

# Country update Germany

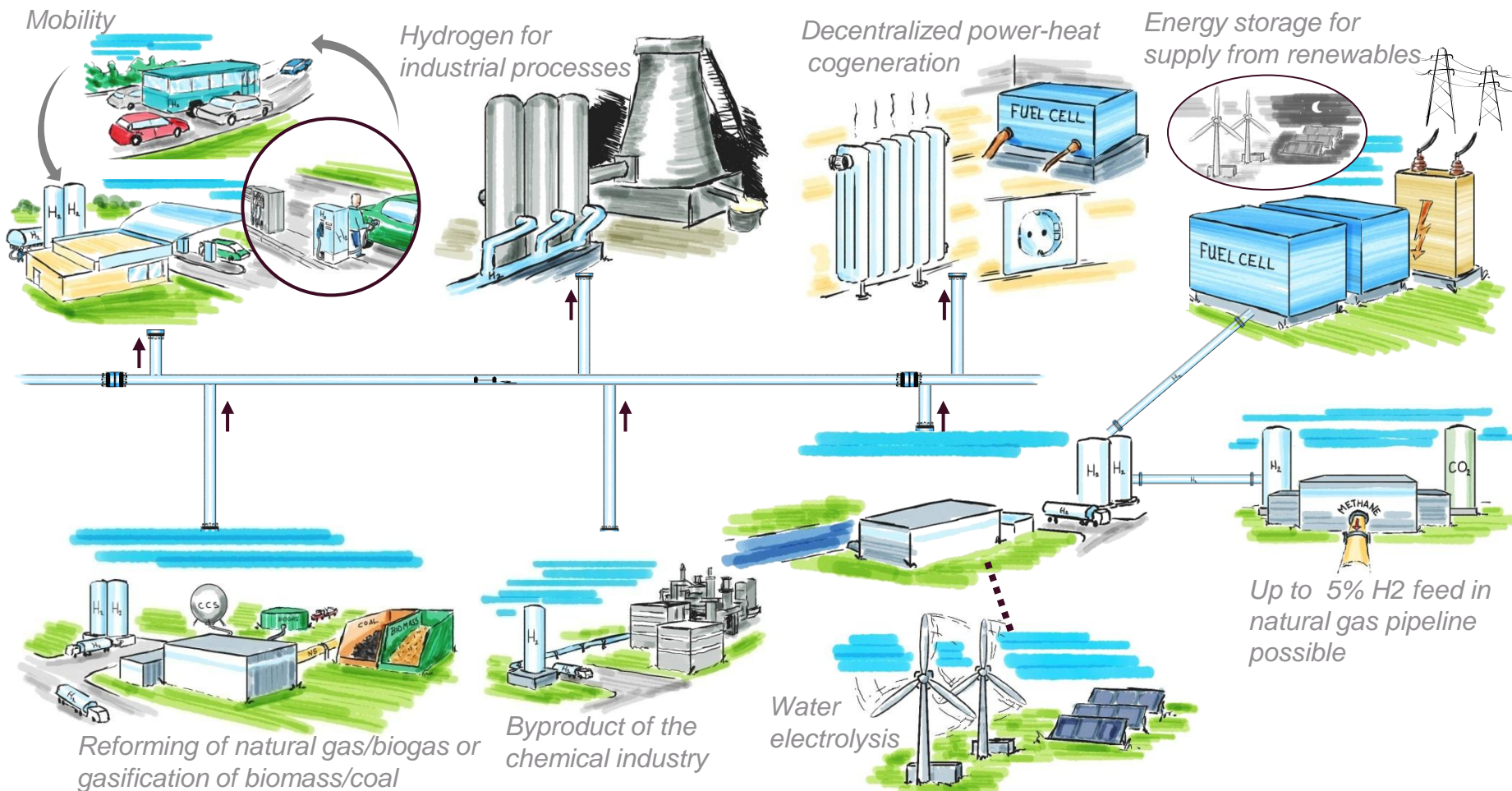
IPHE Steering Committee Meeting

Cape Town, South Africa | May 3<sup>rd</sup>, 2012

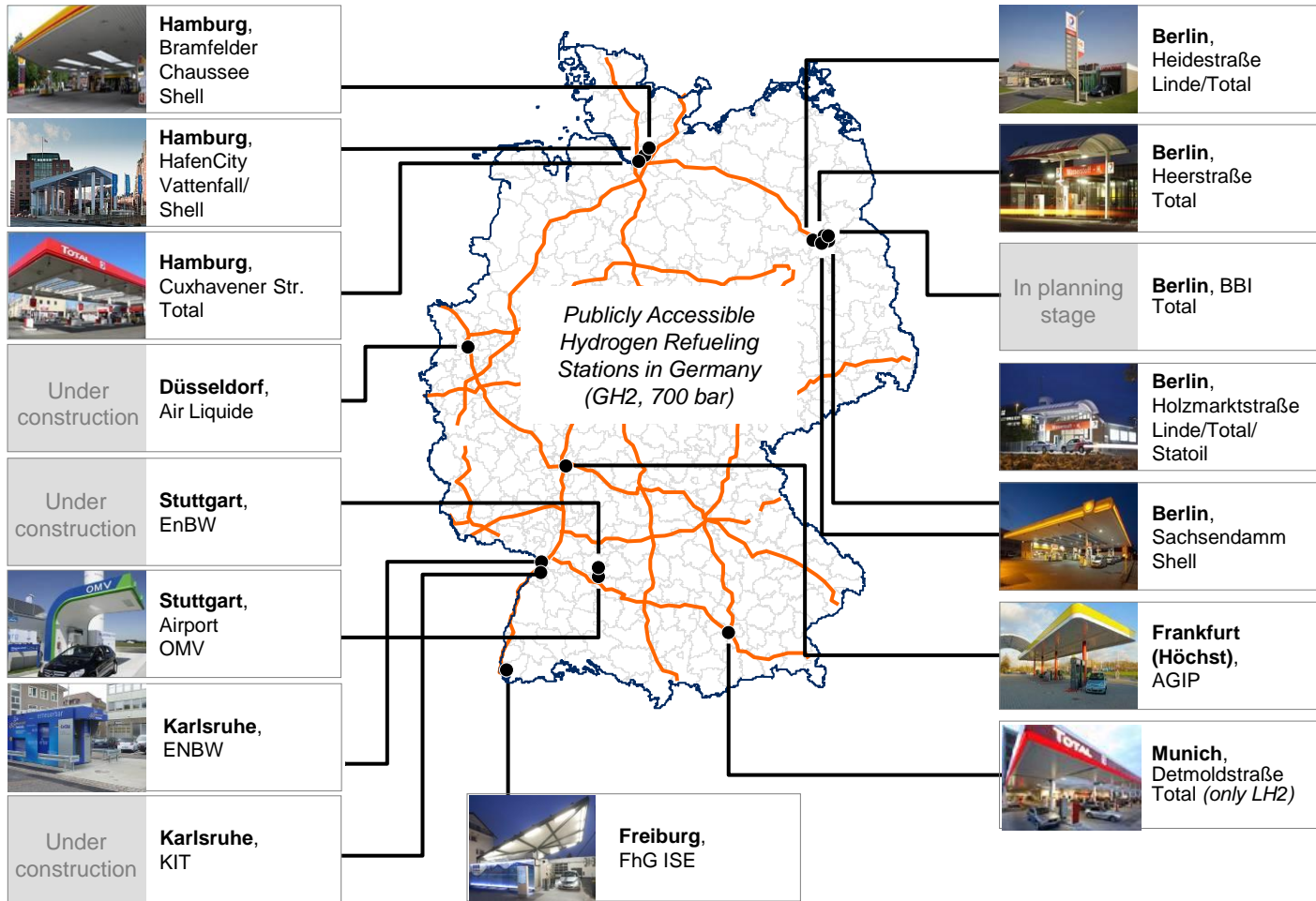
Dr. Klaus Bonhoff | Managing Director (Chair), NOW GmbH

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# Key role of hydrogen as an energy carrier to facilitate the energy transition in Germany



# Clean Energy Partnership – Hydrogen Refueling Stations (HRS)



- ### Key achievements
- Safety of stations proven
  - Refueling standards agreed
  - Storage and compressor technology tested
  - H<sub>2</sub> supply chain tested
  - Bugs of station technology eliminated

- Several additional stations are currently planned
- Daimler and Linde have announced to build 20 HRS within the next years

## In-depth analysis investigating the potential development of a hydrogen infrastructure in Germany



### Main achievements

### H<sub>2</sub> Mobility coalition objectives

Memorandum of understanding for H<sub>2</sub> Mobility signed Sep 10, 2009 in Berlin

Consistent HRS and FCEV ramp-up scenarios for Germany agreed

Design of joint entity structure outlined

Business case calculated and implementation plan outlined

Negotiate joint entity agreement

Win (new) H<sub>2</sub> Mobility members as investors

Start HRS rollout in Germany via the CEP

Synchronize HRS rollout with FCEV ramp-up

DAIMLER



TOYOTA

NISSAN



TOTAL

VATTENFALL



EnBW



BMW GROUP



Intelligent Energy



OMV



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AIR LIQUIDE

SIEMENS



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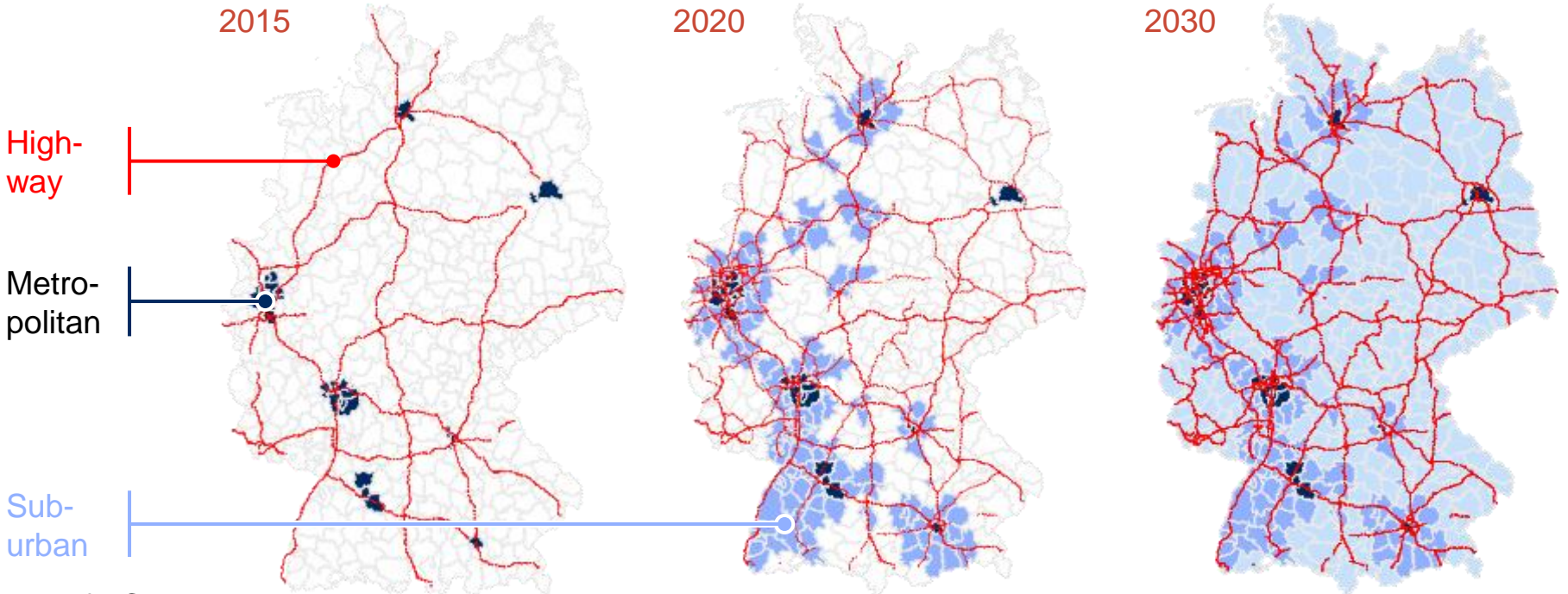


AIR PRODUCTS

H<sub>2</sub> Mobility analysis participants in 2011

## Potential HRS rollout in Germany

- Tier-1 regions
- Tier-2 regions
- Tier-3 regions



No. of FCEVs Thousands	~ 5	~ 150	~ 1.800
No. of HRS	~ 100	~ 400	~ 1.000
Total population covered by HRS Percent	~ 20	~ 60	~ 100

# Phased approach to a profitable commercial infrastructure ramp-up



**Thank you very much for your attention!**

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