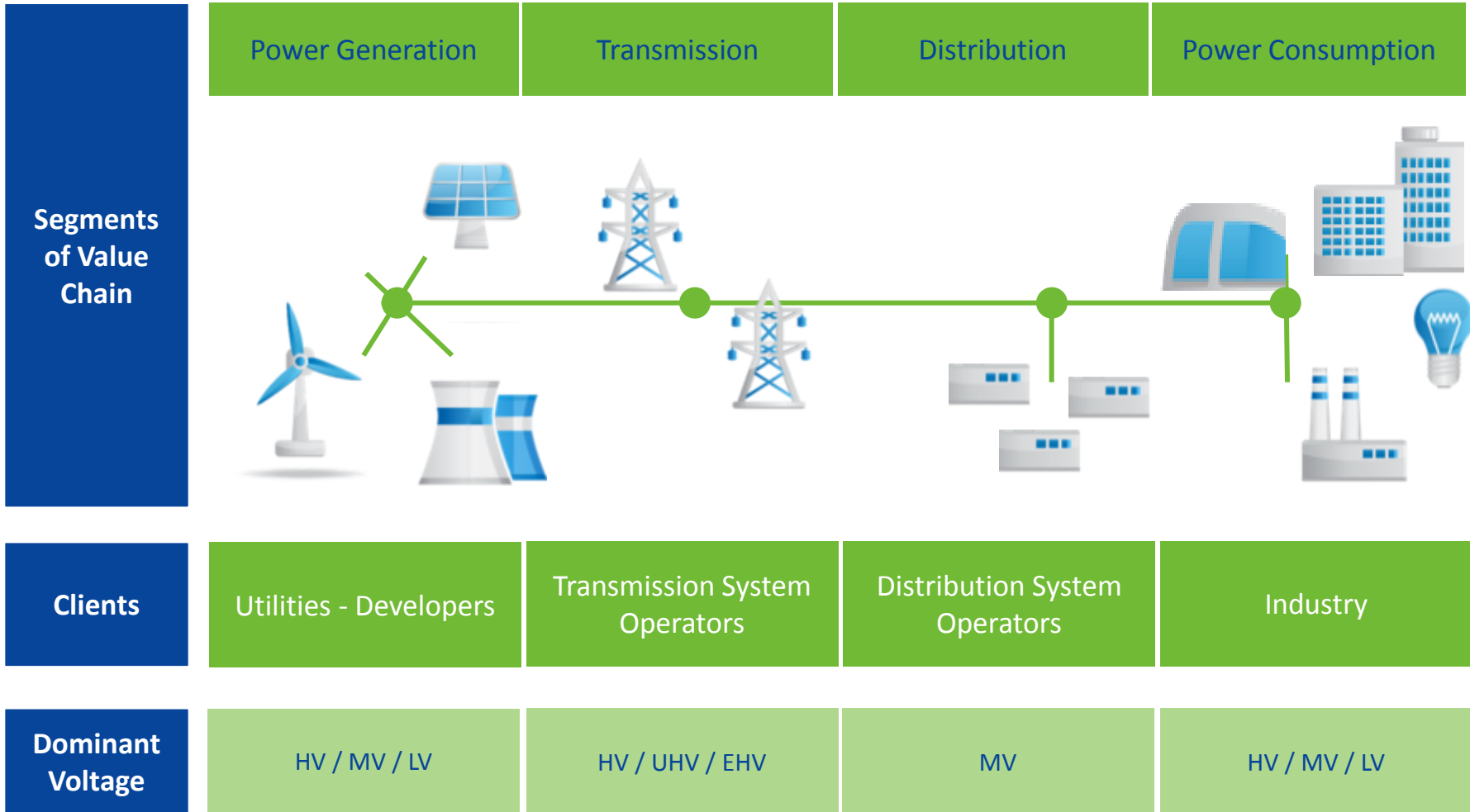
## Unique & diverse portfolio. Turnkey solutions

- Transformers
- Switchgear
- Circuit breakers
- Protection SAS/DAS
- Control Utilities/Railways.
- Meters/AMI/AMR.
- Project engineering,
- HT & LT motor drives
- Lighting, Fans, Pumps
- Consumer appliances.

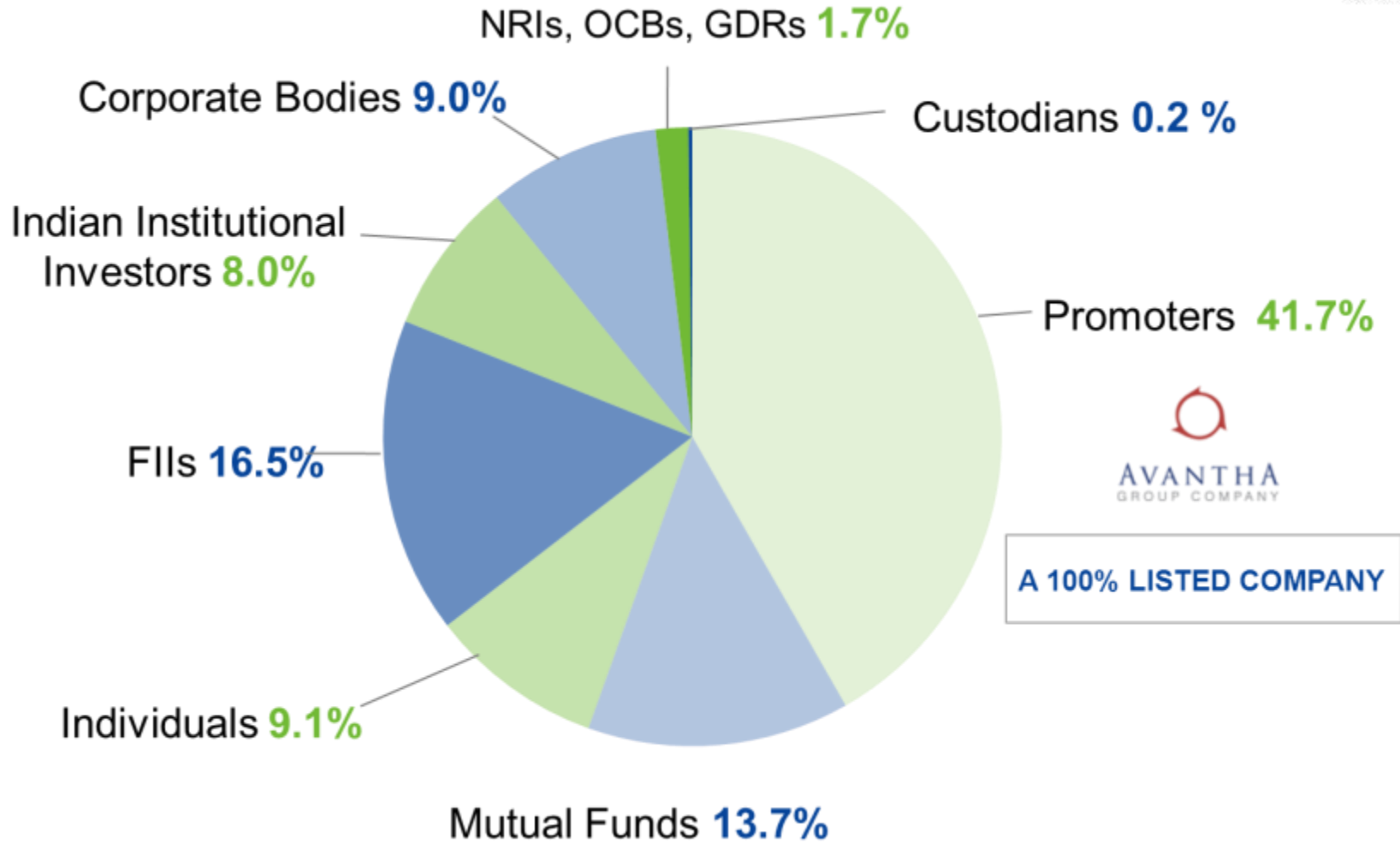
# From generator to light Bulb



Smart solutions.  
Strong relationships.



# SHAREHOLDING





The US \$ 4 bn Avantha Group is one of India's leading business conglomerates. With an impressive global footprint, the Group operates in more than **90** countries with **20,000** employees of **20** nationalities.



**Power T&D Equipment & Services**  
Crompton Greaves Limited



**Pulp & Paper**  
Ballarpur Industries Limited – BILT  
- BILT Graphic Paper Products Limited ( BGPPL)  
- Sabah Forest Industries - Bilt Tree Tech Limited



**Food Processing**  
The Global Green Company Limited  
- Intergarden N. V. - Puszta Konzerv Kft



**Chemicals**  
Solaris ChemTech Industries Limited

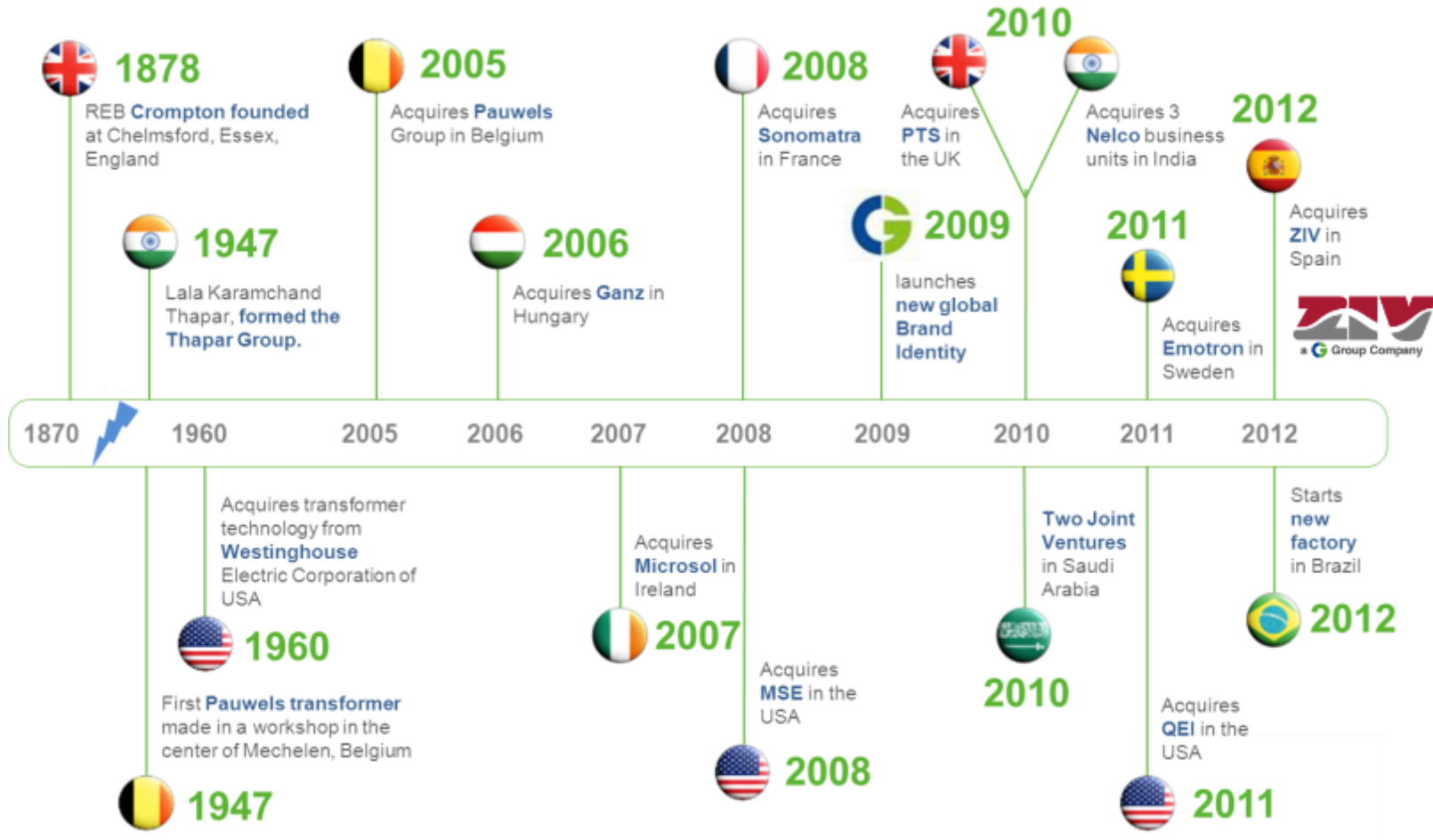


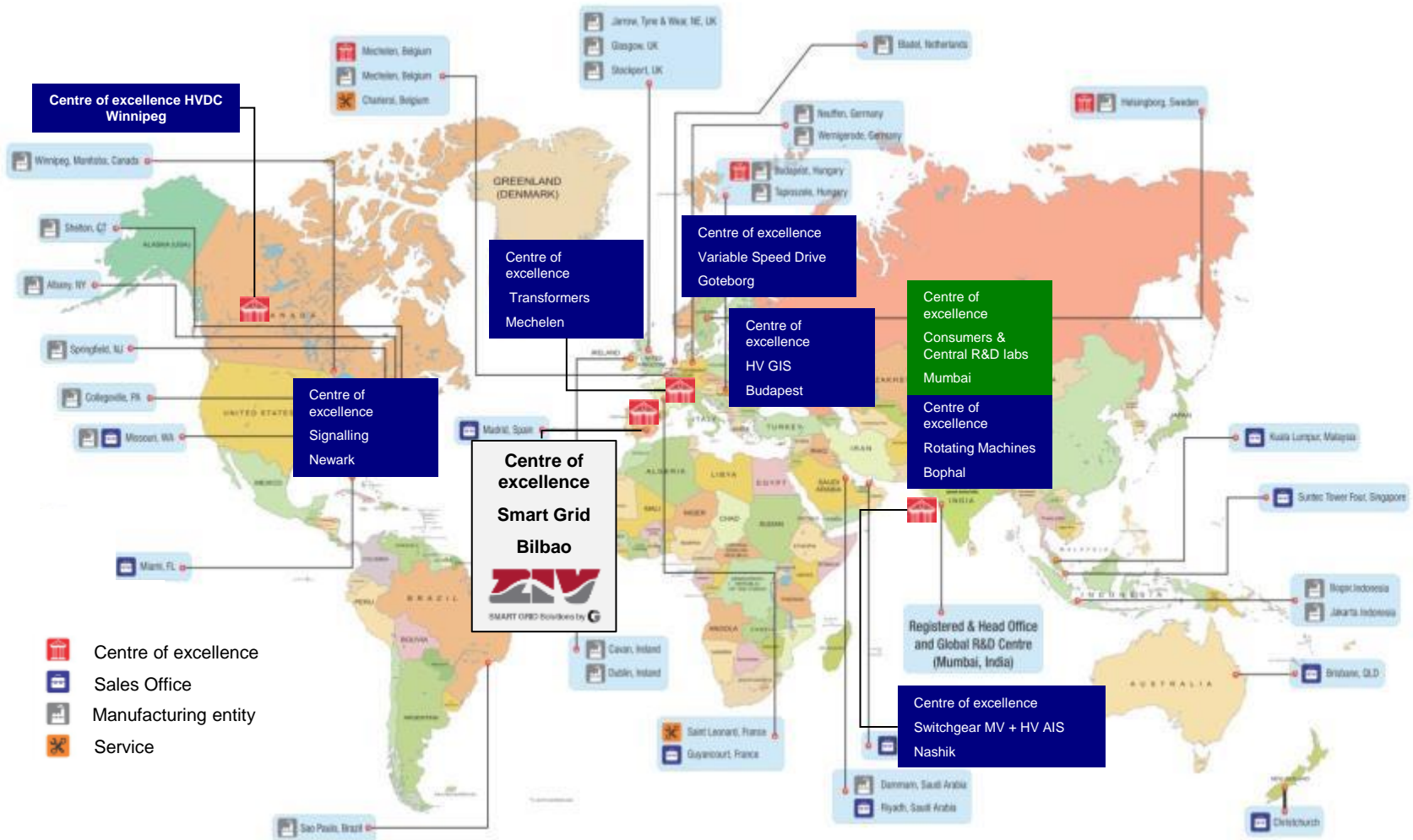
**Energy & Infrastructure**  
Avantha Power & Infrastructure Limited  
Biltech Building Elements Limited



**IT & ITES**  
Salient Business Solutions Limited  
Avantha Technologies Limited  
Pyramid Healthcare Solutions









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



Smart solutions.  
Strong relationships.

**CG AUTOMATION BU**  
ZIV SUBSTATION AUTOMATION & DISTRIBUTION  
AUTOMATION SOLUTION PORTFOLIO



**AVANTHA**  
GROUP COMPANY



# 4 BUSINESS UNITS



Smart solutions.  
Strong relationships.



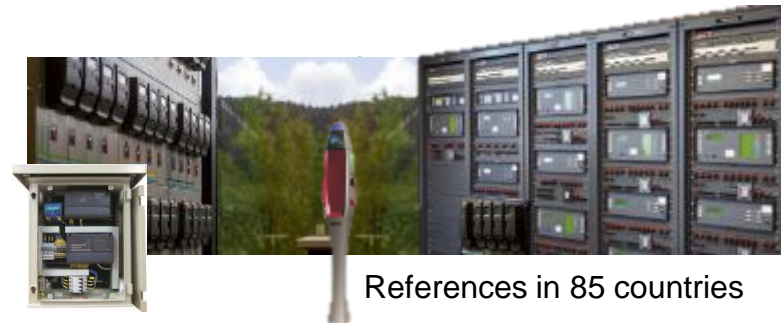
- SAS SUBSTATION AUTOMATION SYSTEMS
- DAS DISTRIBUTION AUTOMATION SOLUTIONS
- T TRANSIT

**CG Automation BU is the Crompton Greaves' business unit specialized in solutions to make the smart grid real**



CG Automation BU is dedicated to the design, manufacture and marketing of digital protection, control, metering and communications equipment and systems

For generation, transmission and distribution electric utilities, industries and EPC contractors worldwide; as well as automation systems for transit and water utilities.

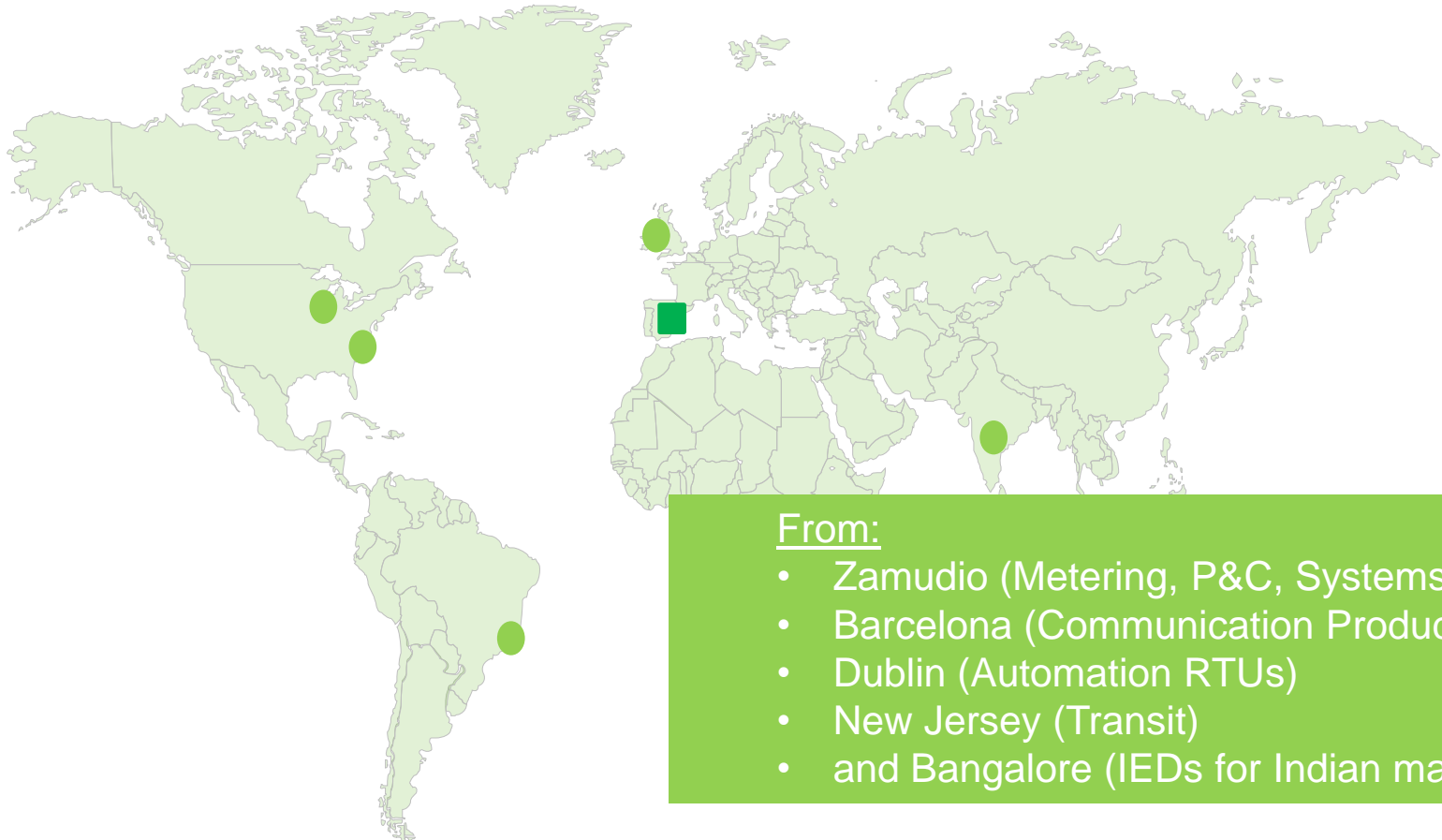


References in 85 countries

Organized in 3 Product Lines:

- SAS
- DAS
- TRANSIT





From:

- Zamudio (Metering, P&C, Systems)
- Barcelona (Communication Products)
- Dublin (Automation RTUs)
- New Jersey (Transit)
- and Bangalore (IEDs for Indian market)

## References in 85 countries



### • EUROPE:

(SP) Iberdrola, Grupo Endesa, Grupo Gas Natural Fenosa, Red Eléctrica de España, HC Energía , EDP, E.ON España, Gamesa, Repsol, Aceralia, Ehn, Metro De Madrid; (Czech Republic) Jme-Eon; (Fr) Rte, Edf; (Italy) Enel; (Nw) Statnett, Lyse Energi As (Poland) Pse; (Portugal) Ren, Edp ; (Romania) Hidroelectrica; (Sweden) Vattenfall; Svenska KraftnÅ ; (UK) MANX Electricity Authority; National Power Grid, Northern Power Grid, etc..

### • AFRICA:

(Algeria) SONEGAS ; (Angola) GAMEK ; ENE ; (Burkina Faso) SONABEL ; (Cameroon) AES-SONEL ; (Egypt) EETC; (Ethiopia) EEPKO (Mali) EDM; (Tanzania) TANESCO; (Morocco) ONE; (Kenya) KPLC  
 • AMERICAS: (USA) Alabama Power Co, Hydro Mississauga, Pennsylvania Electric Co, Houston Electric, Entergy, Maine Electric Co ; (BRAZIL) Ampla, Coelba, Cosern, Celpe, Coelce, Furnas, Copel; (MEX) CFE , Luz y Fuerza; (ARG) Edenor, Edesur, Edelap, Ape, Dock Sud; (BOL) Electropaz, Cre; (CHILE) Grupo Enersis –Chilectra, Chilquinta; (PAN) Edemet; (PARAGUAY) Ande; (VEN) Cadafe, Enelven.

### • AUSTRALIA

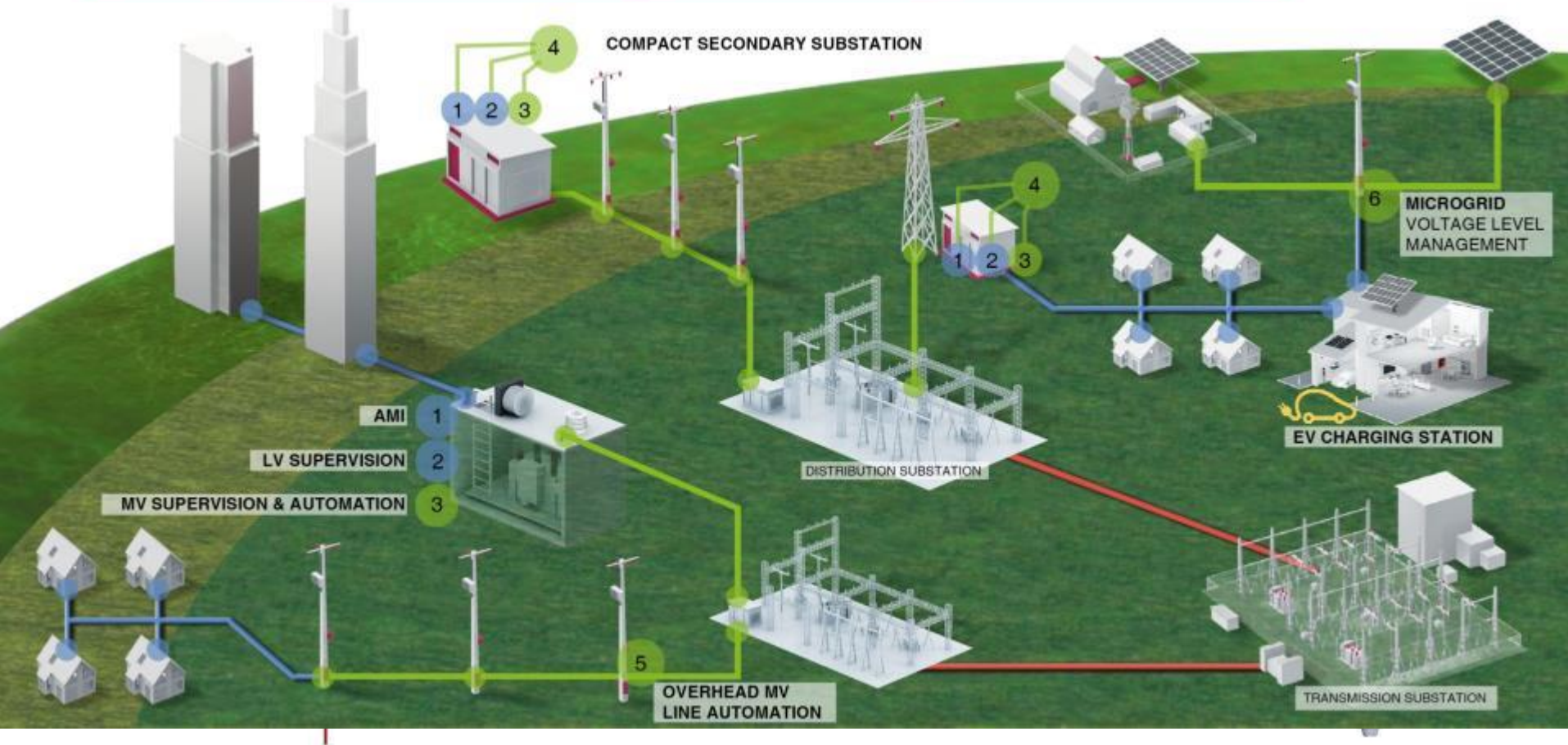
(Australia) Western Power, TransGrid, SPI PowerNet , Powerlink, Hydro Tasmania, ETSA, Ergon Energy; (New Zealand) Transpower; etc..

• ASIA: (Indonesia) PLN; (Malaysia) SESCO; (Philippines) TRANSCO ; (Thailand) EGAT; (Vietnam) EVN; (India): Avanya Power, PGCIL, MSETCL, UPPCTL, JSEB, Power Grid India, etc...

**Distribution  
Automation Solutions**

**Based on ZIV  
innovative products**

**Manufactured in  
Europe**





**Complete IEC 61850  
Substation  
Automation Systems**

- AUTOMATION & SUPERVISION SOLUTIONS FOR RAILWAY INFRASTRUCTURE

## CG focuses on the traction power segment in the transit market

Traction power control centers (SCADA Master Station)

Traction power substation automation equipment and systems

- Traction Power Substation (TPSS)
- Tie Breaker Substation (TBS)
- Emergency Trip System (ETS)
- Fault Detection (DCTRace)

### → Markets

Passenger Railroad  
Commuter Railroad  
Subway  
Light Rail





Smart solutions.  
Strong relationships.



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



Smart solutions.  
Strong relationships.

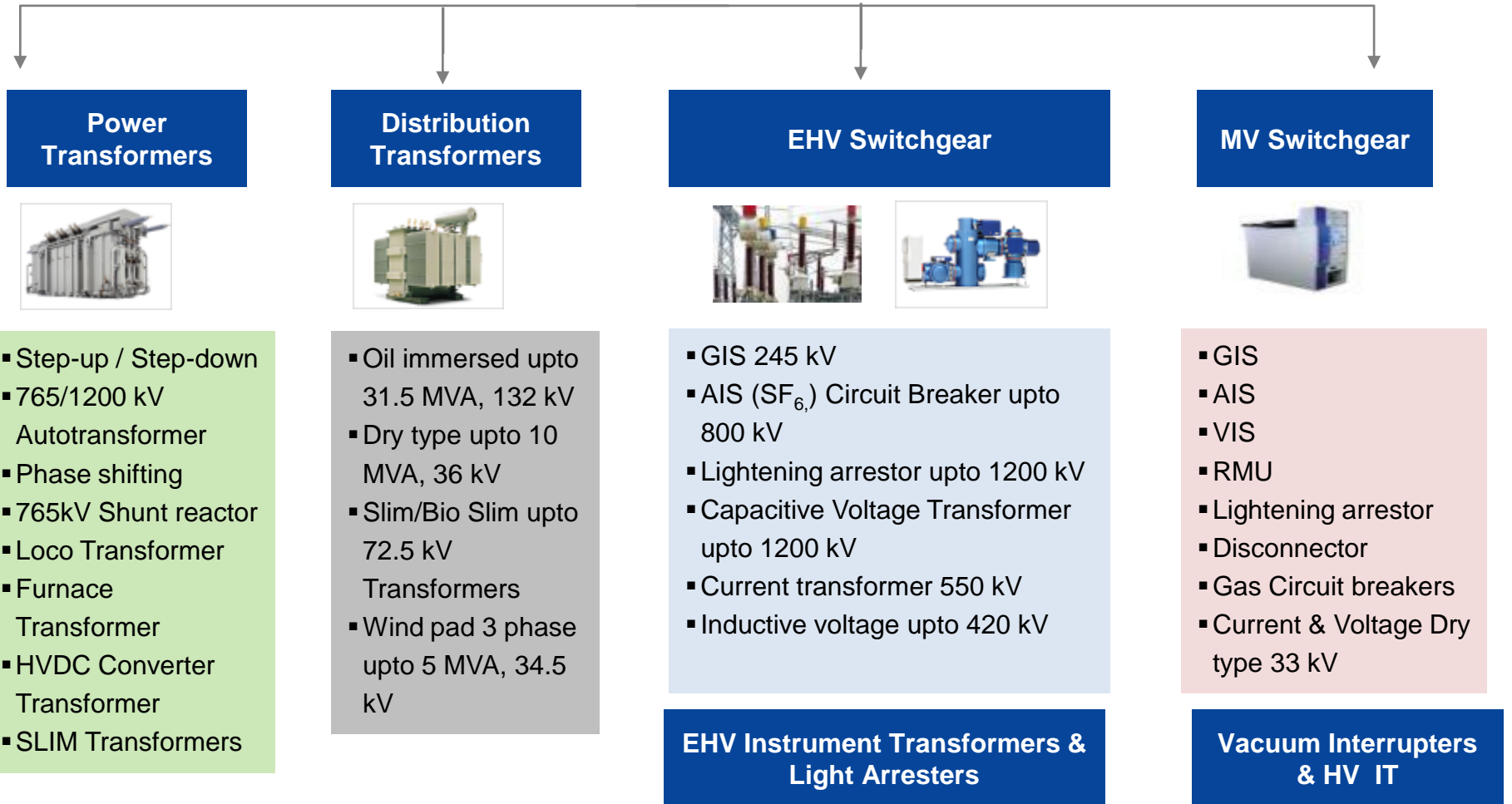
**CG POWER, INDUSTRIAL AND CONSUMER BUS**



**AVANTHA**  
GROUP COMPANY



- CG (Ganz) built the world's first transformer and recently has built the highest voltage AC transformer (1200 kV)



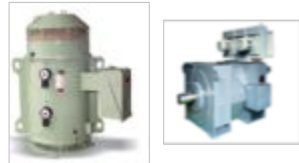
- CG is India's number one supplier for AC motors

## LVRM



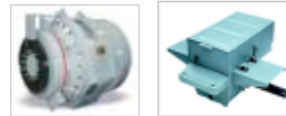
- Apex IE2/IE3 Series
- Explosion Proof Motors
- NEMA Series - Al/ Cast Iron
- FHP Motors
- Special motors for Appliances

## LRM



- HT Motors
- DC Motors
- HT Generator
- Alternators

## Railway



- Traction Motors
- Traction Alternators
- BLDC Motors
- Power and Auxiliary Convertors
- Relays
- Point Machine
- Data Logger
- Traction Electronics

## Drives & Automation



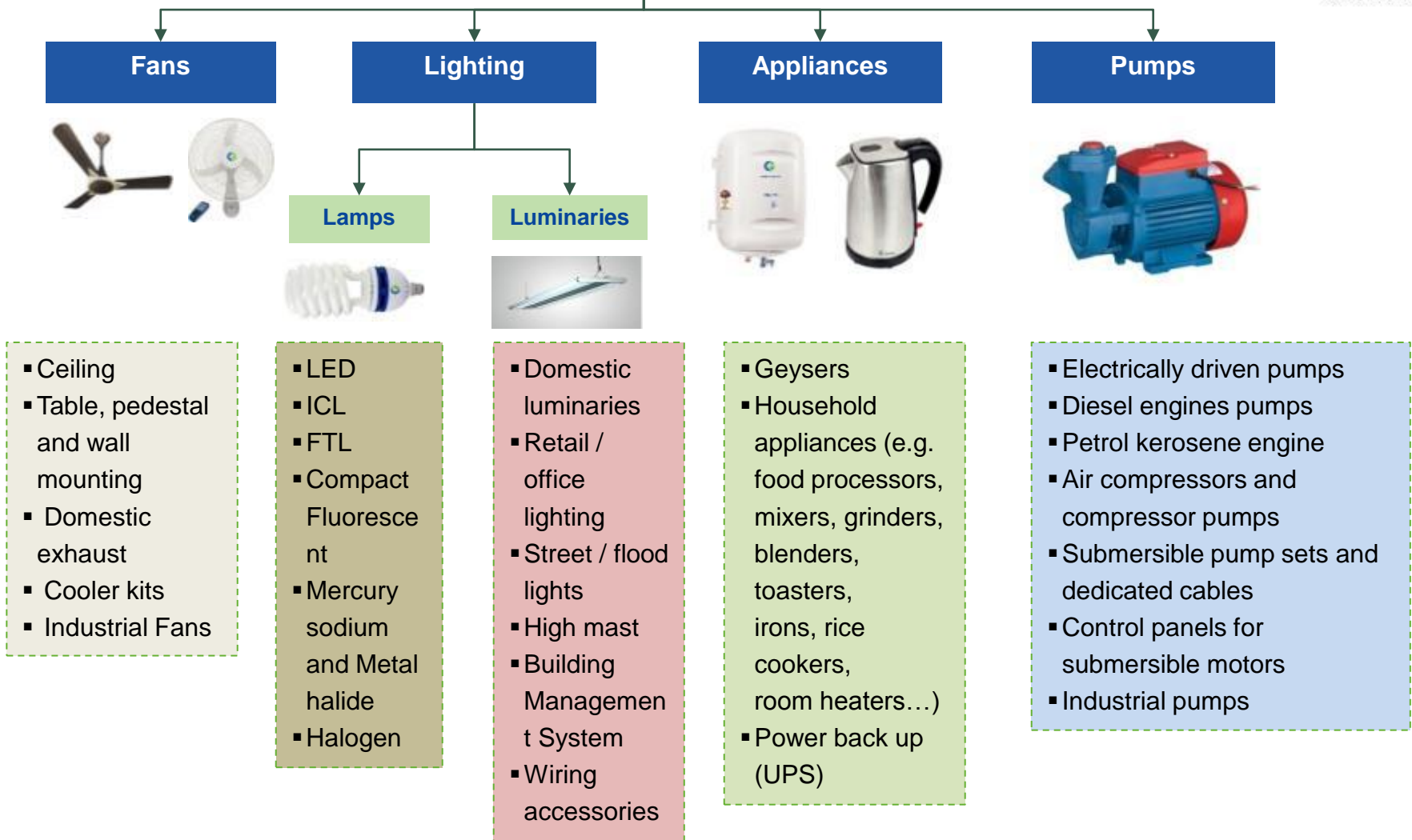
- Variable Speed Drives
- Soft Starters
- Shaft Power Monitors
- SCADA Applications
- Control Equipments

## Stamping



- Stampings & laminations

- CG is India's number one brand for Fans and Domestic Pumps



**MERCI**  
**THANK YOU**  
**धन्यवाद**  
**GRACIAS**  
**ESKERRIK ASKO**  
**ವಂದನೆ**  
**GRACIES**  
**GO RAIBH MAITH AGAT**