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ISGF
India Smart Grid Forum

India SMART UTILITY Week 2024

Supporting Ministries

# Session 3: Global Lessons on Smart Metering

# Hybrid communication


***Presented By***

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# INTRODUCTION – What is the G3-Alliance



G3-Alliance

*Enabling the smartest grid...together*

- Member organization
- Not-for-profit
- Standardise & promote smart grid communication protocol
- Operate Certification program

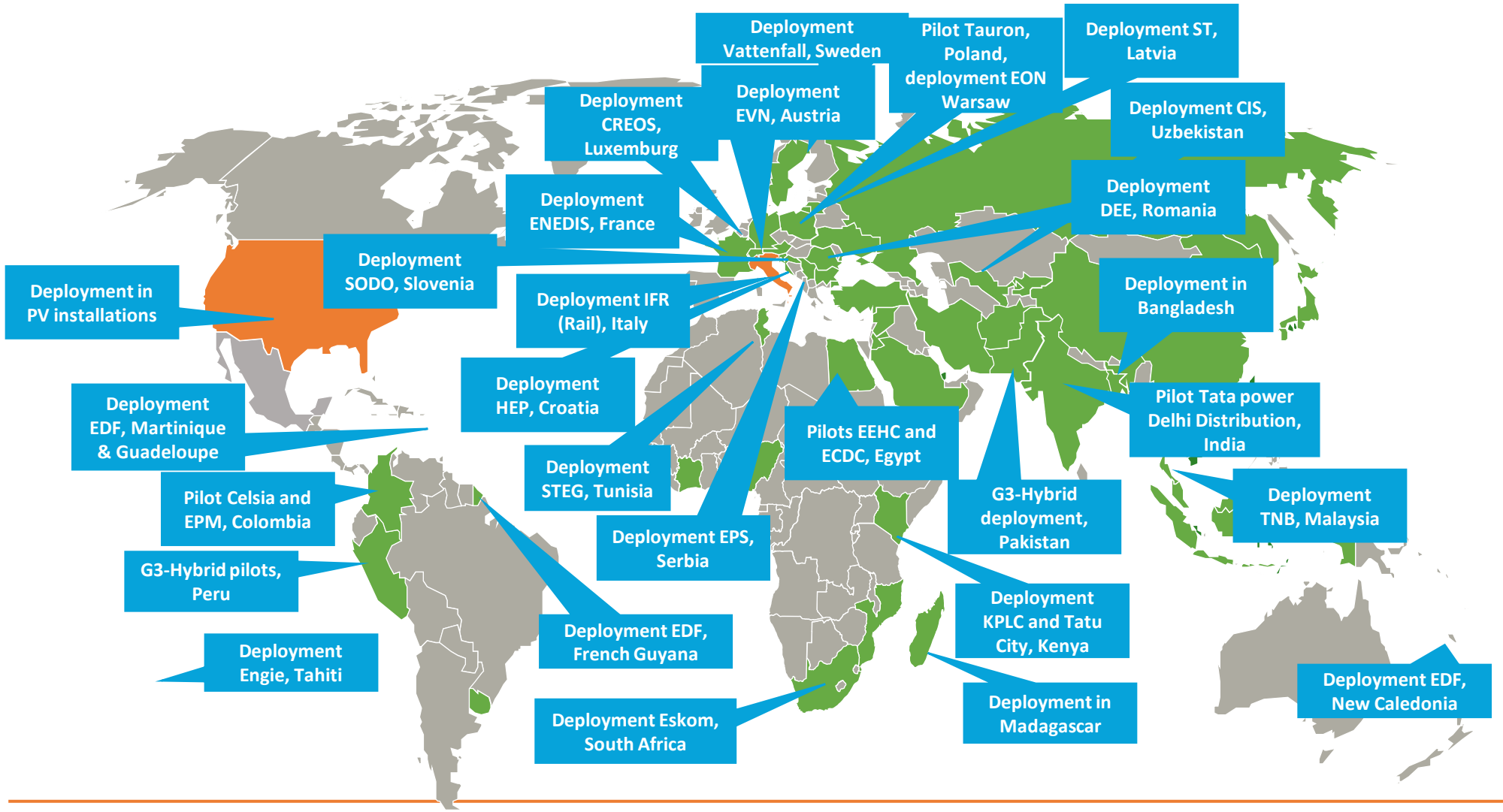
# INTRODUCTION – What is the G3-Alliance

G3-Alliance
Enabling the smartest grid...together

Supported by international group of 100 utilities and industrial players

# G3 is a mature Technology

## Over 80 million G3-PLC products in more than 30 countries



# G3 Technology

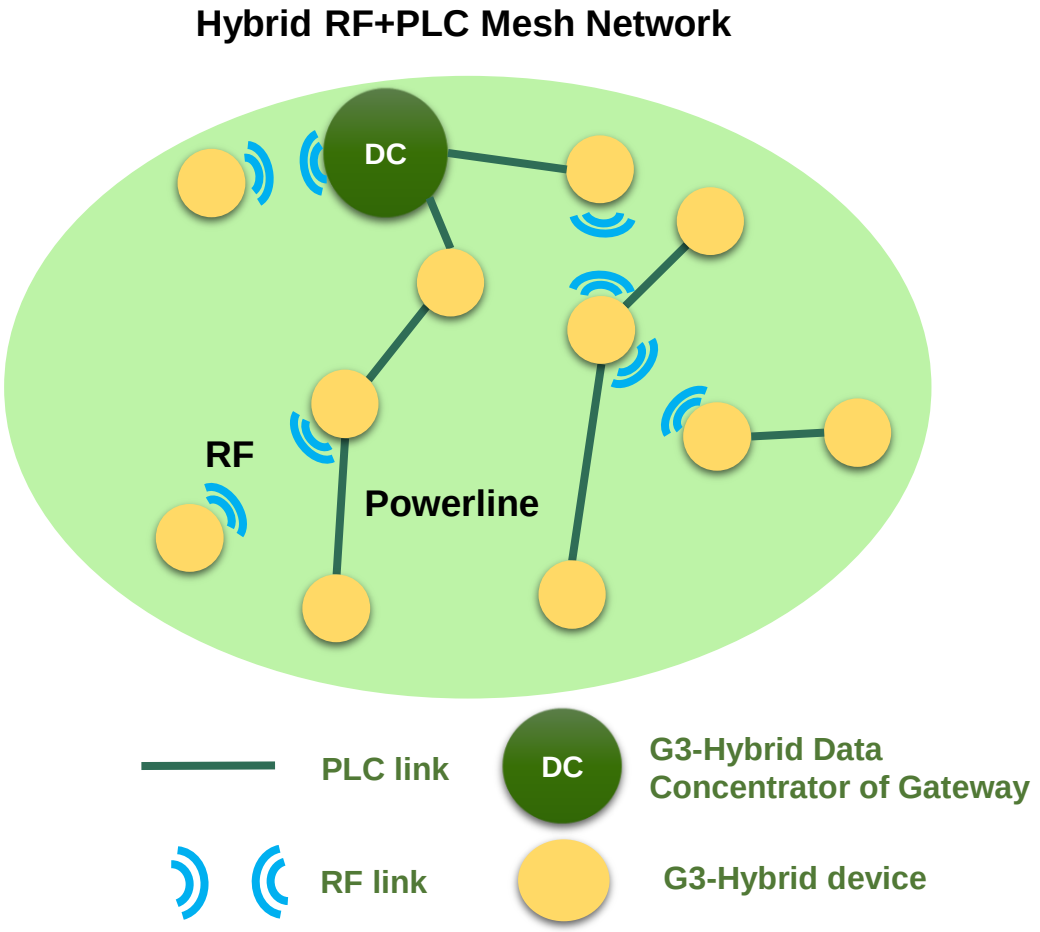
Each communications technology on itself has its limitations

That is why we developed

**G3-Hybrid**

# RF mesh and power line communication in one single solution

- Each node can use PLC as well as RF for communication
- For each link, the ‘best’ channel is selected - at network startup and dynamically adjusted
- Maximises coverage and connectivity
- Strongly reduces the complexity of the roll-out



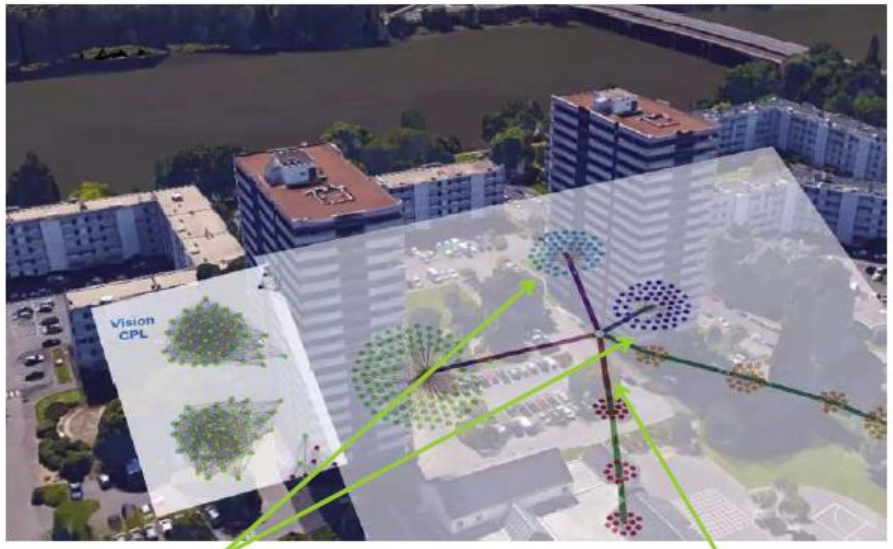
# Key features and benefits

| | |
|---|---|
| 1 **Adapts to network conditions** | • Each device in the hybrid mesh network can use PLC as well as RF for communication. The best channel is dynamically selected. |
| 2 **Cost-effective** | • Avoids high costs associated with achieving the last percentages of connectivity when using a single technology<br>• No telecommunication or license fees |
| 3 **Open standard & Interoperable** | • Open international standard published by ITU<br>• Strong certification enabling multi-vendor implementations |
| 4 **Supports IPv6** | • Facilitates true IPv6 addressing, enabling seamless integration of various application profiles |
| 5 **Low-power operation** | • Supports RF-only and low-power operation devices, enabling communication with battery-powered devices |

# Value added services of G3 technologies

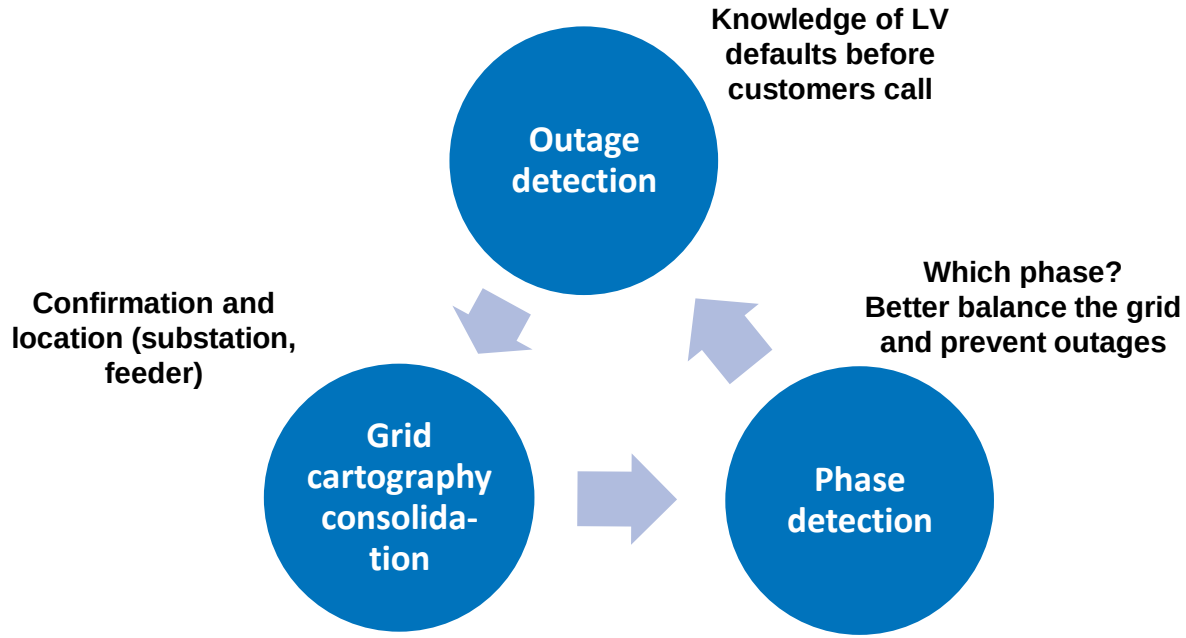
## Examples of value-added services running on top of G3 meters …

Beauty of PLC : Telecom Links = Electrical Links ! → Grid info for free



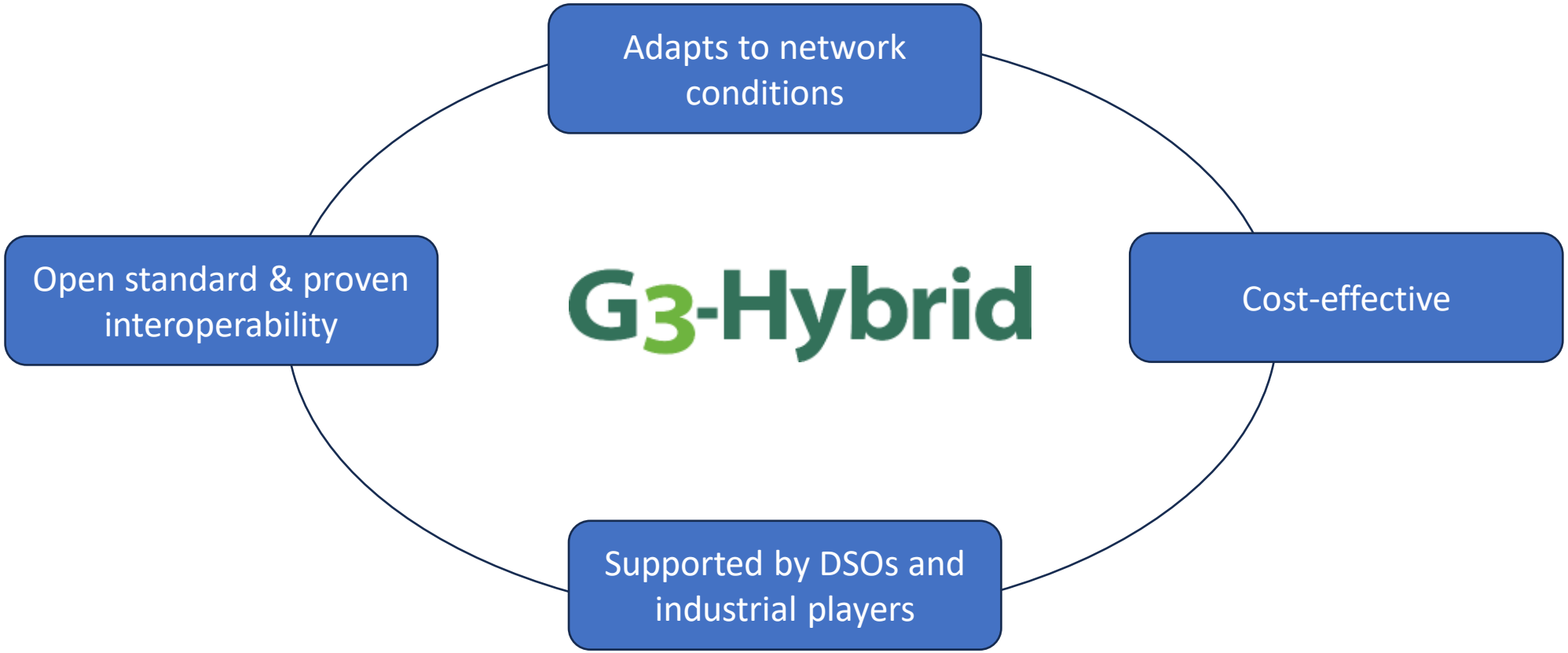

1 grid connection BUT PLC enables to look beyond the current knowledge of grid cartography
(floors 1-8 + floors 9-16)

2 meters were uncorrectly referrenced




## … supporting DSO's to reduce technical and non-technical losses

# G3-Hybrid: A powerful communication backbone for the Smart Grid!



# THANK YOU!

*For further Information:*

*Visit booth #24*

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*www.g3-alliance.com*