

Off-grid innovation: Latest solutions and future needs

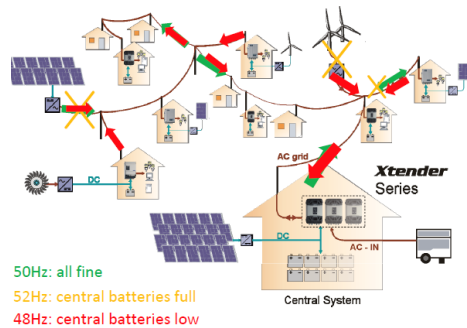
- Breakthroughs, Challenges and Opportunities -

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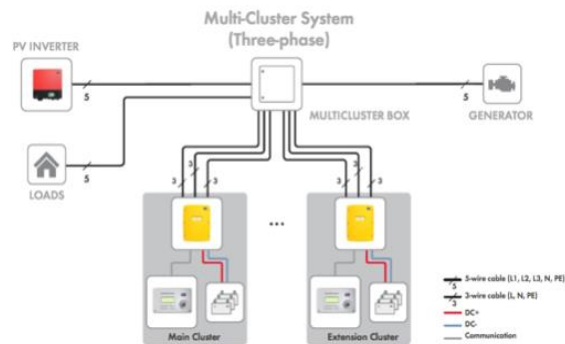
Technology today

- DC - Pico PV, SHS
- AC - SHS, Hybrid, Mini-Grid
- Container Solutions
- Modulare
- Standardized

Distributed Minigrid



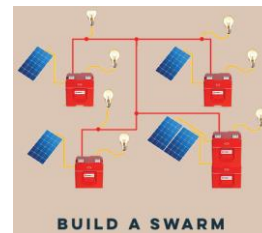
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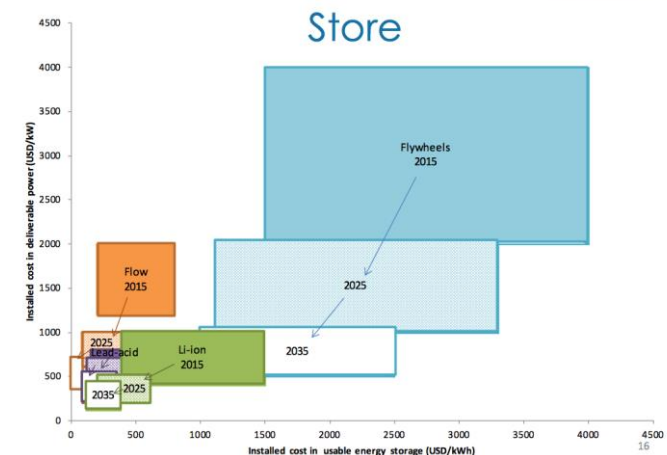
SMA Solar Technology

Innovation

- Innovative LED Technology
- Large scalable Hybrid Systems / Mini-Grids
- Distributed AC-Mini-Grids
- Distributed DC-Grids
- Tools for site selection
- Tools to plan Mini-Grids with corresponding grid infrastructure
- New storage technology
- ...



PowerBlox

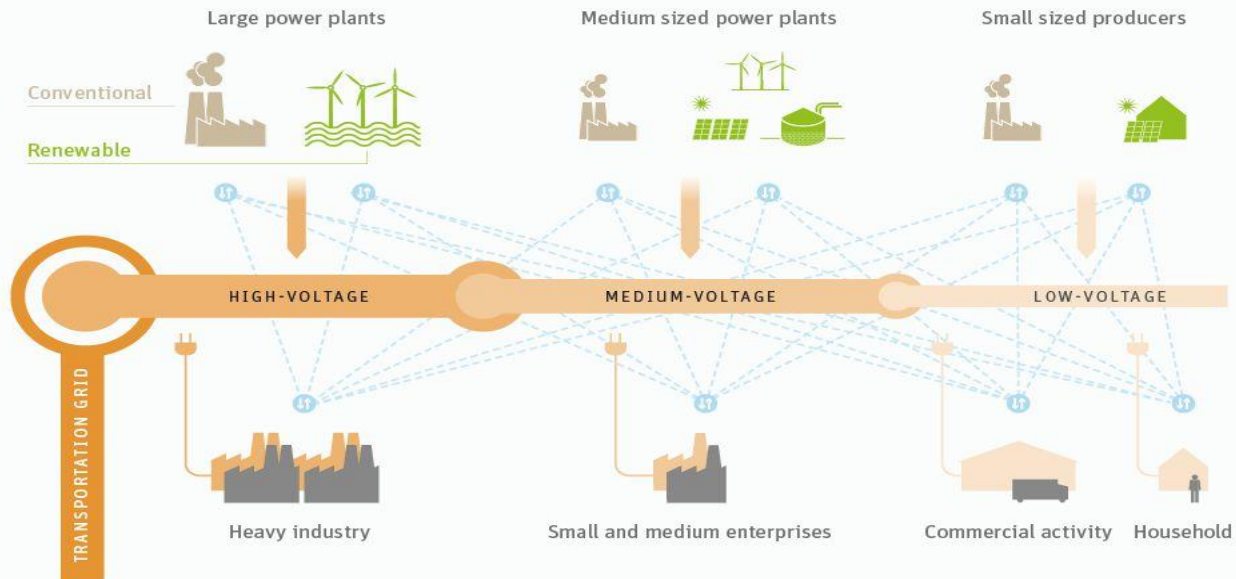


Information and Communication

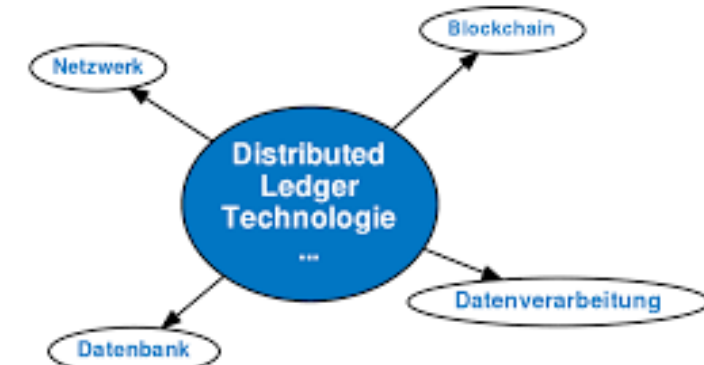
- Data monitoring
- Data analysis
- Remote control
- Operation and Maintenance
- Metering

Innovation

- Future grid should be bidirectional and intelligent
- Advanced monitoring and controls
- Internet of Things
- Blockchain, distributed ledger technologies
- ...



A Smart Grid will be bidirectional and intelligent (Kintech Synergy)



Quelle: <https://wirtschaftslexikon.gabler.de/definition/distributed-ledger-technologie-dli-54410>

Financing

- Grants and loan financing
- Rental of system

Business Models

- Donor based lending
- Pay-as-you-go
- Fee for Service model
- Lease/ hire purchase model
- ...

Innovation

- Stronger programme coordination between donors
- Strengthen local MFI in understanding solar technology beneficials and limitations (capacity building)
- Implementation of local credit lines
- Selling other services
- Full integrated services
- Solar bankability projects
- ...