

**DOCKETED**

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<b>Project Title:</b>	Vehicle-Grid Integration
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<b>Document Title:</b>	Presentation - (Lucid Motors) Holistic approach to V2X
<b>Description:</b>	N/A
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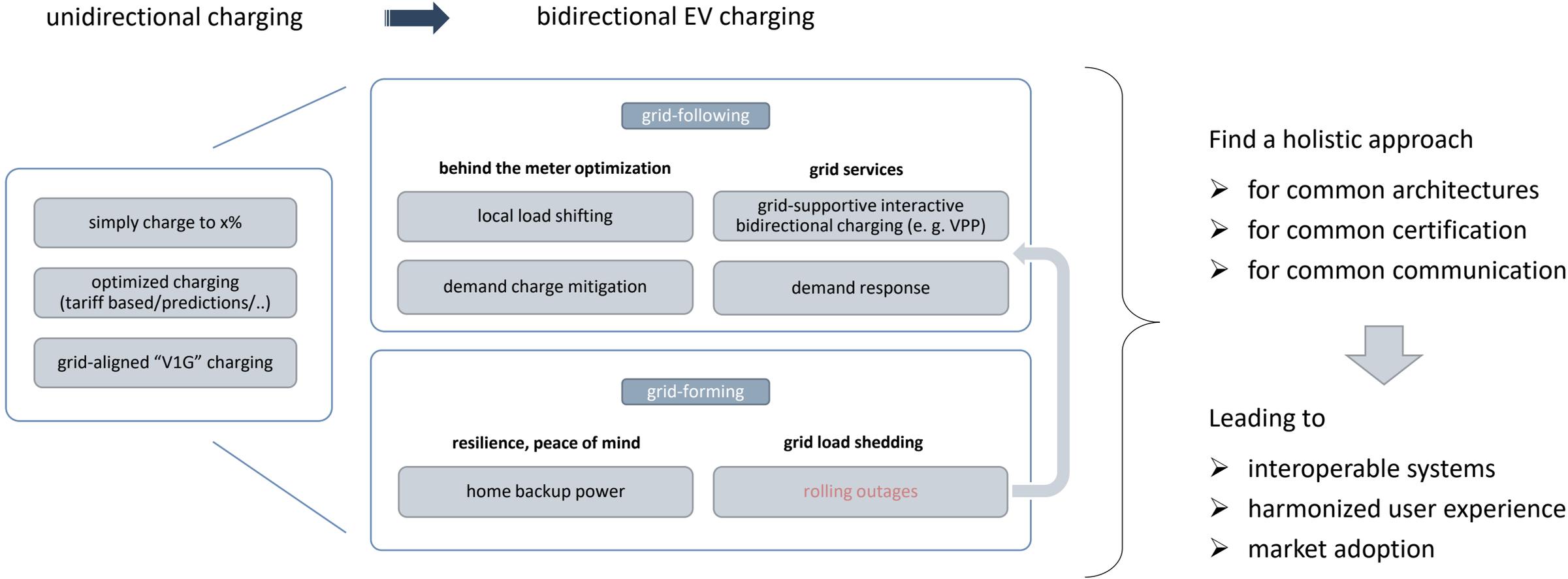
# Holistic approach to V2X

CEC and ElaadNL Webinar on Vehicle-to-Grid

Feb 8<sup>th</sup>, 2023

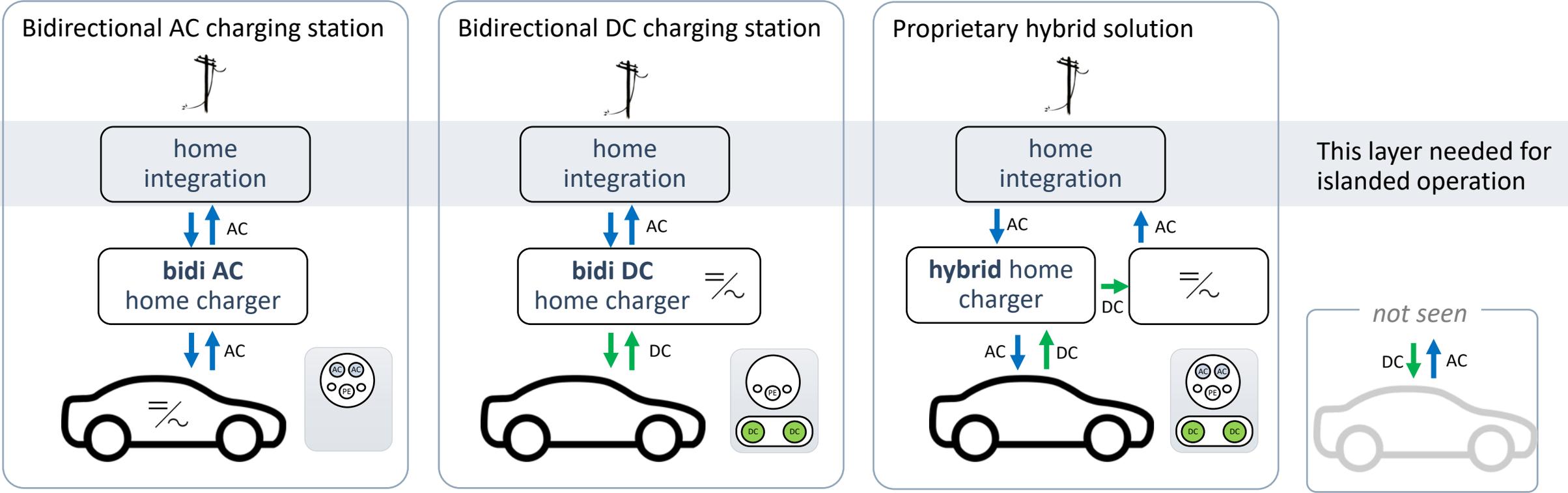
Sebastian Kaluza, Lucid Motors  
SebastianKaluza@lucidmotors.com

# 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

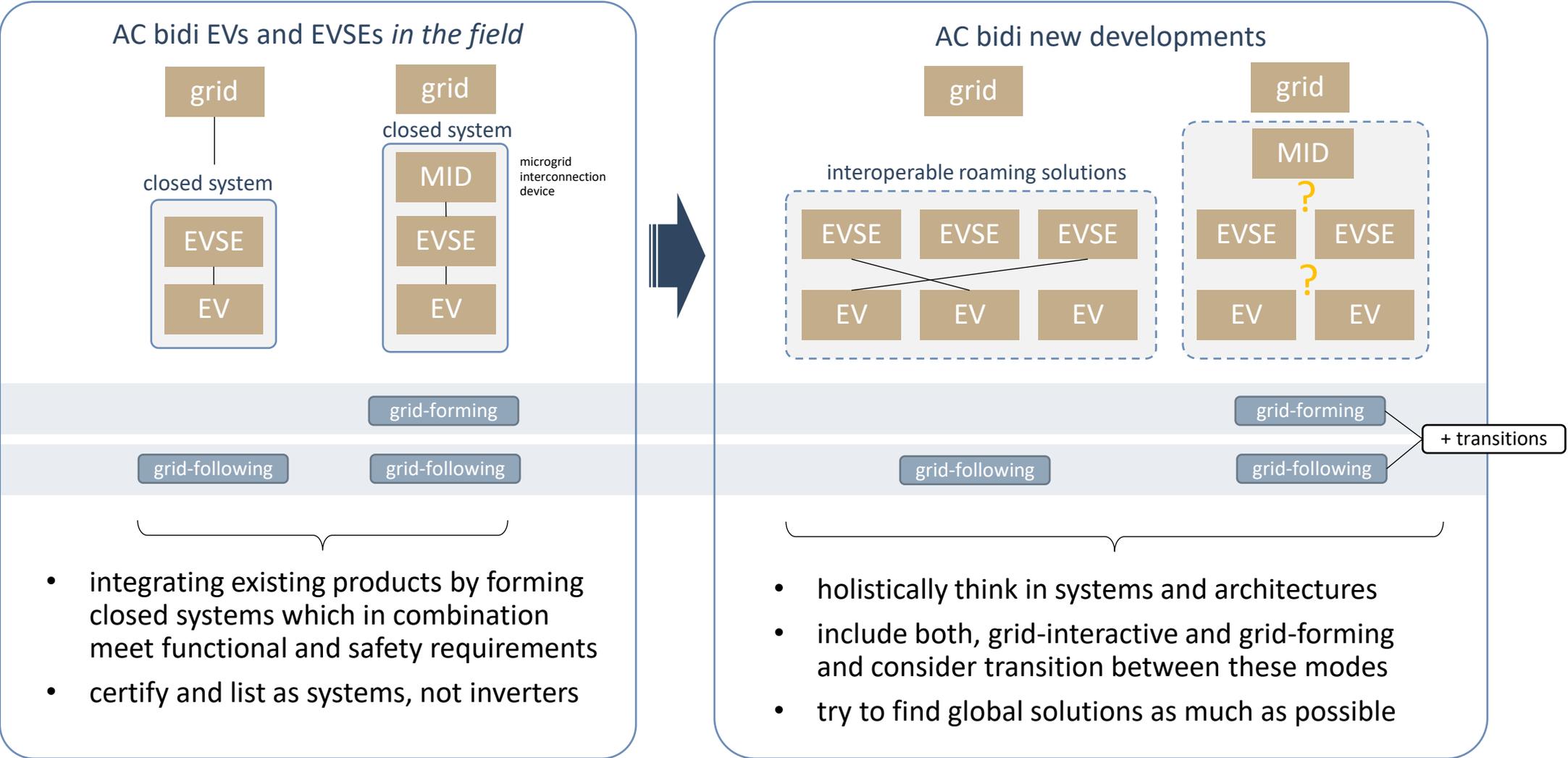
higher cost due DC charger

proprietary hybrid solutions

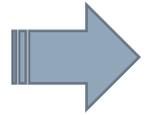
charging cable more bulky and potentially shorter  
 avoids challenges with mobile inverter, grid codes are static

AC Power  
 DC Power  
 inverter

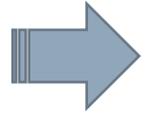
# AC bidirectional: System constellations and inclusive migration path



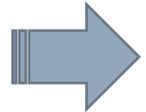
## Key take-aways



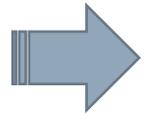
Consider grid-interactive together with grid-forming!



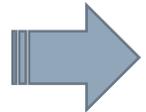
See AC-bidi as a technology with huge scaling potential!



Think in systems! Not inverters!



Enable existing fleets to participate!



Try to find global solutions!

LUCID

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