



Warmth for **EVERY** Journey

Thermal Management Expo  
April 2025



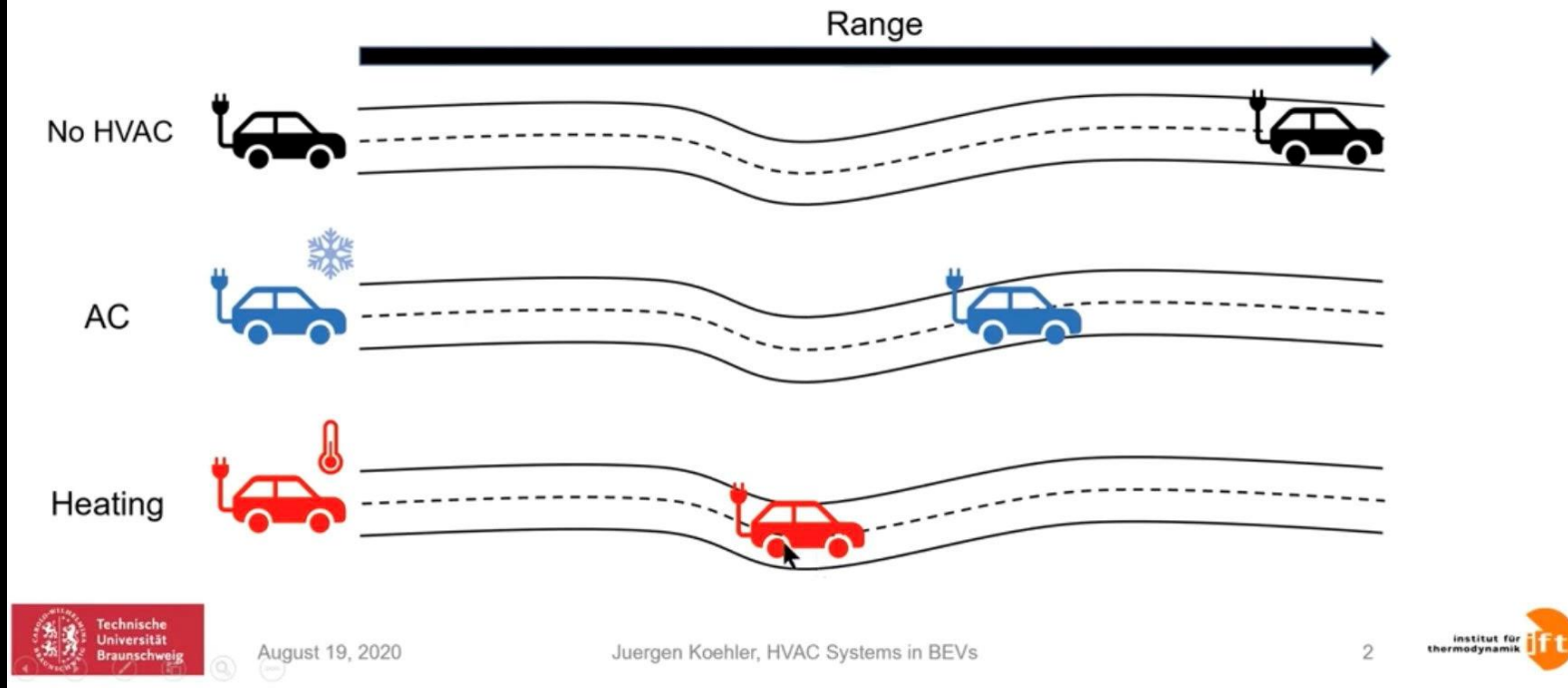


# Breaking the “Range Anxiety Barrier”



# Heat is No Longer “Free”

## HVAC in Battery-Driven Electric Vehicles



Why are we still relying on ICE Architecture?

To conserve range in cold weather, use heated seats instead of cabin heating.



### 💡 Helpful Hints

Maximize mid-corner traction by braking before turning and accelerating after

Temporarily disabling traction control may help free your vehicle if it's stuck.

To conserve range in cold weather, use heated seats instead of cabin heating.



# Flexible Thin Film Heaters

- + Lightweight
- + Flexible
- + Efficient
- + Fast



No more:

- Ø Nichrome Wire
- Ø Etched Copper
- Ø Silver Paste

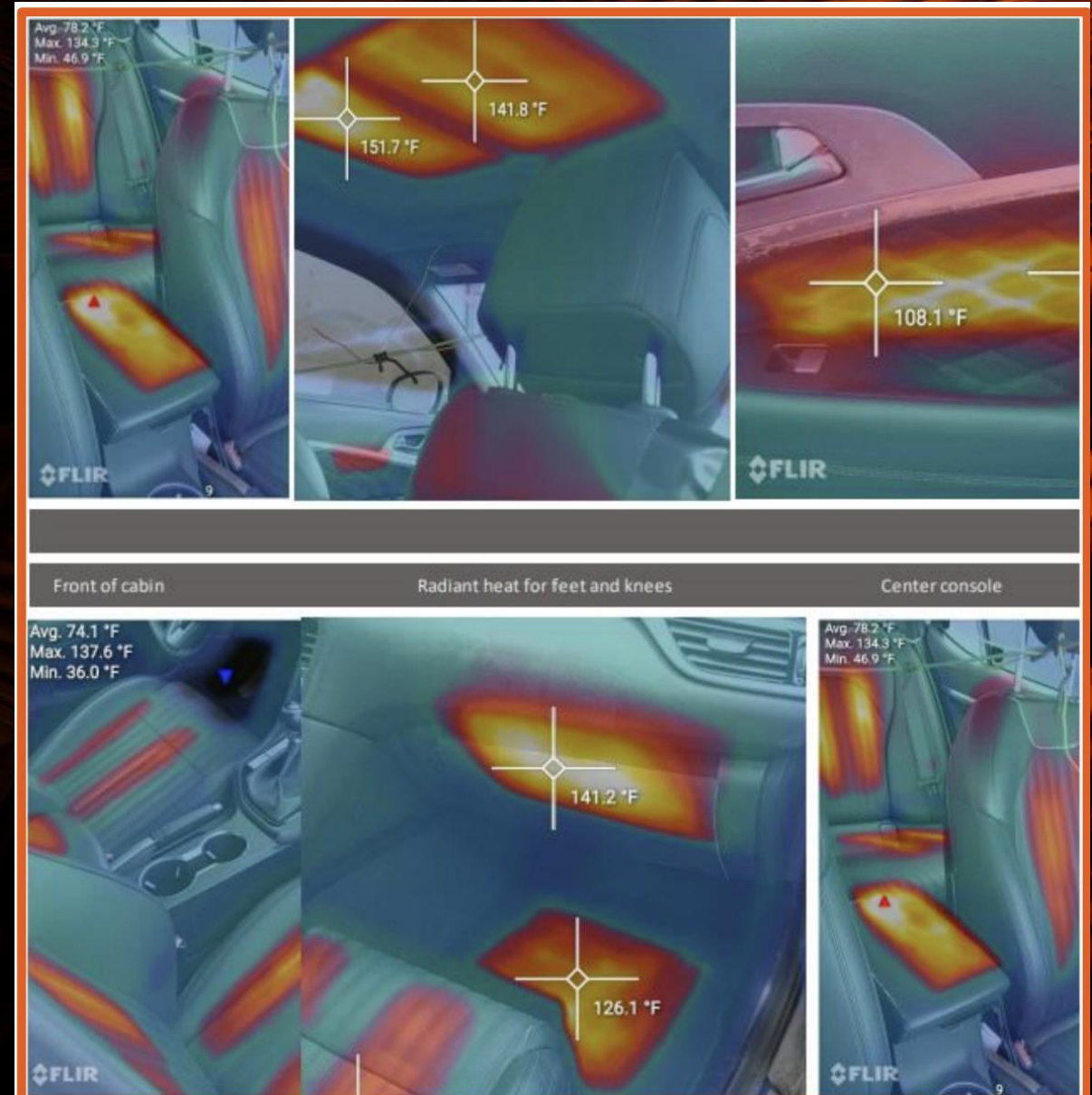
Ever



# Nanotherm shifts the game



to provide 'instant' comfort -  
only where you need it



# Our Direct Contact Battery Heating

Key Metric	Improvement
10-80 SOC Charging Time (-20C to 20C)	-62%
Warm Up time (-20C to 20C)	-81%
Energy Required (-20C to 20C)	-56%
EV Range	+24%



Makes Today's Solutions Obsolete....



# Sustainably made in the USA

## Roll-To-Roll Manufacturing

- ✓ clean
- ✓ efficient
- ✓ affordable
- ✓ eco-friendly

50,000 ft<sup>2</sup> clean room in Ohio  
Helps to mitigate:

- ⊘ Price Fluctuations
- ⊘ Supply Chain Disruptions





# Thank You!



**ANDY DICKSON**

1245 Kinnear Rd  
Columbus, OH 43212  
614-565-9948

[nanotherm.tech](https://nanotherm.tech)

Copyright © 2024 Nanotherm. All rights reserved.





nanotherm

Warmth for **Every** Journey