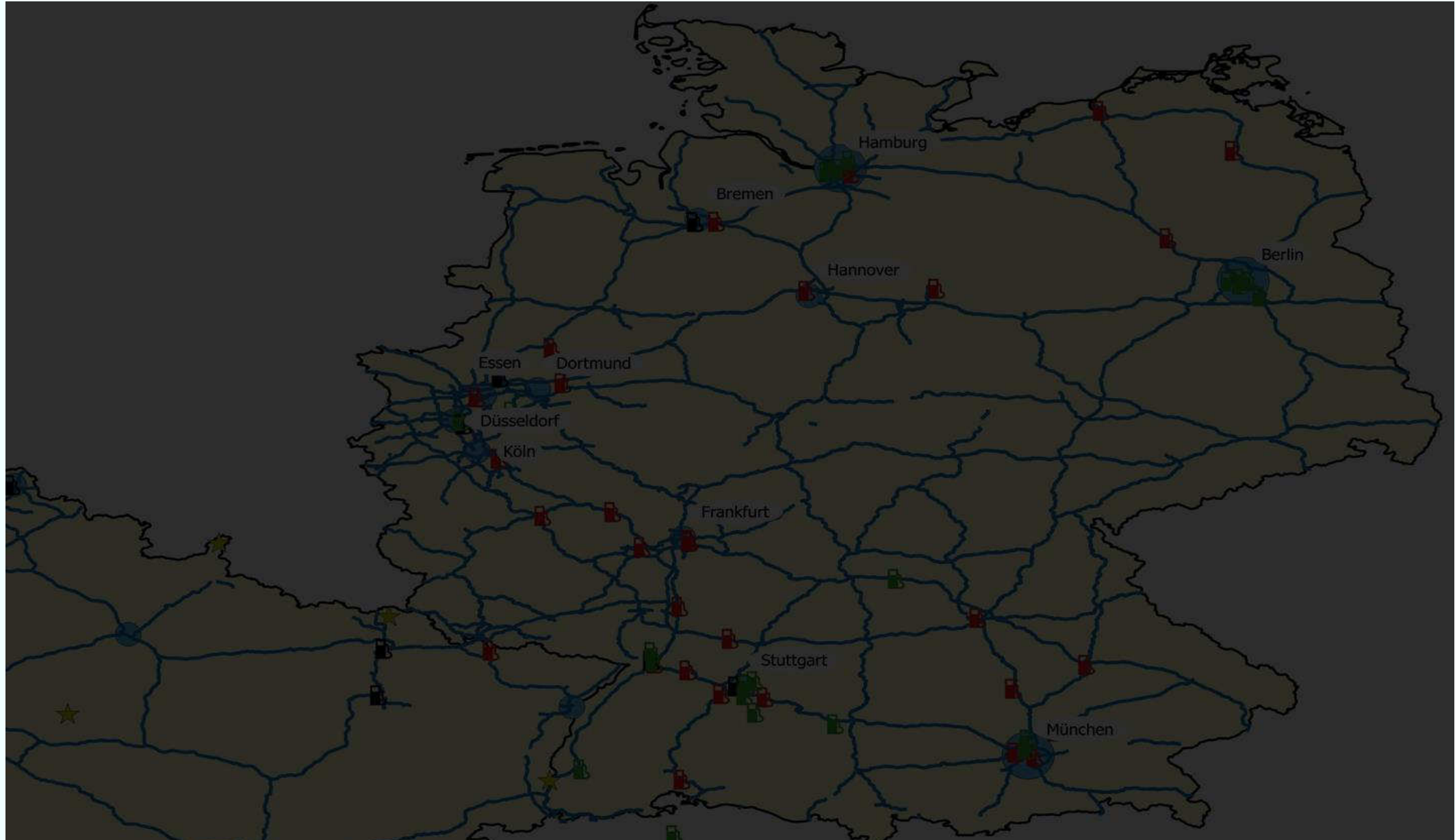
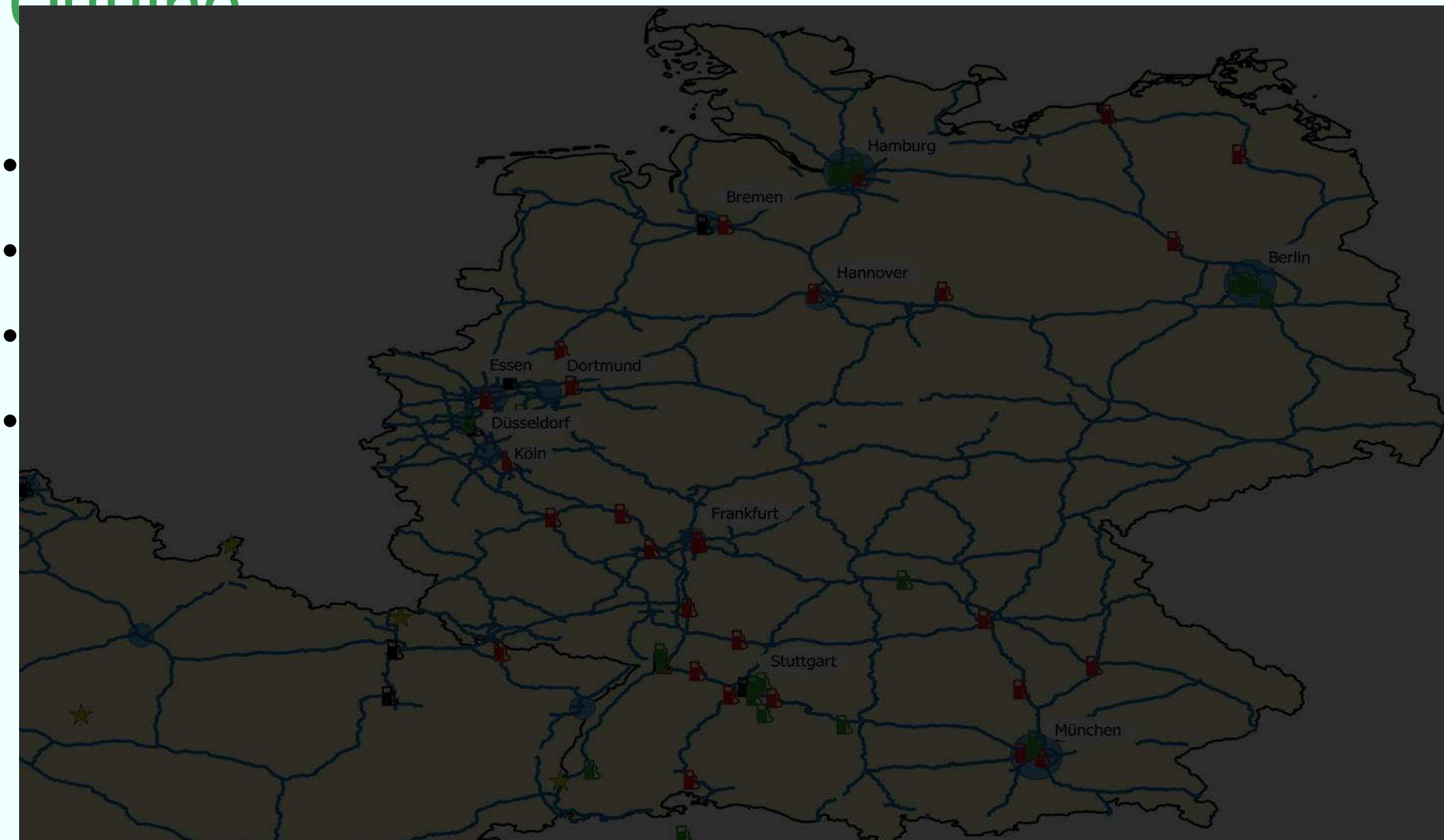
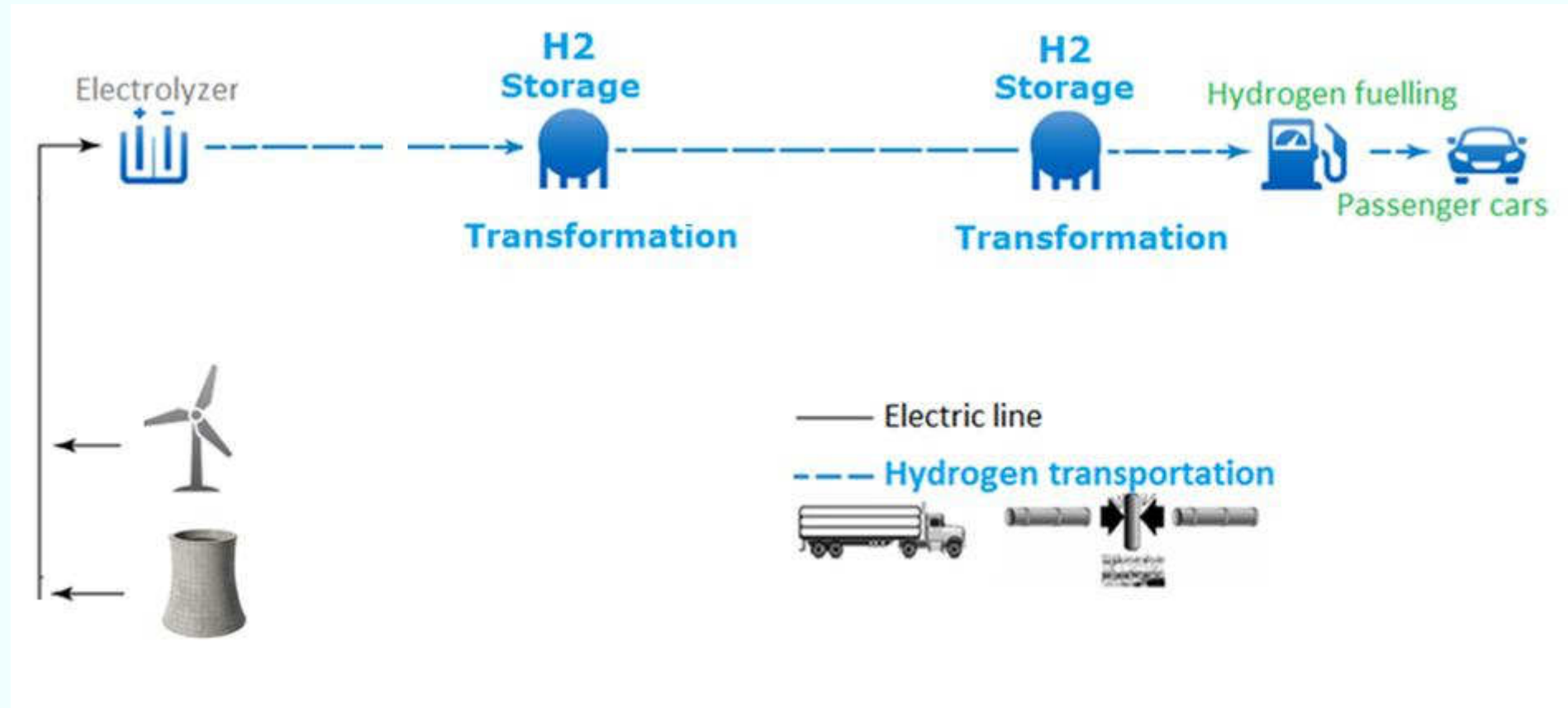




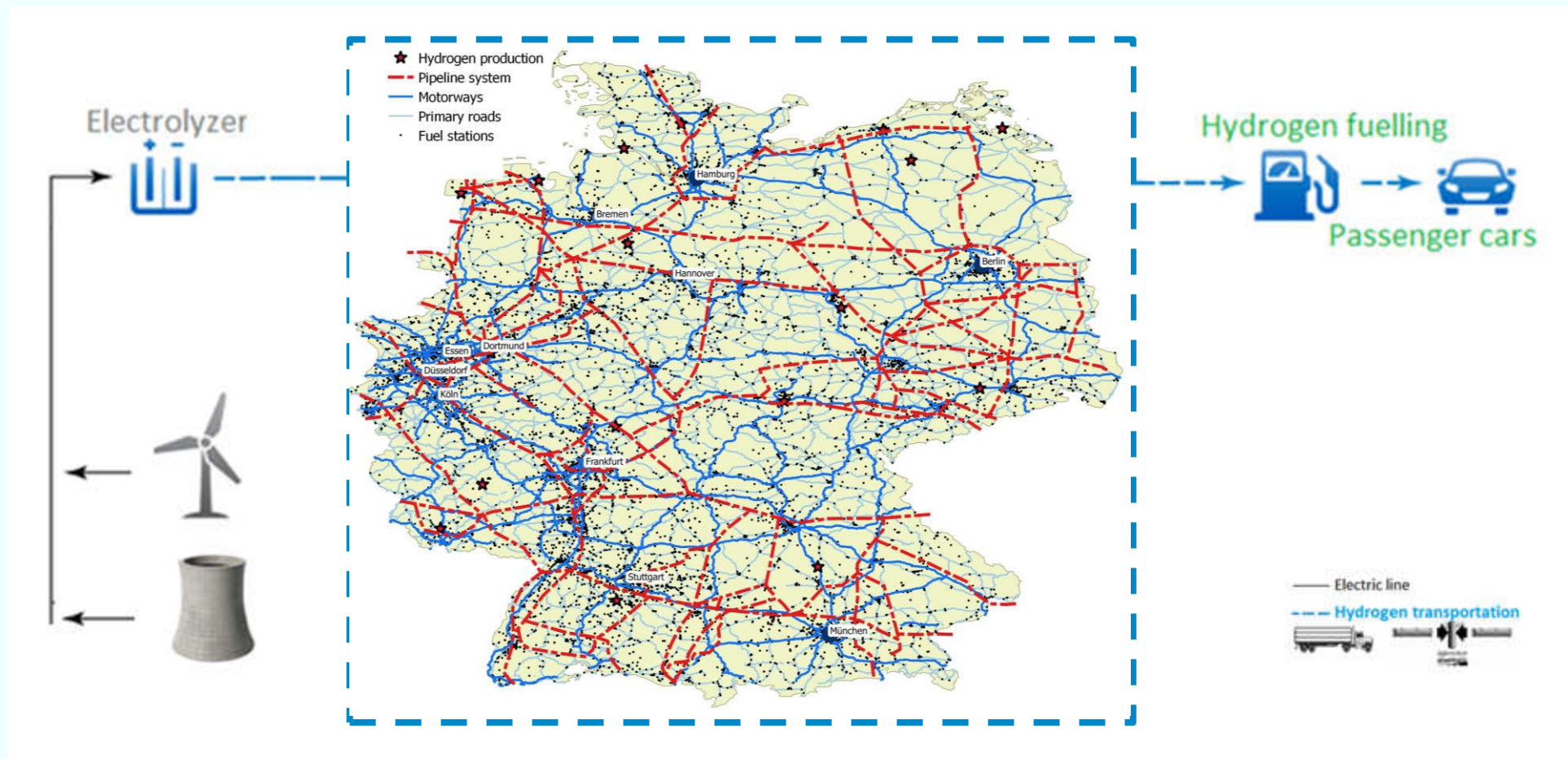
Outline



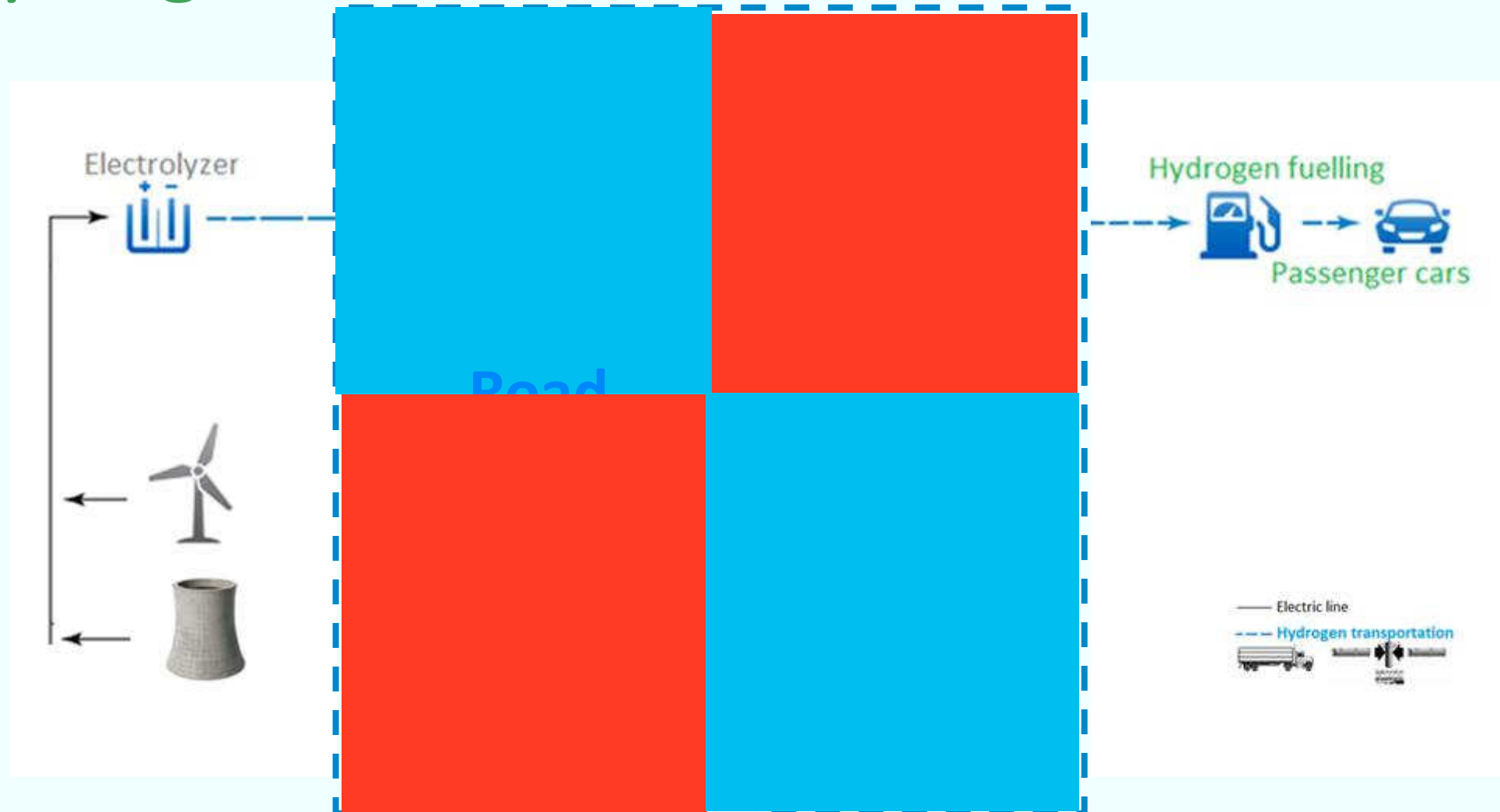
Hydrogen infrastructure, supply chain



Hydrogen infrastructure, supply chain



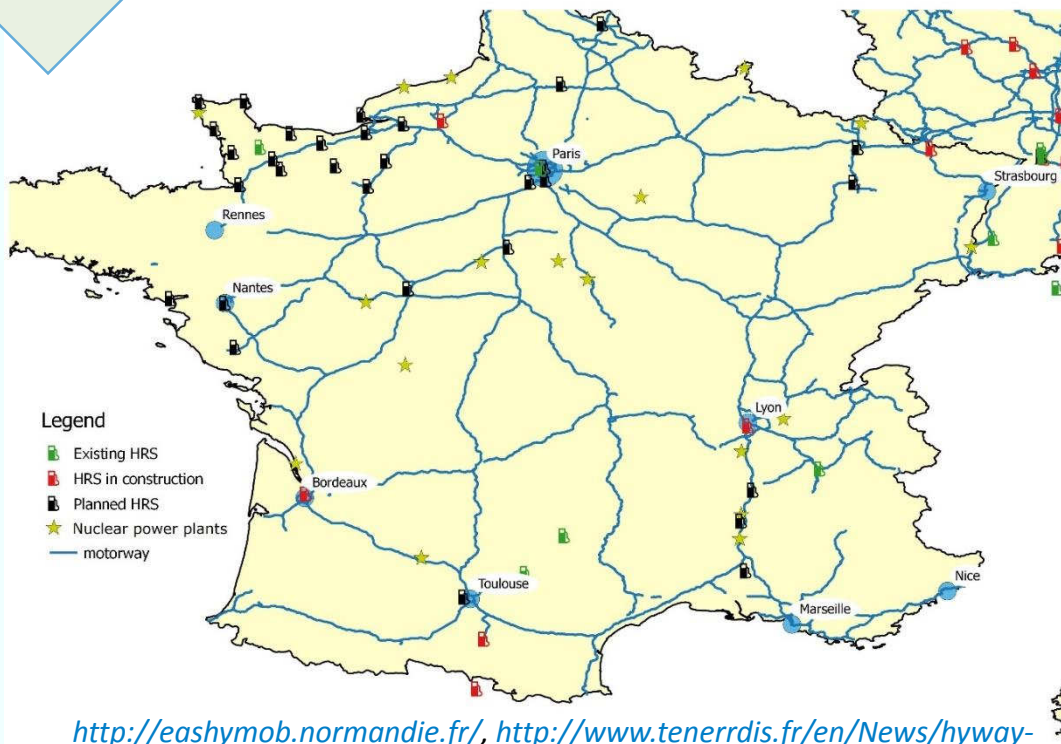
Hydrogen infrastructure, supply chain



Modeling framework

Electricity mix

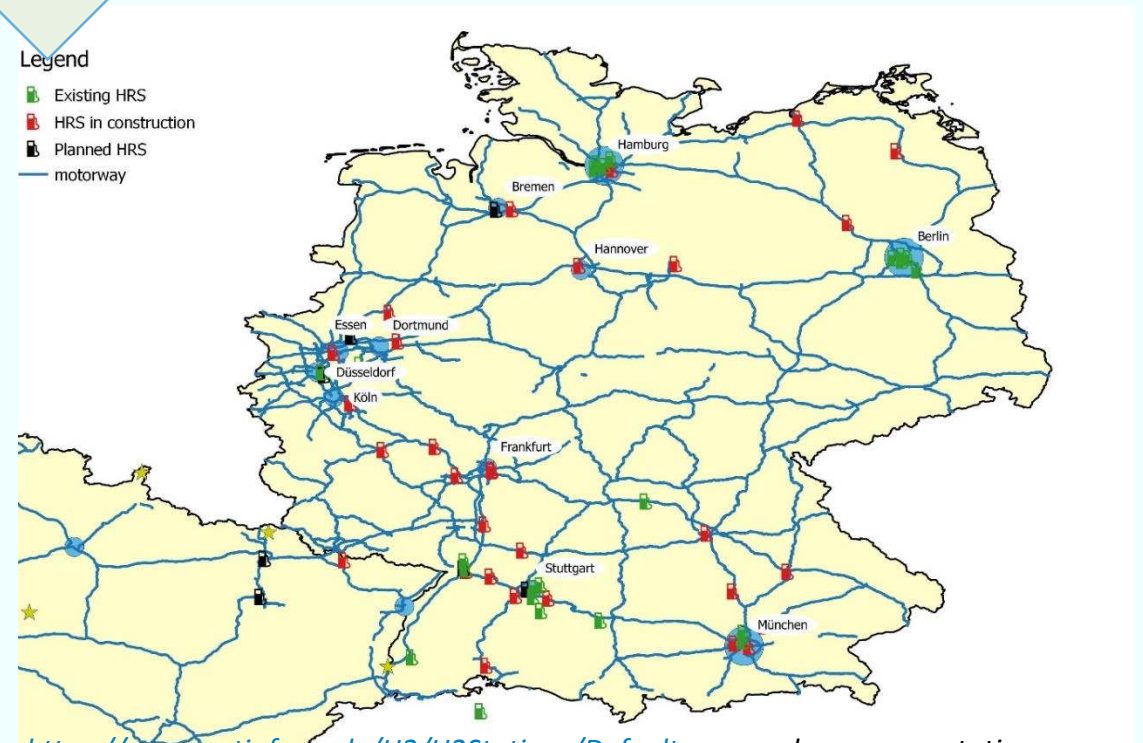
- High share of nuclear in electricity production, followed by hydro



<http://eashymob.normandie.fr/>, <http://www.tenerdis.fr/en/News/hyway-project.html>, <http://h2piyr.eu/> and own presentation

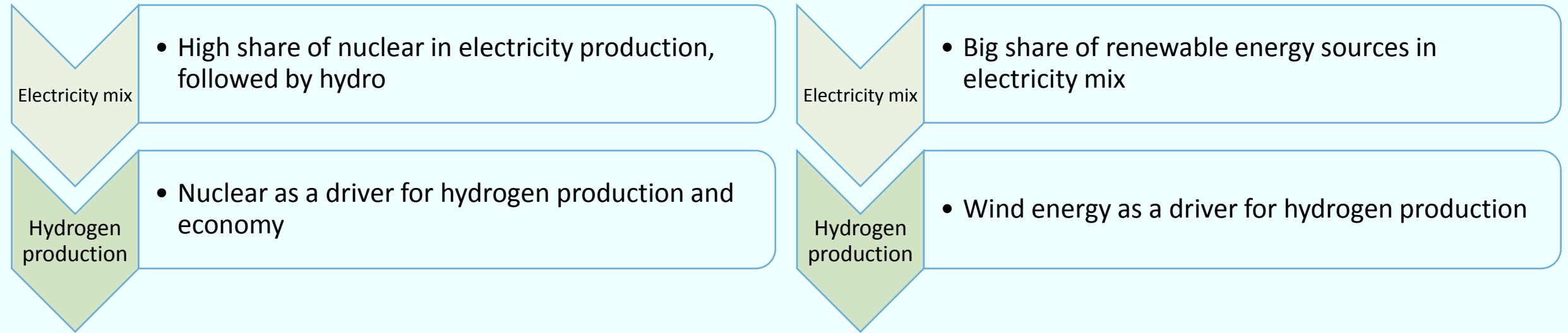
Electricity mix

- Big share of renewable energy sources in electricity mix

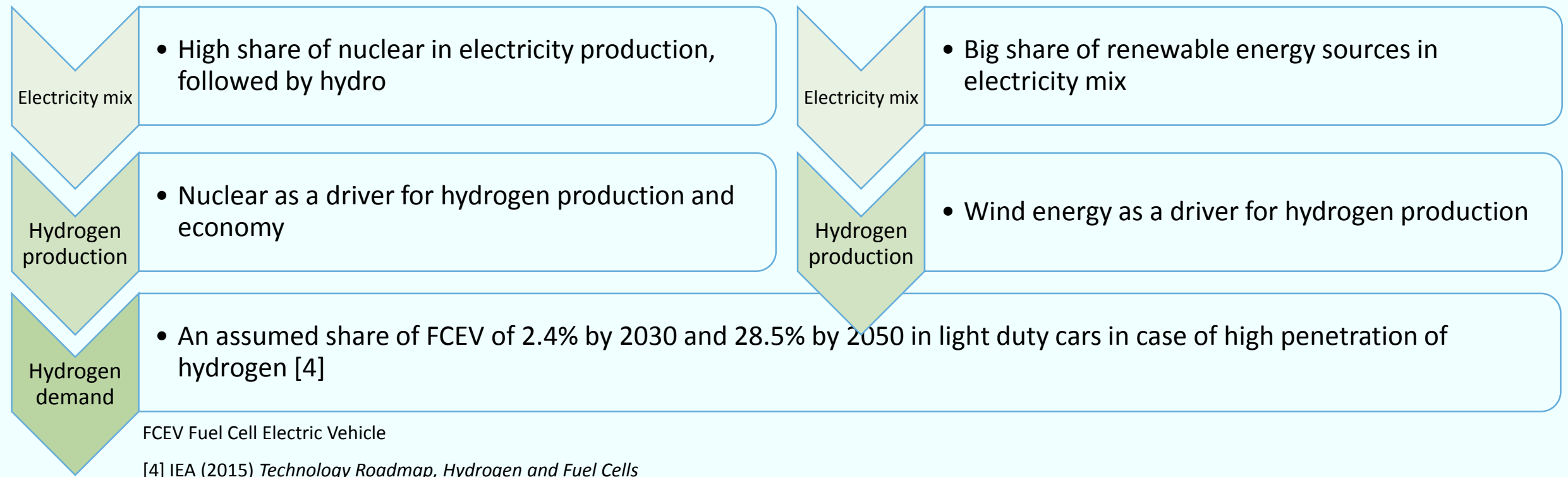


<https://www.netinform.de/H2/H2Stations/Default.aspx> and own presentation

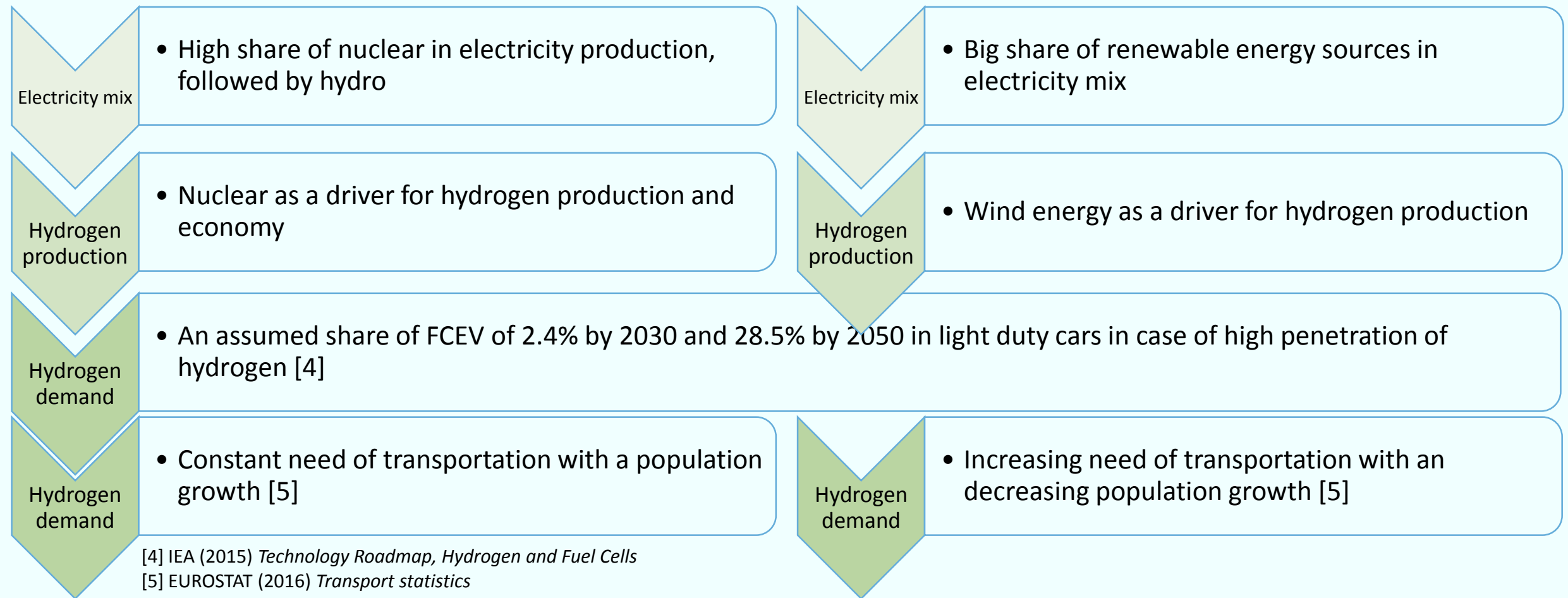
Modeling framework



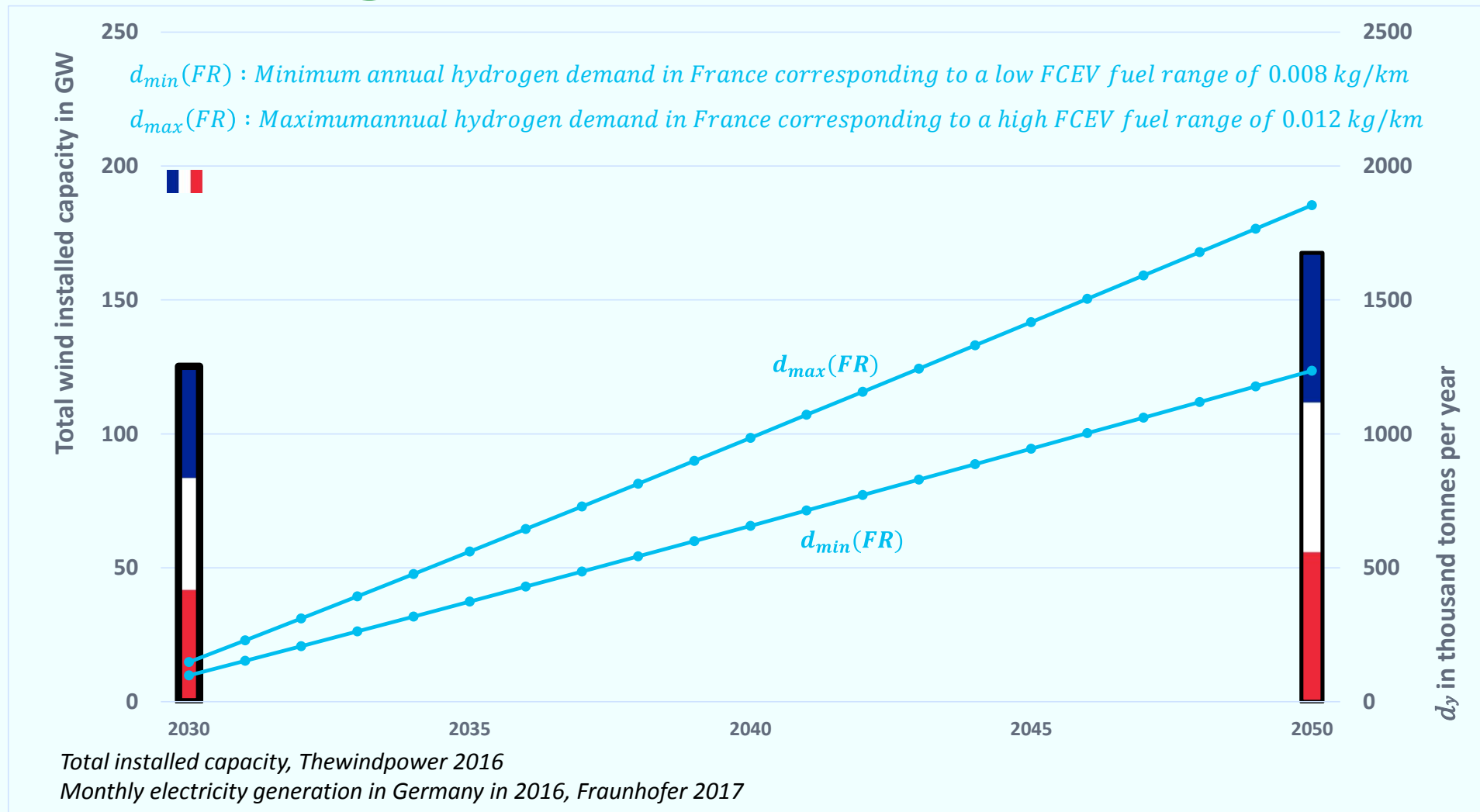
Modeling framework



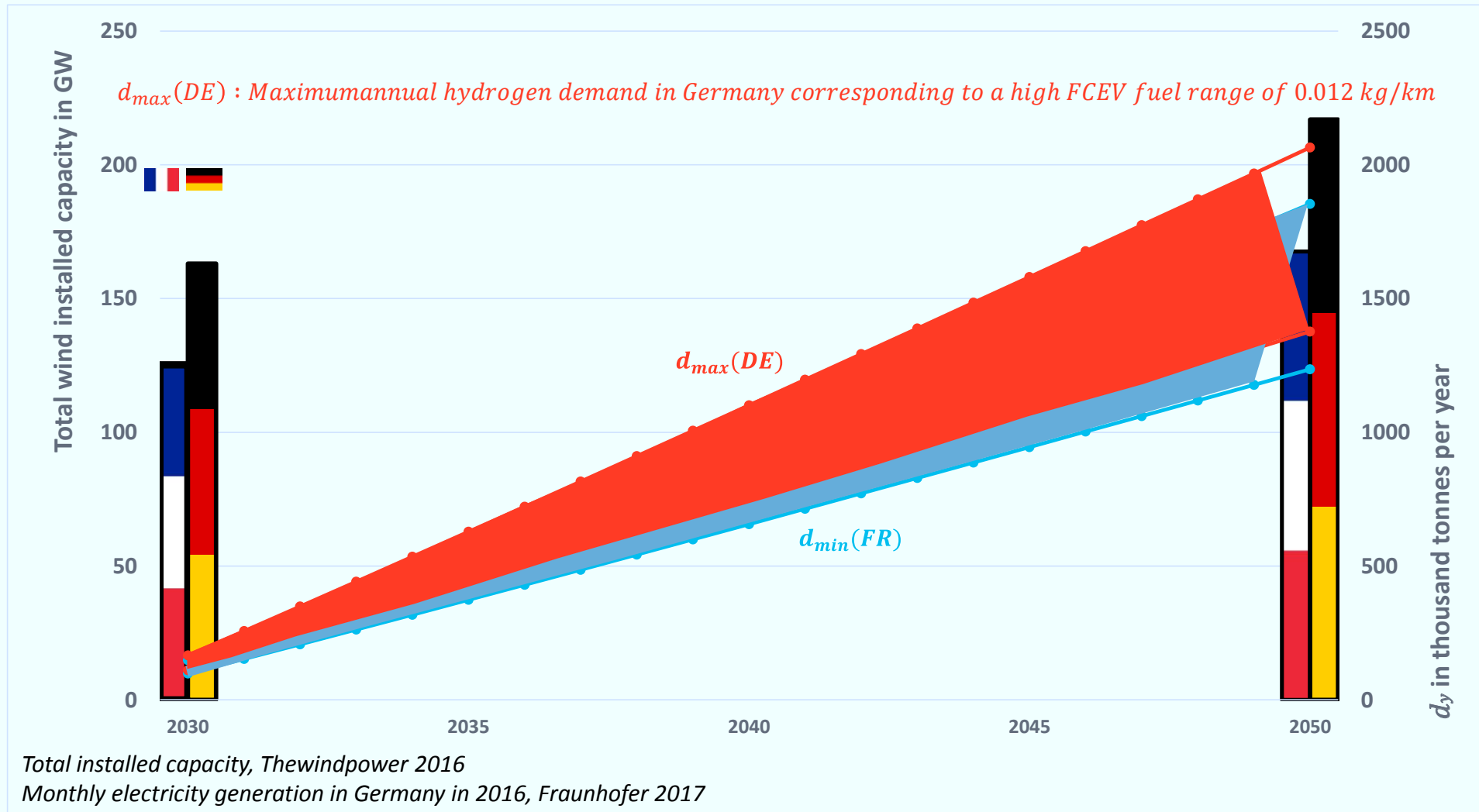
Modeling framework



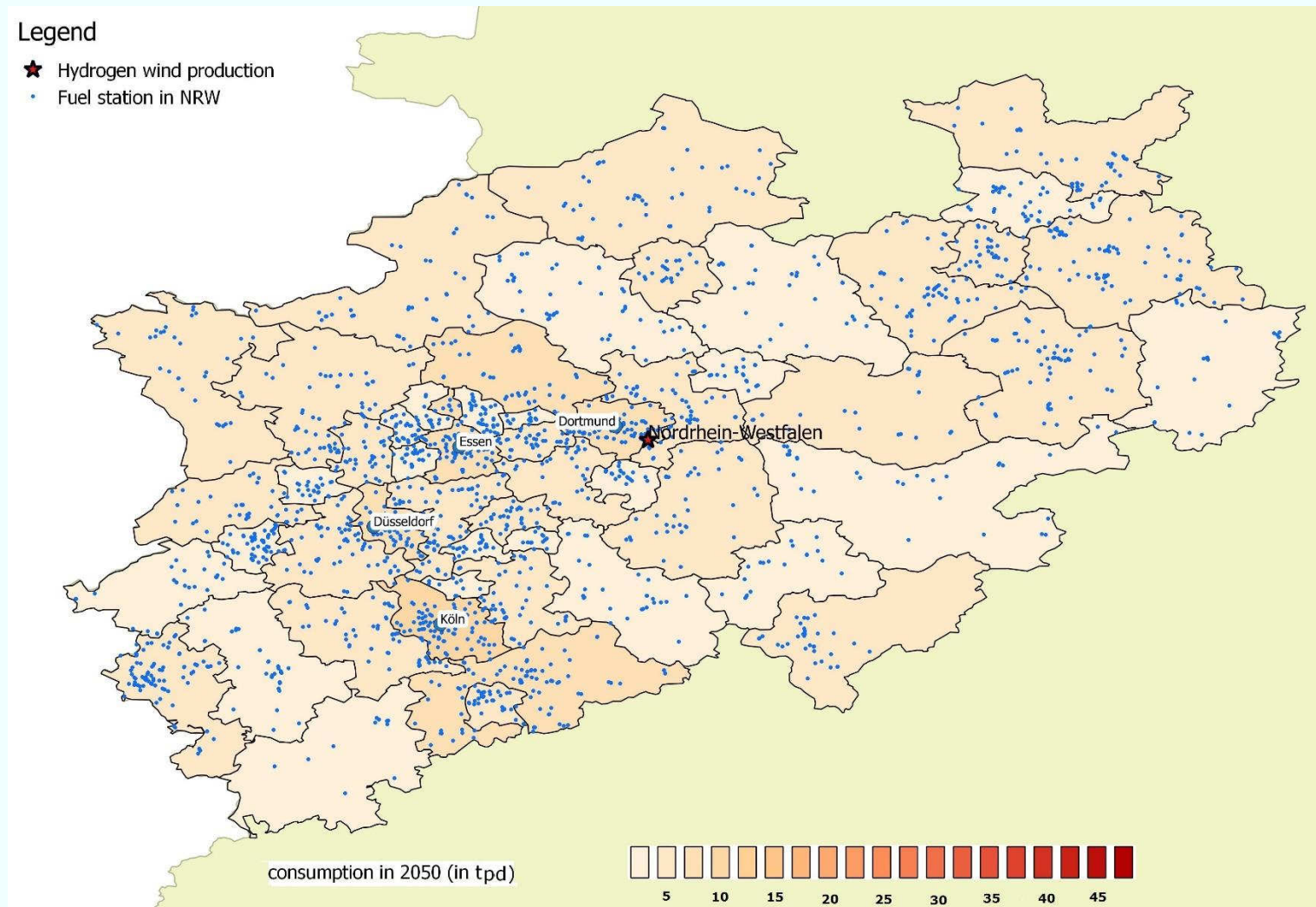
Modeling framework



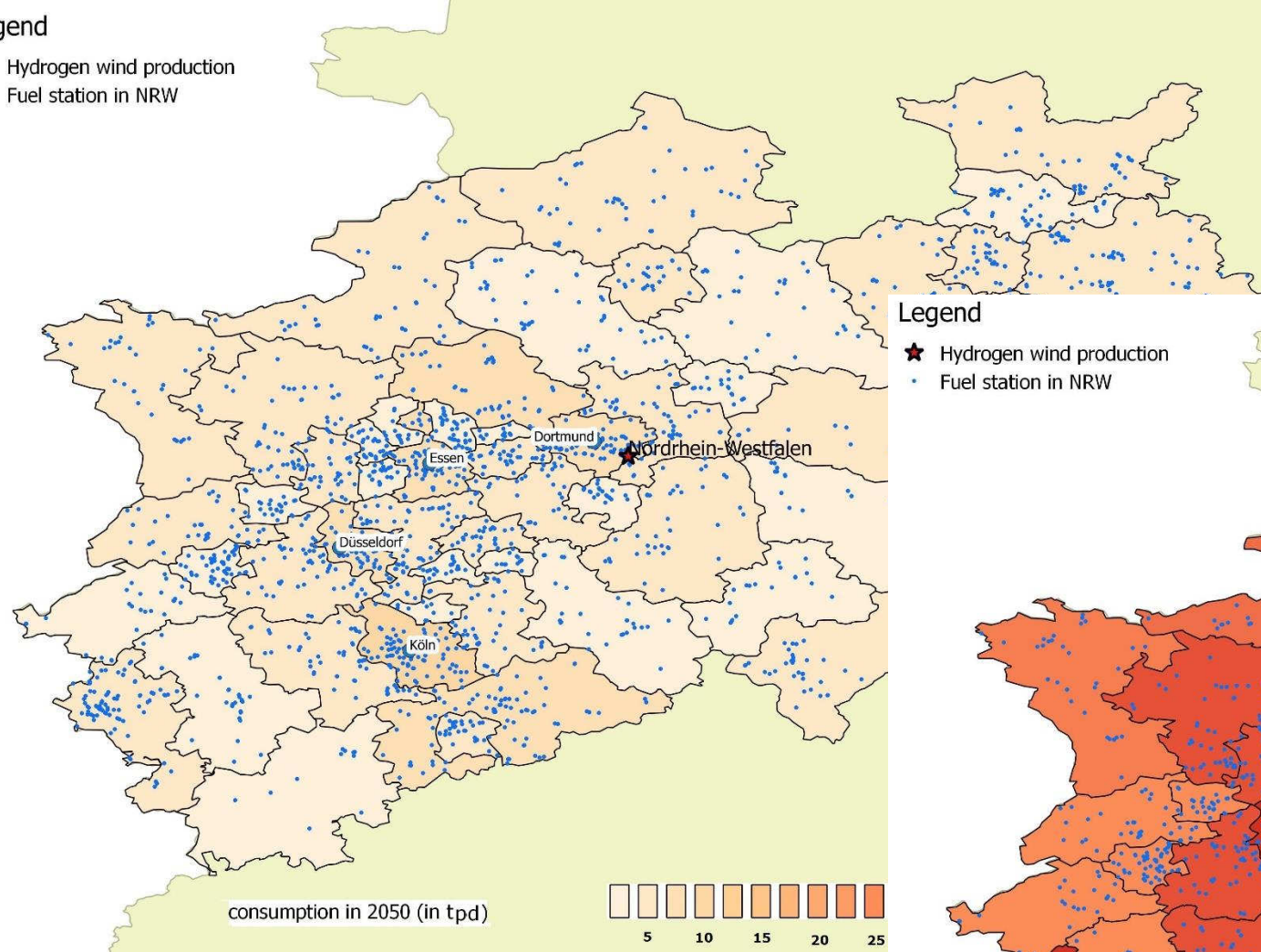
Modeling framework



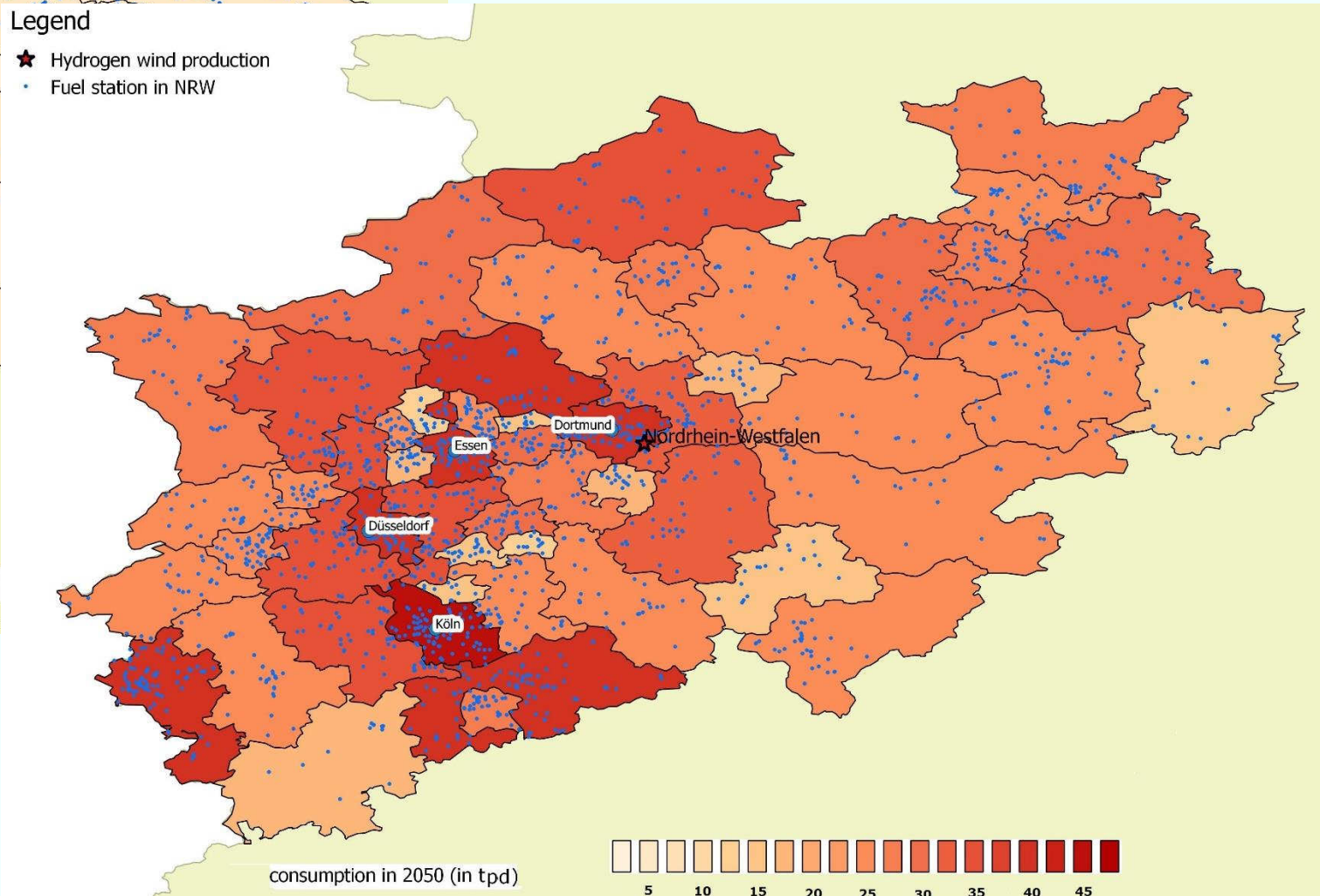
Results, NRW Hydrogen demand in 2030



2050



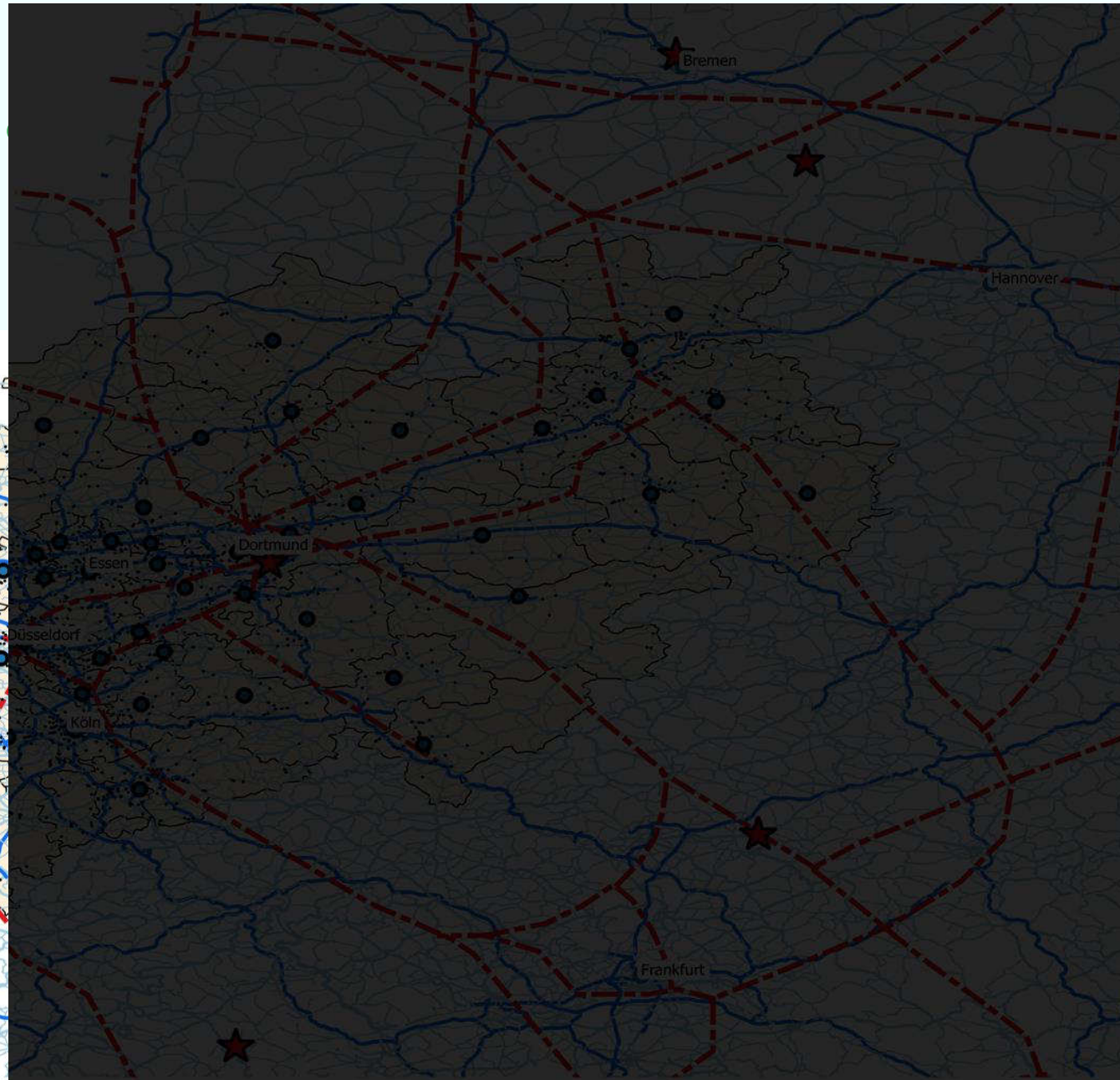
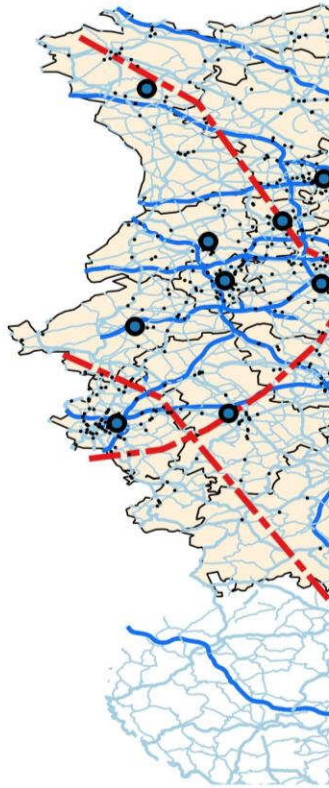
2030

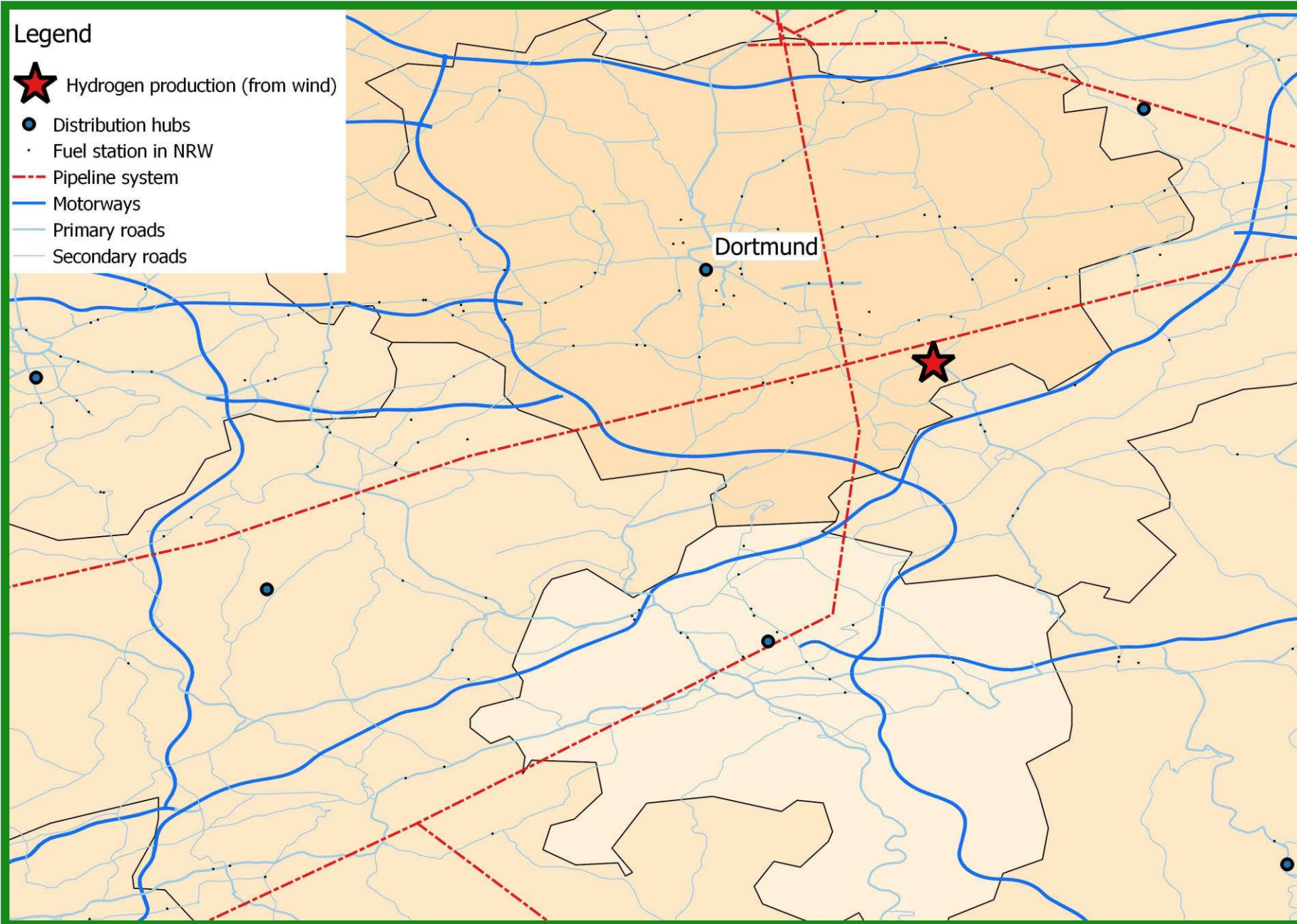


Methododol infrastructure

Legend

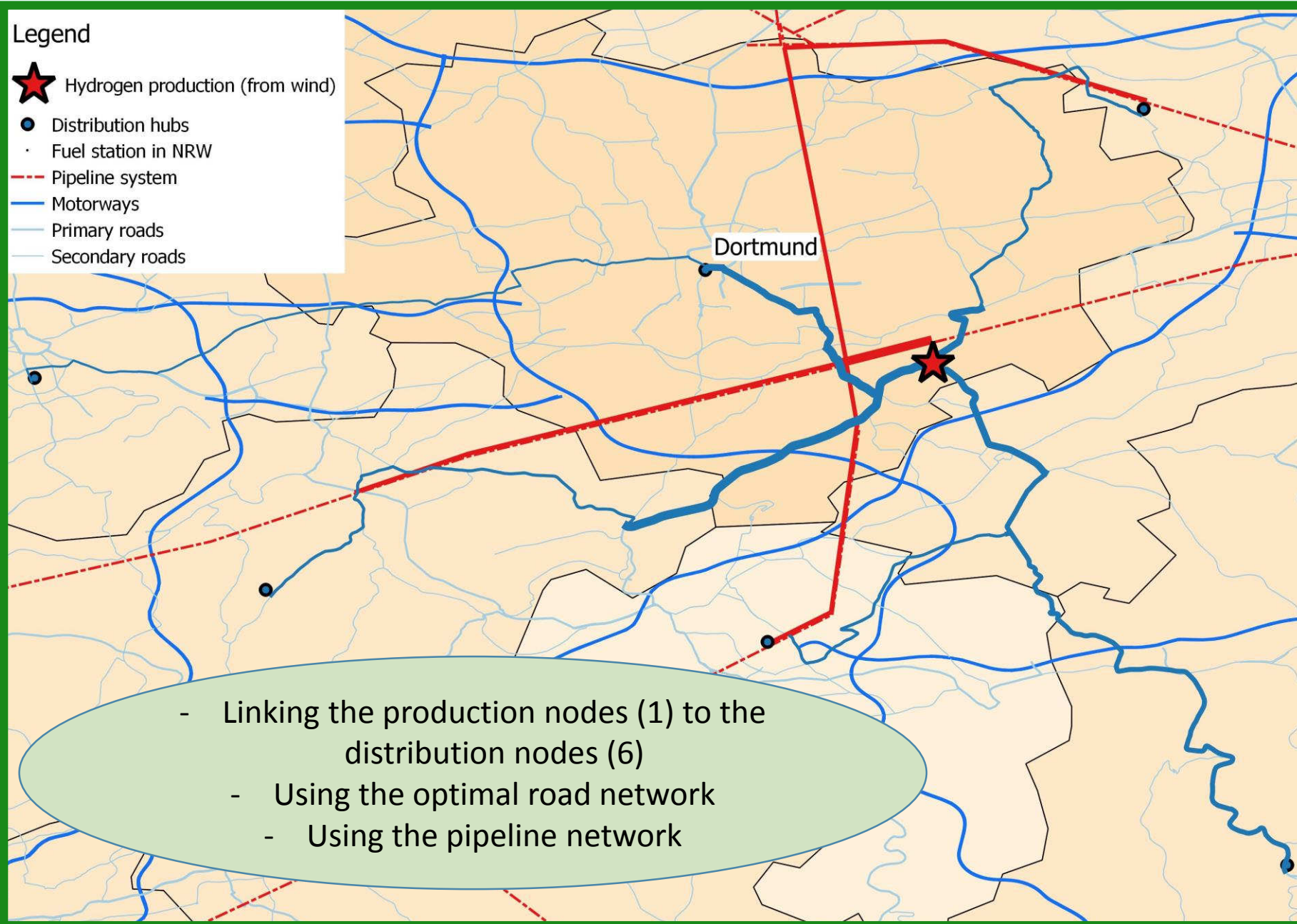
- ★ Hydrogen production (from wind)
- Distribution hubs
- Fuel station in NRW
- Pipeline system
- Motorway
- Primary roads
- Secondary roads
- NRW region





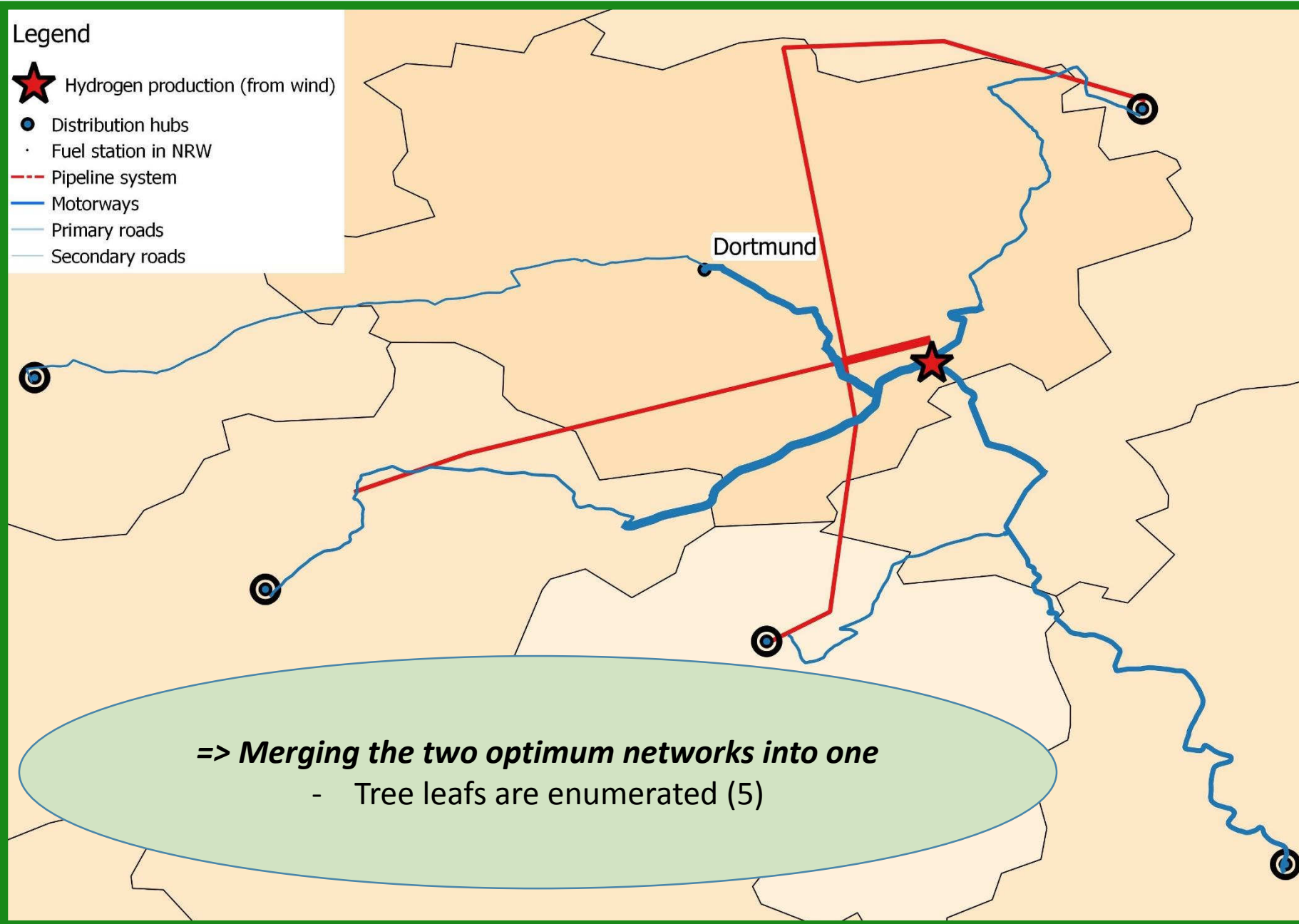
Legend

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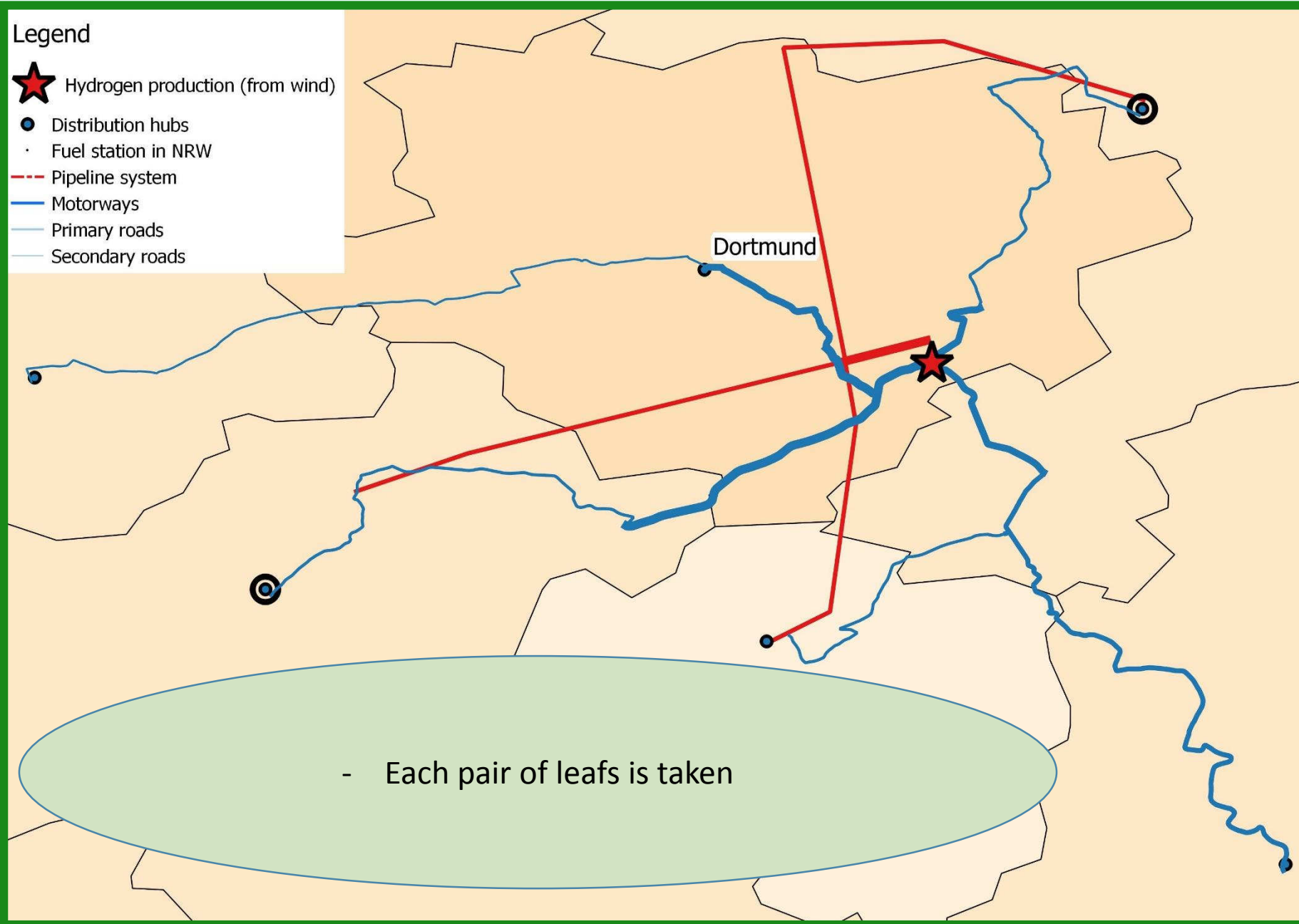
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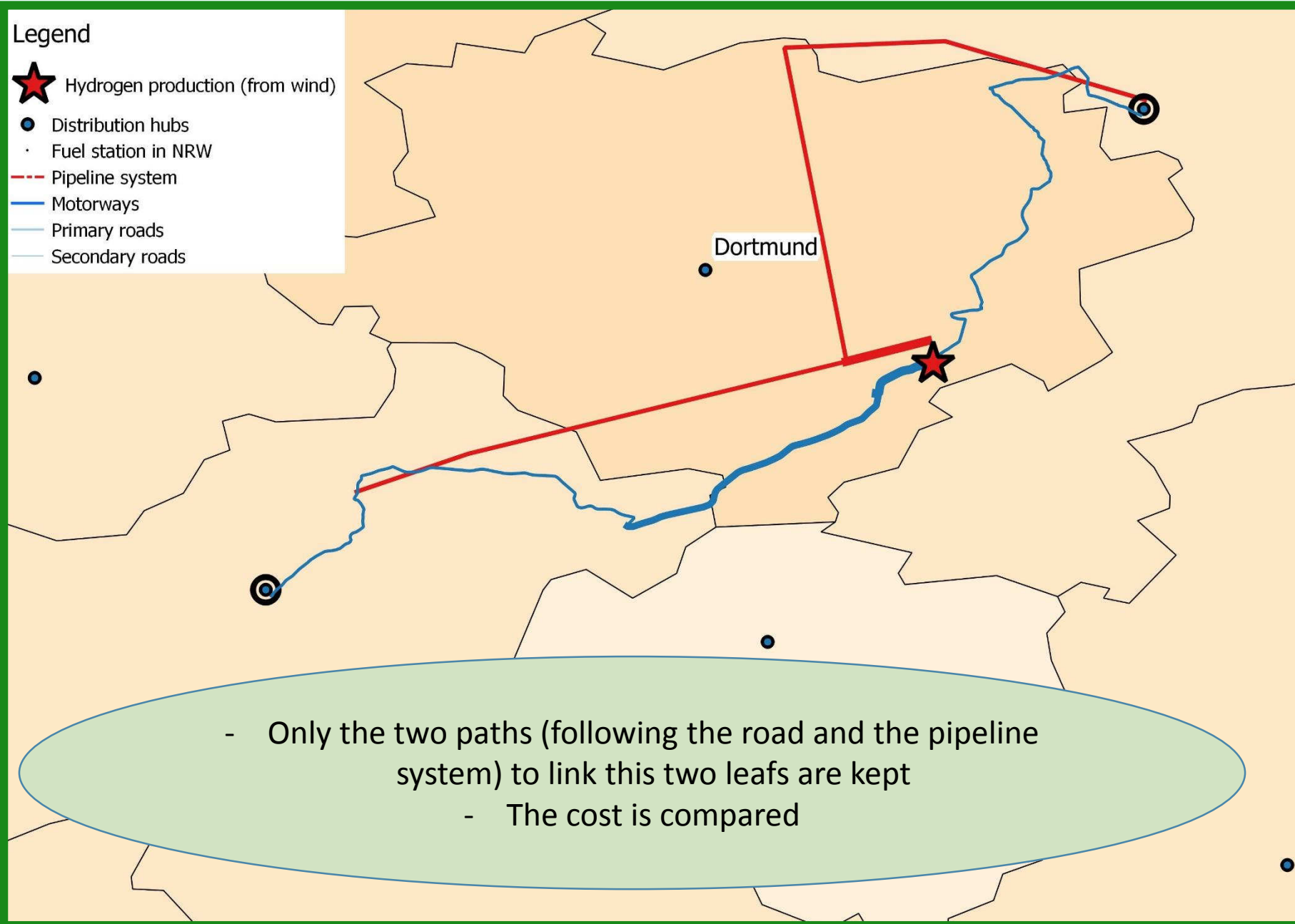
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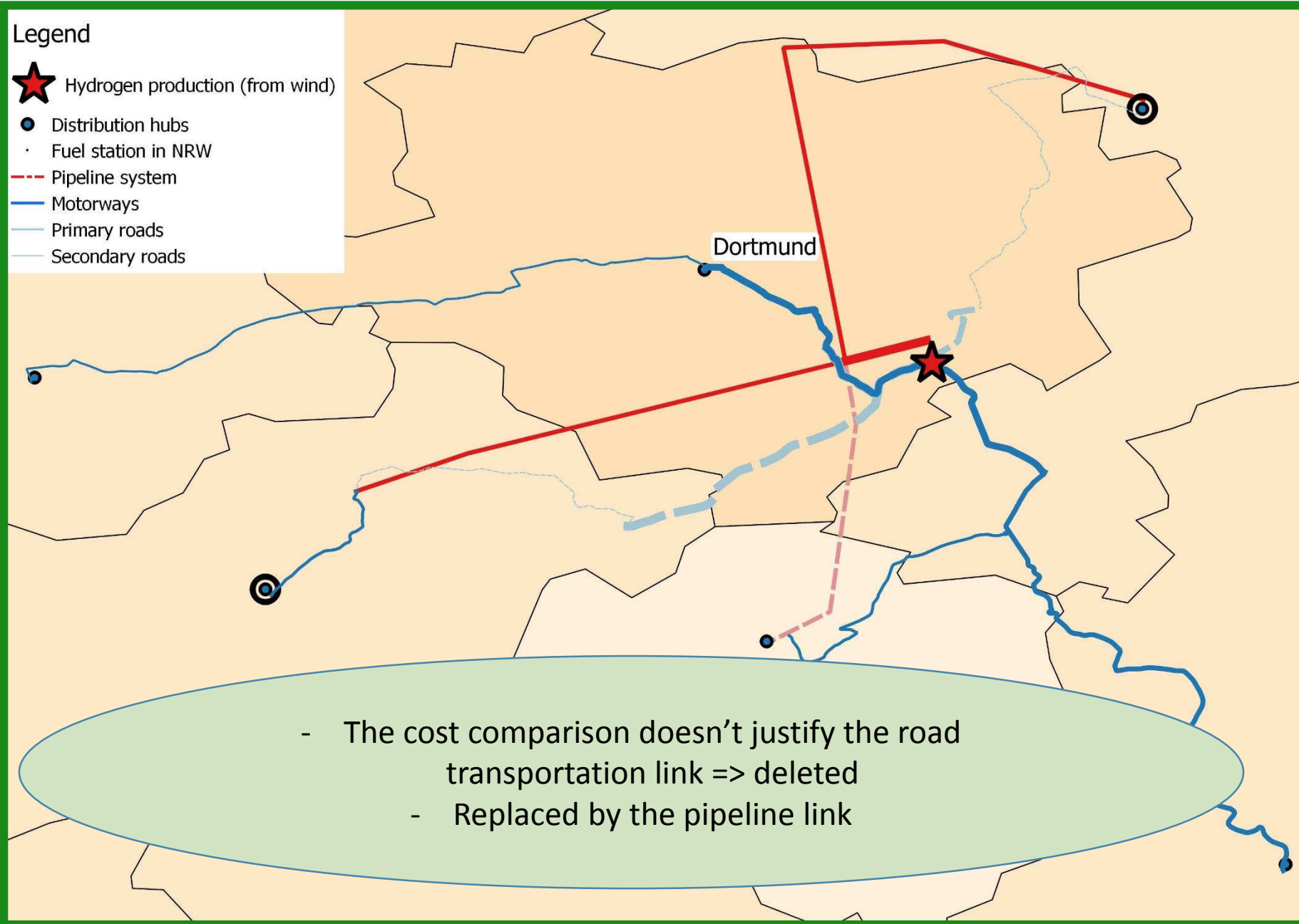
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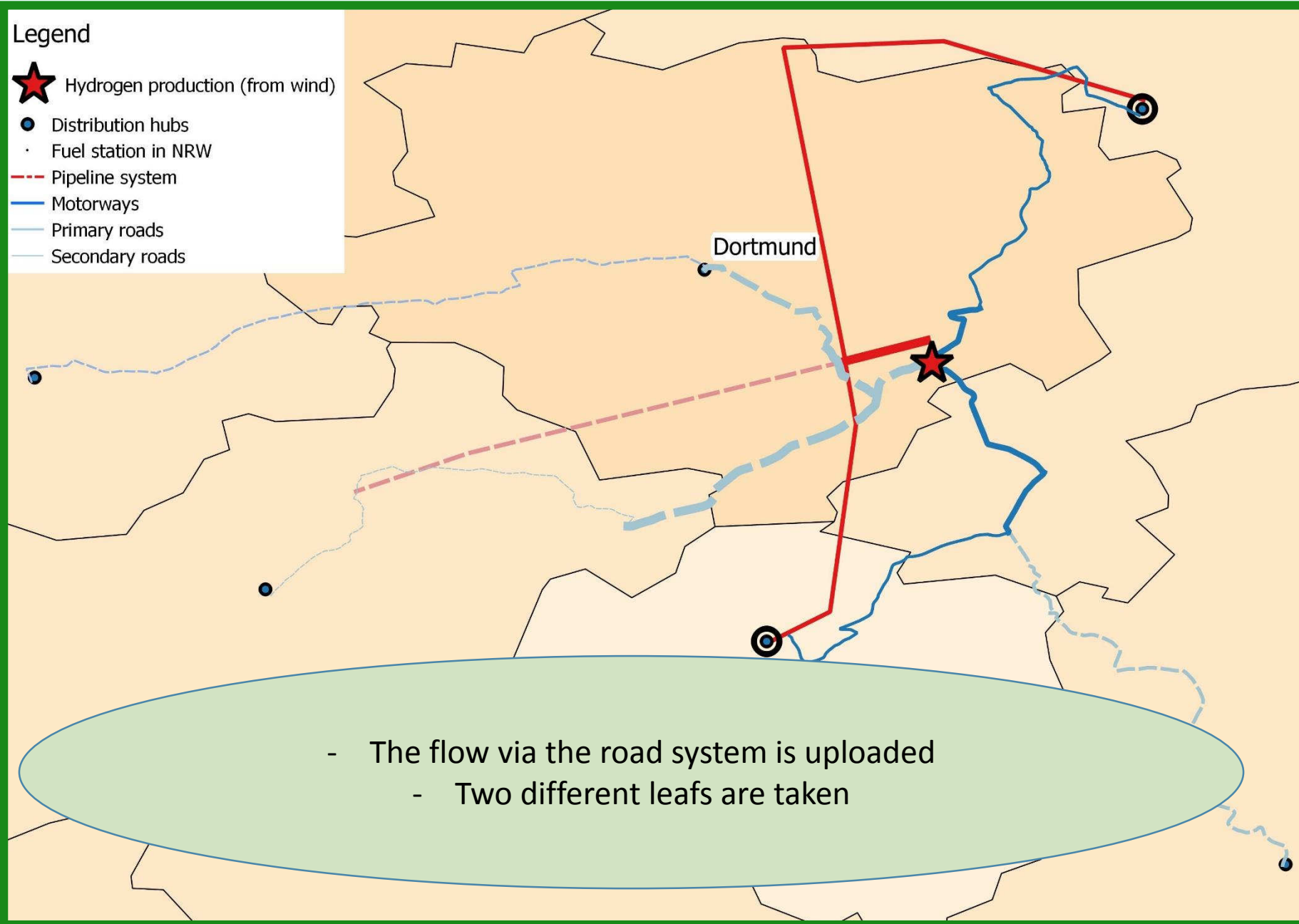
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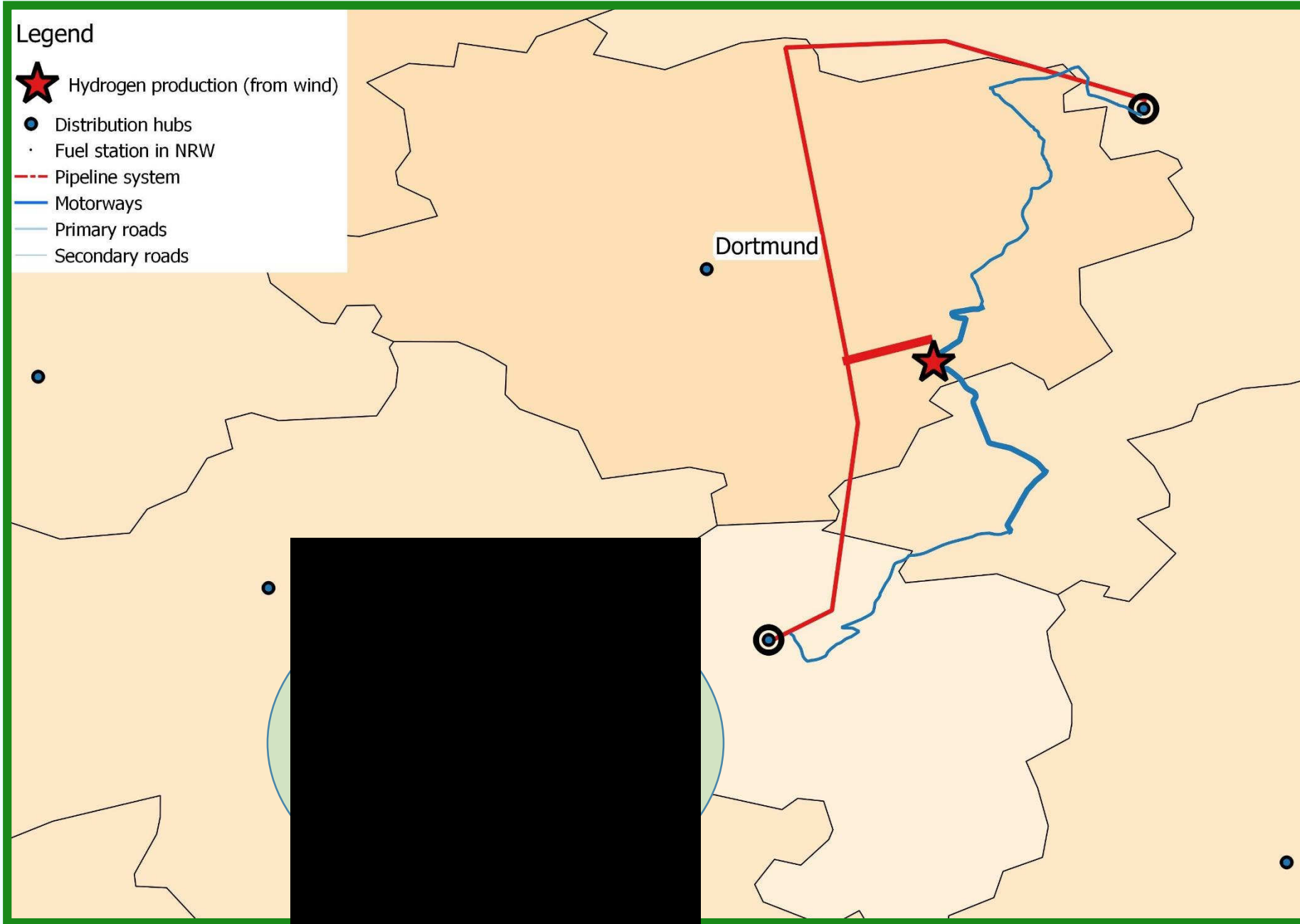
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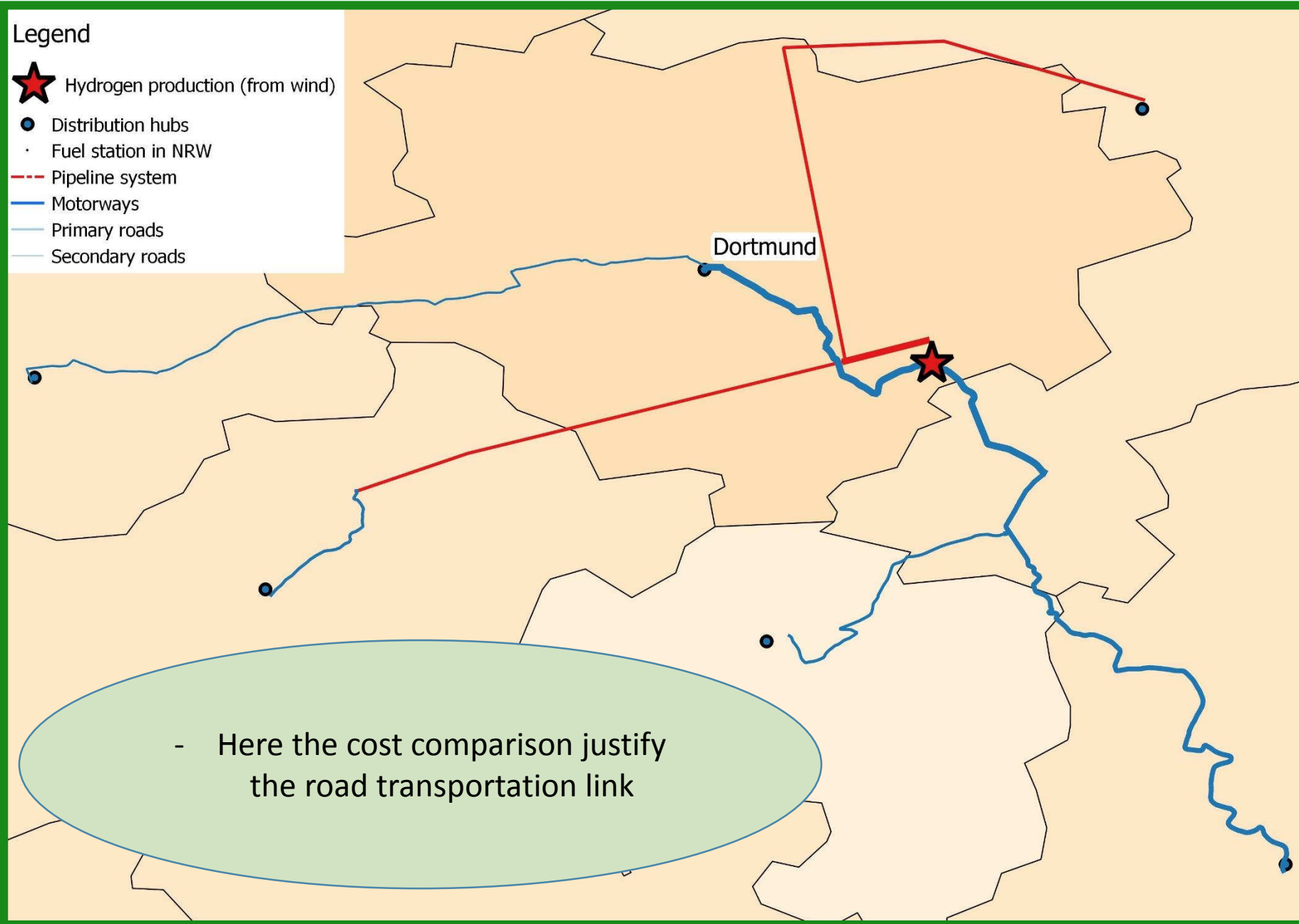
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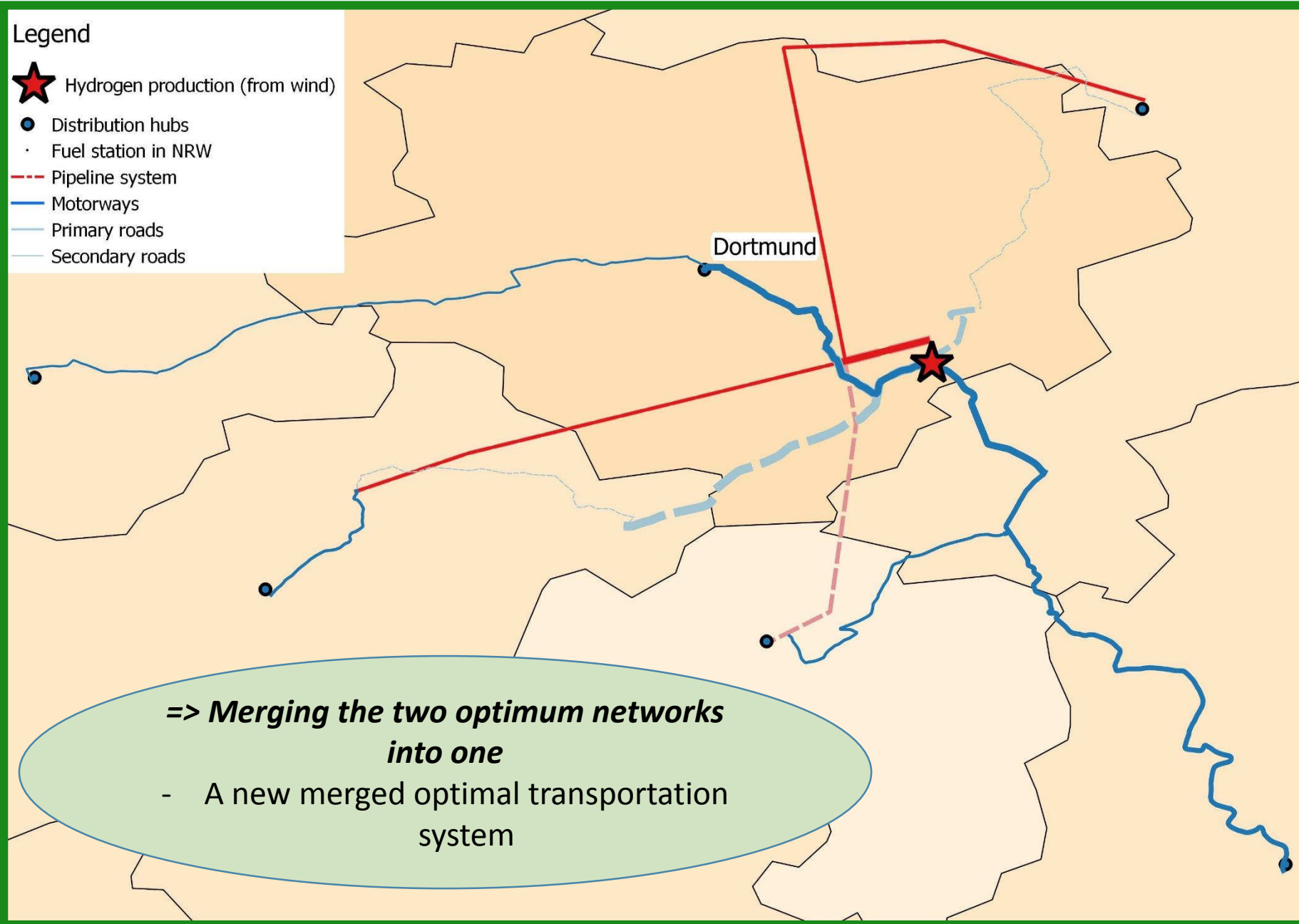
Legend

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Legend

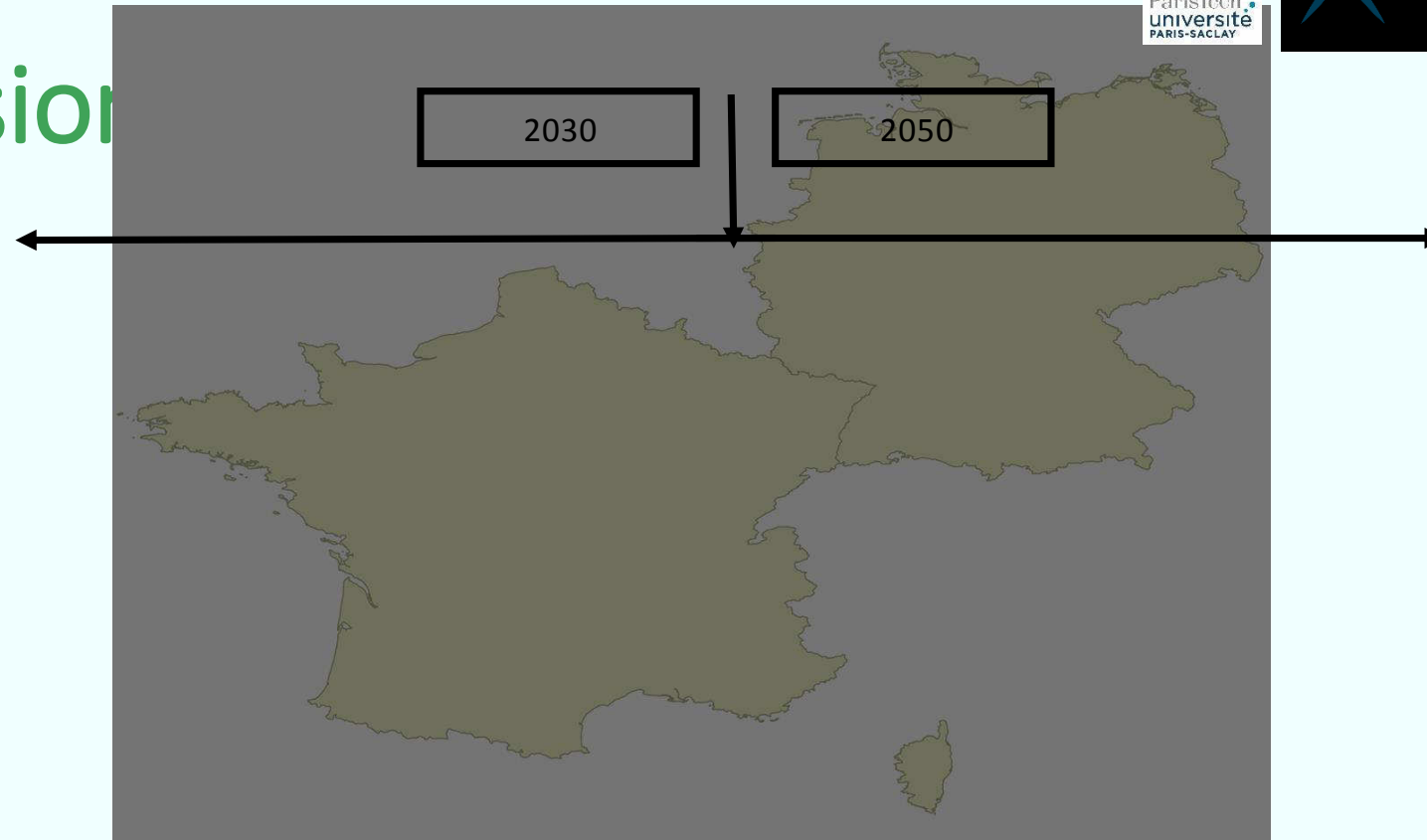
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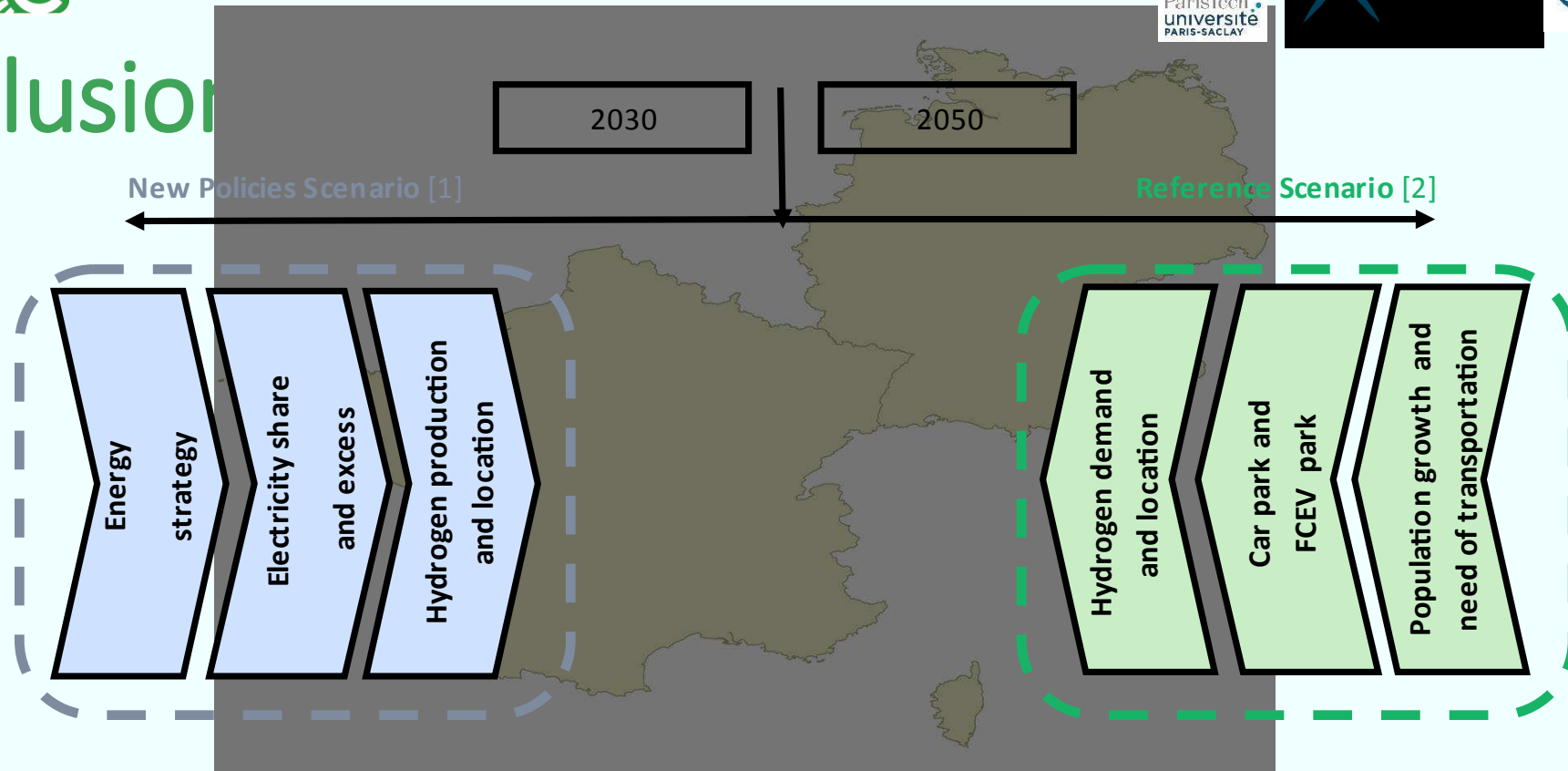
Conclusion



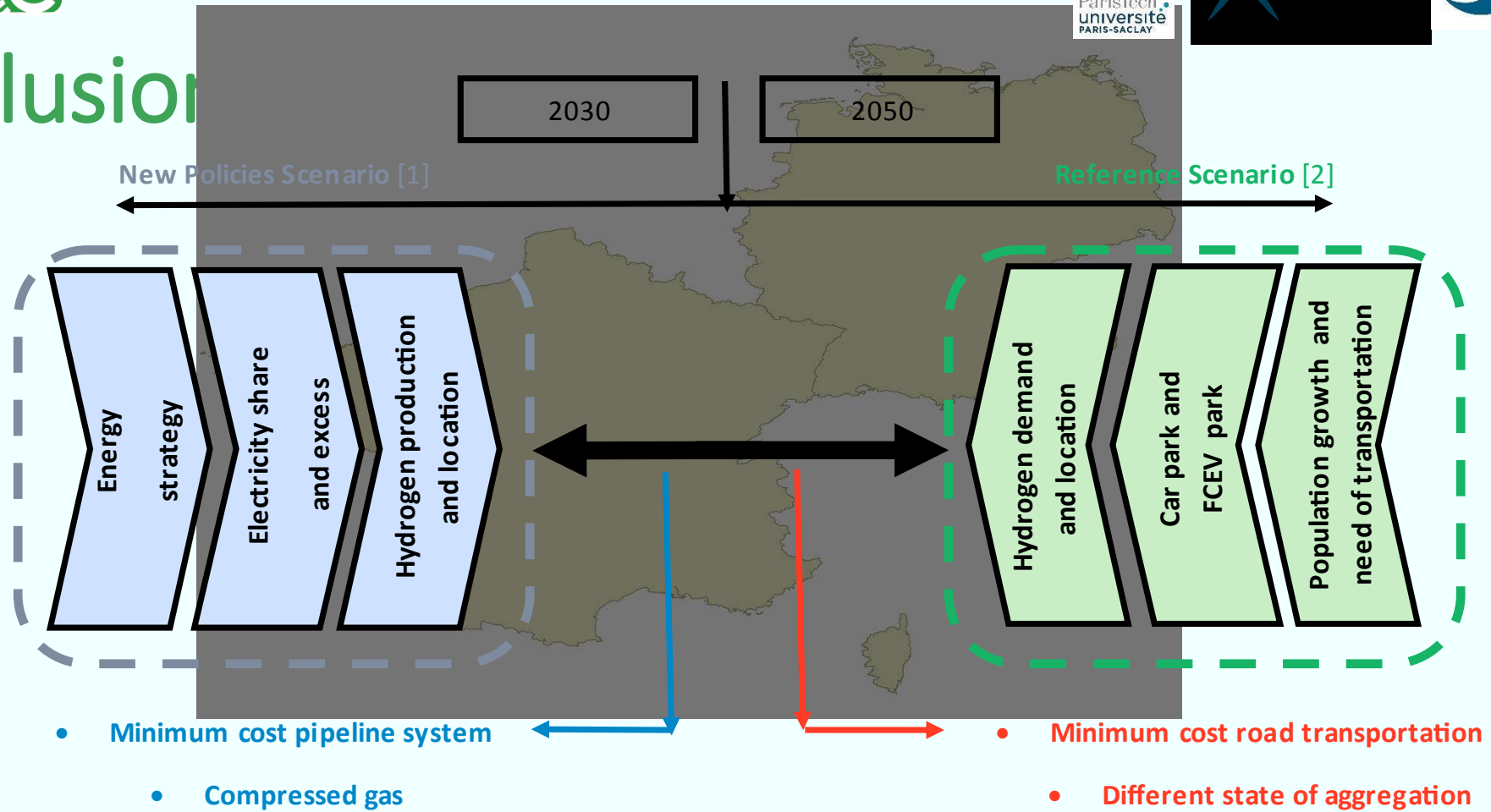
Conclusion



Conclusion



Conclusion



Conclusion

