

DOCKETED

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Project Title:	Vehicle-Grid Integration
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Document Title:	Presentation - (Lucid Motors) Holistic approach to V2X
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Holistic approach to V2X

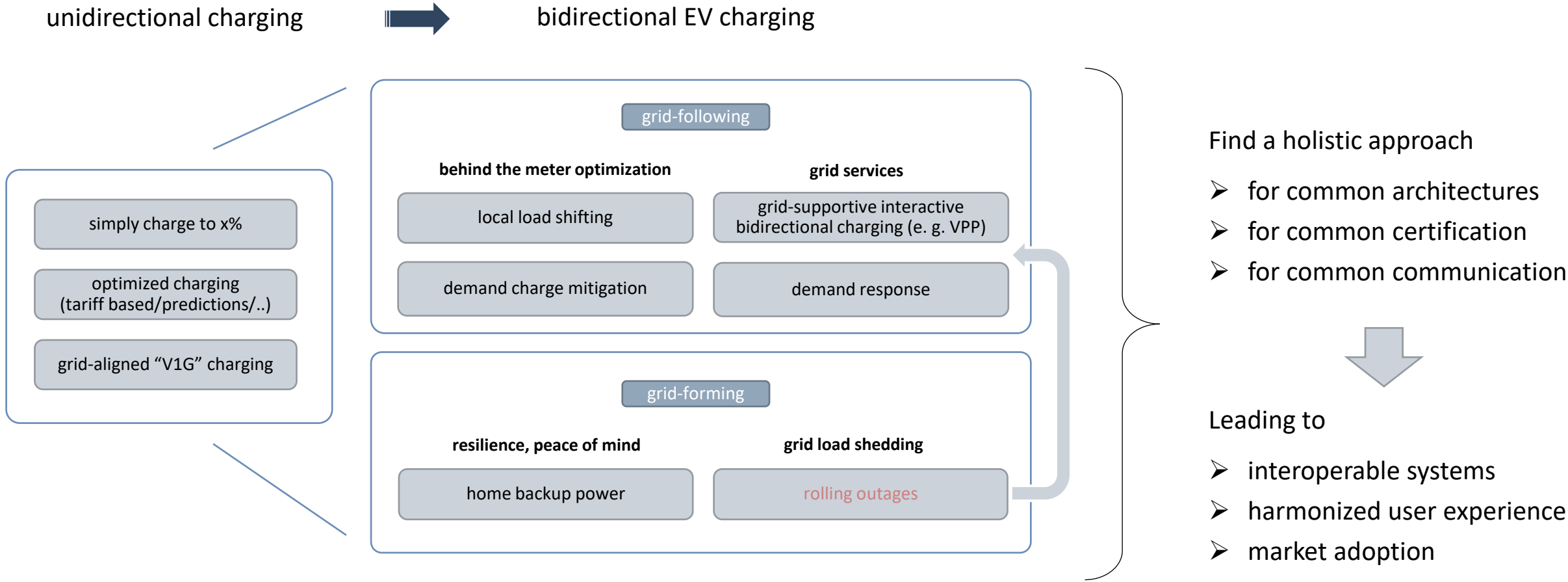
CEC and ElaadNL Webinar on Vehicle-to-Grid

Feb 8th, 2023



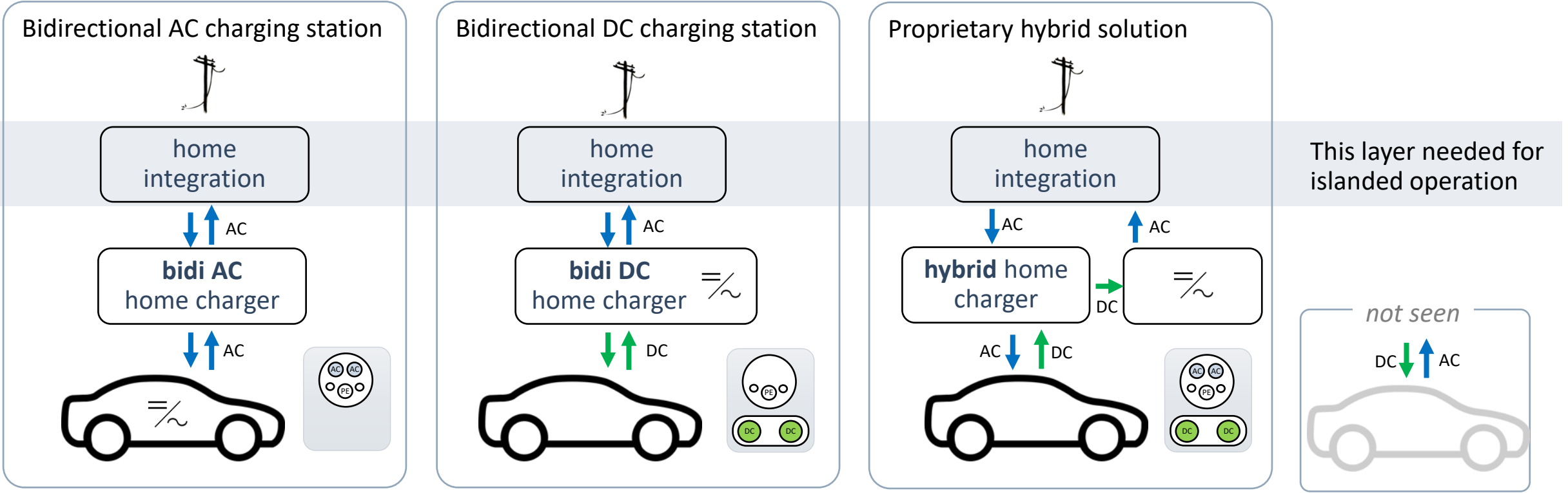
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Selected customer use cases – leveraging bidirectional EV charging



(not showing use cases with home energy storage or solar integration)

AC/DC combinations for bidirectional vehicle power transfer for grid-interactive and grid-forming use cases



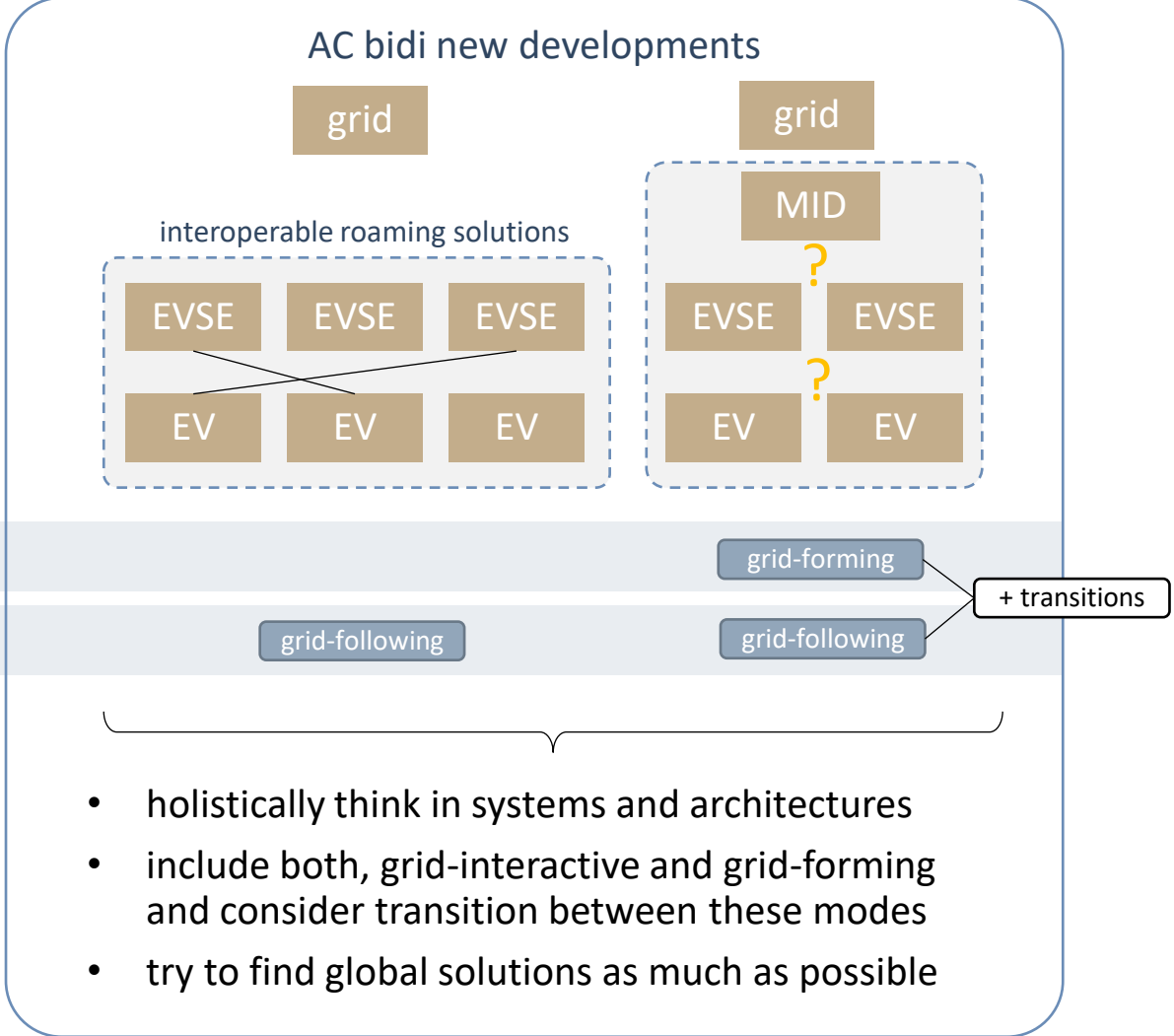
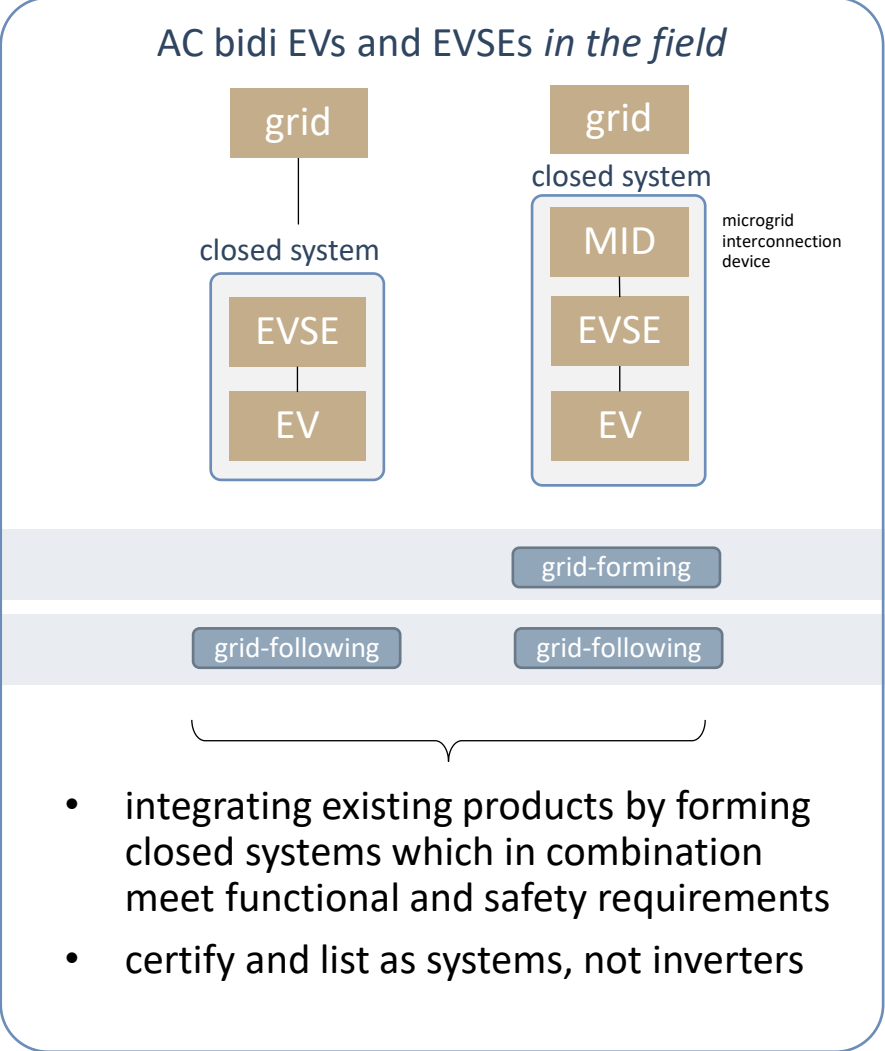
Leanest customer setup, low-cost
 → scales best for large rollouts
 → customer friendly
 synergetic with onboard charger
 grid-codes are location-specific

higher cost due DC charger
 proprietary hybrid solutions

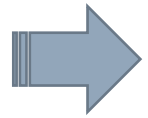
charging cable more bulky and potentially shorter
 avoids challenges with mobile inverter, grid codes are static

AC Power
 DC Power
 inverter

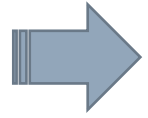
AC bidirectional: System constellations and inclusive migration path



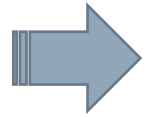
Key take-aways



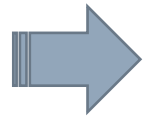
Consider grid-interactive together with grid-forming!



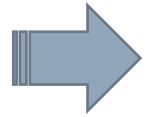
See AC-bidi as a technology with huge scaling potential!



Think in systems! Not inverters!



Enable existing fleets to participate!



Try to find global solutions!

LUCID
