



What do potential partner countries think about **P2X**?

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Overview of the Bilateral Energy Partnership Program

- **Commissioned by:** German Federal Ministry for Economic Affairs and Energy (BMWi)
- **Lead executing agency:** Energy ministries in participating partner countries
- **Energy Partnerships implemented by GIZ:**
 - Algeria (since 2015)
 - Brazil (since 2017)
 - Chile (since 2019)
 - China (since 2007)
 - India (since 2006)
 - Jordan (since 2019)
 - Mexico (since 2016)
 - Morocco (since 2012)
 - South Africa (since 2013)
 - Tunisia (since 2012)

Energy Dialogues:

- Iran (since 2017)



Fields of activity and inputs

- **Intergovernmental dialogue** on energy policy with partner countries, including contributions from multilateral actors
- **Advice** on policy for the global energy transition
- **Cooperation** with the private sector, academia and civil society actors
- Facilitating **mutual knowledge transfer** on current energy policy issues
- **Communication and knowledge management** in relation to the energy transition



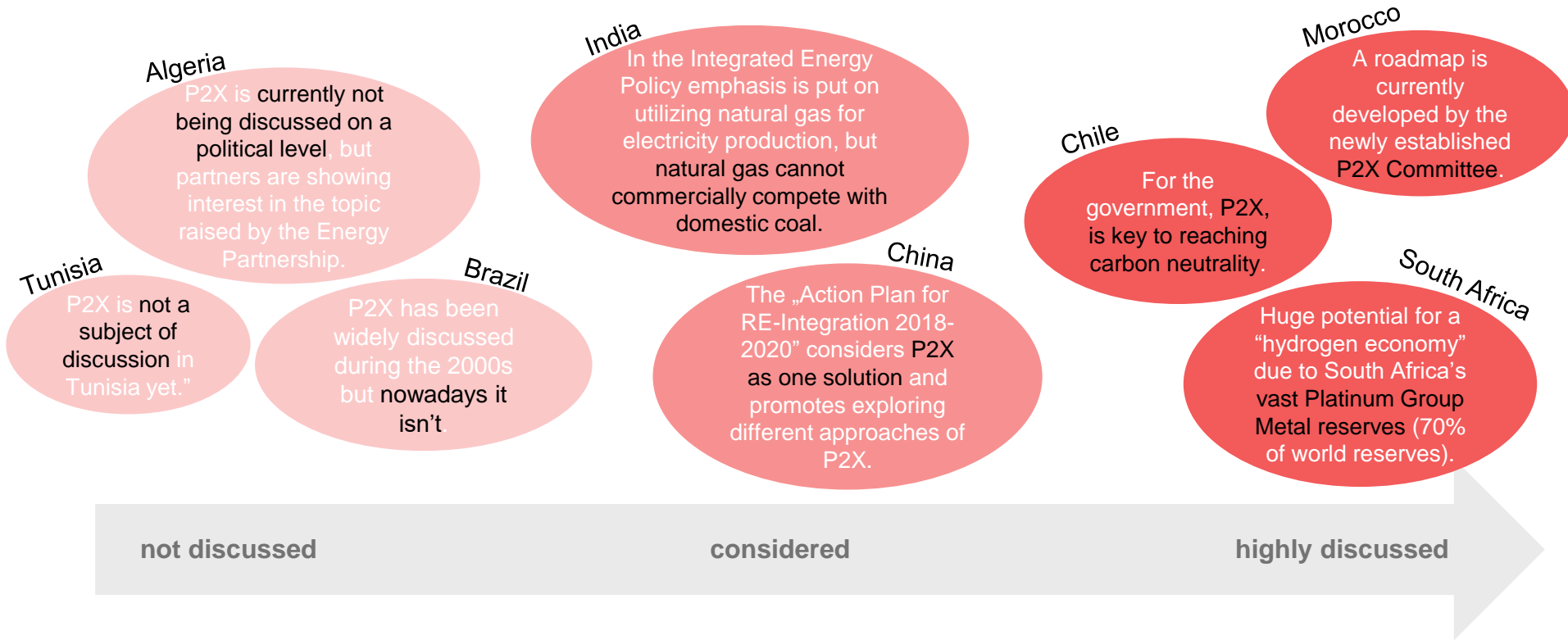
Informal survey among EP secretariats in selected countries in September 2019

Survey questions

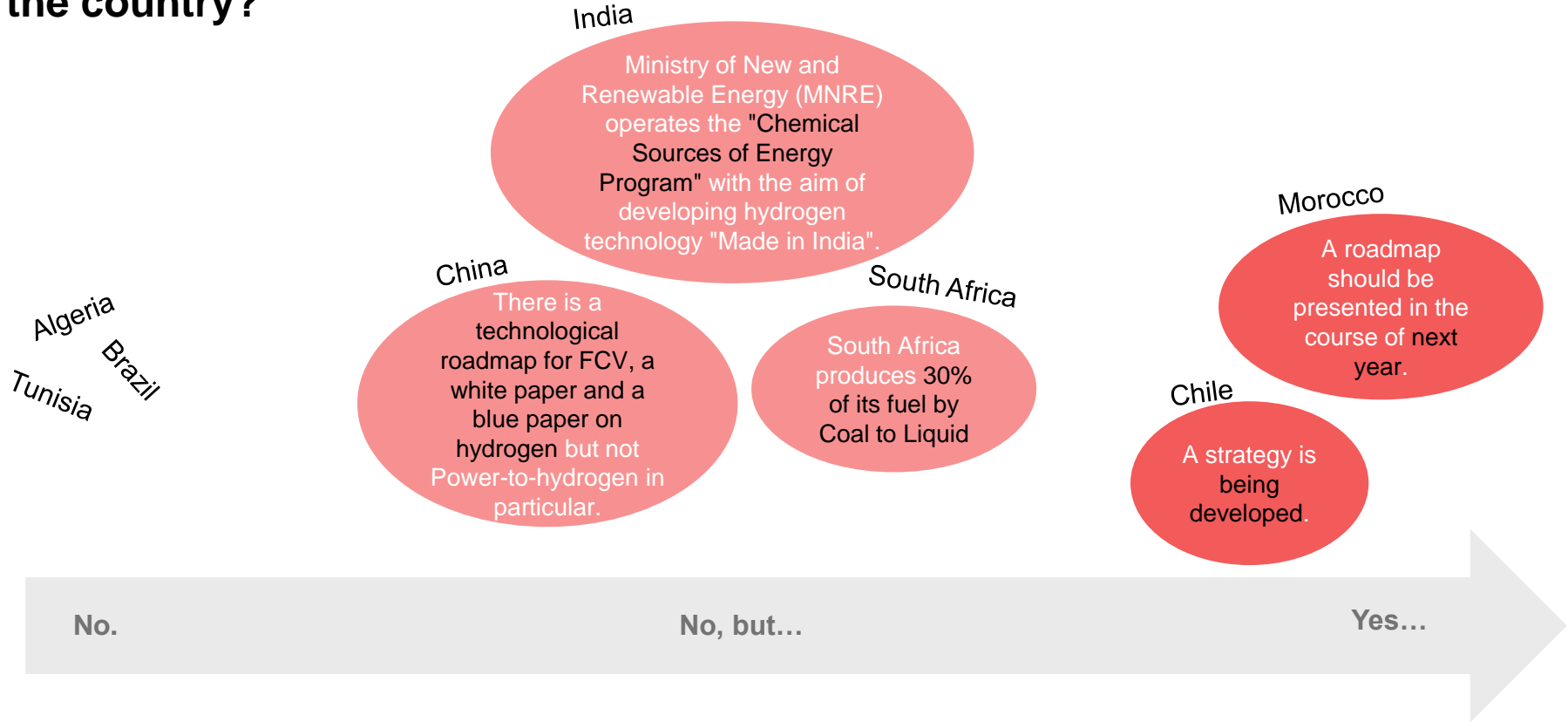
1. How is P2X perceived and discussed politically and technologically in the country?
2. Does a P2X strategy already exist (in particular concerning P2G and P2L) in the country?
3. Is P2X actively supported by the government or is it driven by the private sector?
4. Does the country already consider sustainability criteria (land and water use, environmental impacts...)?
5. Does the country focus on the local market or does it already consider exports?
6. Are first P2X projects implemented in the country?
7. How strong is the company landscape in this field in the country?
8. What support can be offered by Germany to develop a P2X market in the country?



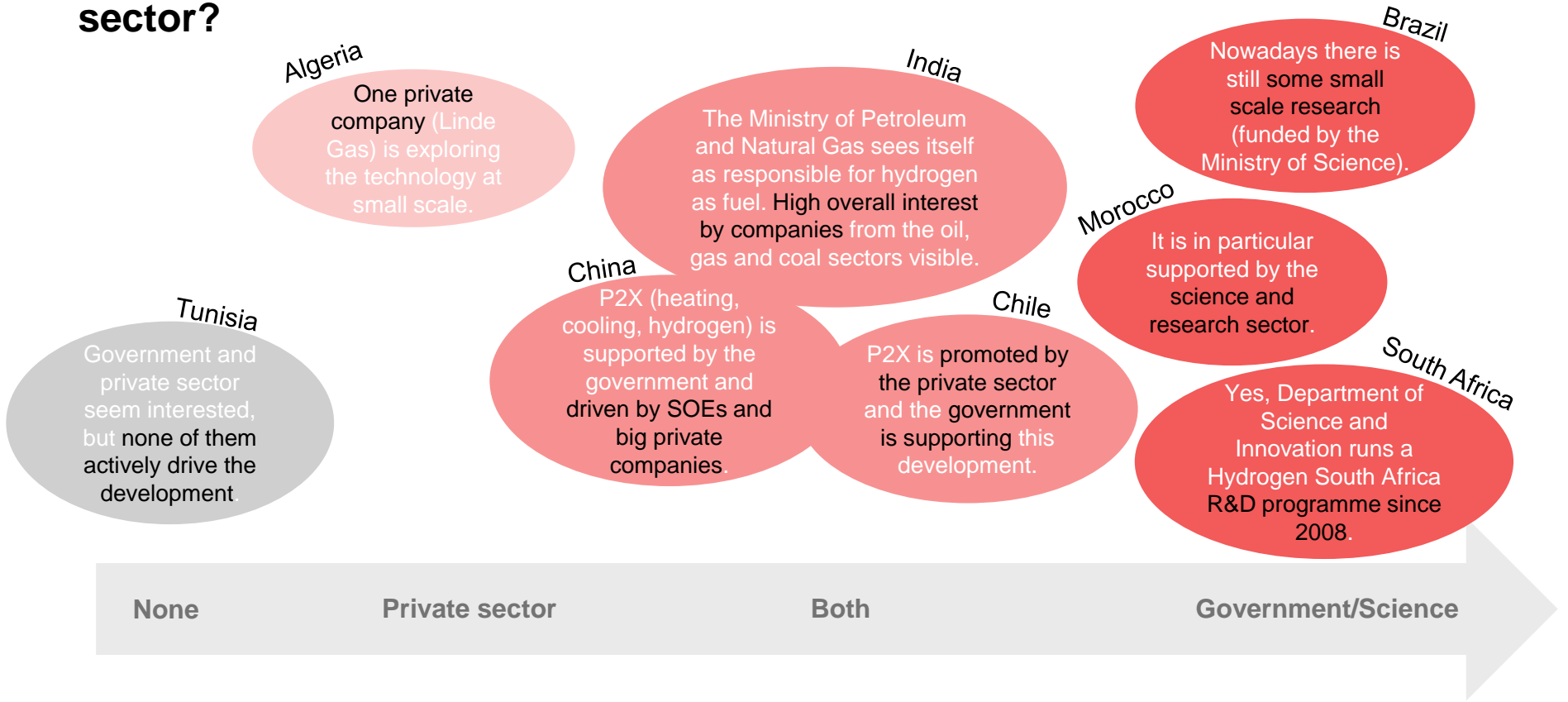
How is P2X perceived and discussed politically and technologically in the country?



Does a P2X strategy already exist (in particular concerning P2G and P2L) in the country?



Is P2X actively supported by the government or is it driven by the private sector?



Does the country already consider sustainability criteria (land and water use, environmental impacts...)?

Brazil

considers its energy matrix already clean, so it is not a concern.

Algeria

Sustainability criteria are generally being considered for all kind of infrastructure projects, so it is to be assumed that this would be the case for P2X.

Tunisia

For RE yes, it can be assumed that these factors would play a role for P2X development as well.

South Africa

Water use plays an important role in the Integrated Resource Plan (power plant development plan).

India

Yes in all power projects excluding the solar and wind

China

Water shortage in most regions with high curtailment of RE limits the development of PtH₂.

Morocco

Yes, but the coal lobby requests to talk about P2X rather than green P2X.

Chile

It is intended that all the electrical energy for P2X will be of renewable origin (+ land use & water regulations)

No.

Not yet...

Yes...

Does the country focus on the local market or does it already consider exports?

Algeria

Hydrogen production in the private sector currently focusses on satisfying local demand.

India

Limited resources of natural gas reserves are currently being used for fertilizer production etc. and hence exports of gas cannot happen.

China

China has gas shortage and P2G should contribute to the independence of gas import. So far, no consideration of exports

Tunisia

In the first discussions, both options were considered.

South Africa

Japan and Europe have been identified as potential markets. The current synthetic fuel from CtL is mainly used on the local market.

Morocco

The aim is first to serve the local market. However, Morocco had always ambitions to export energy derivatives to Europe.

Chile

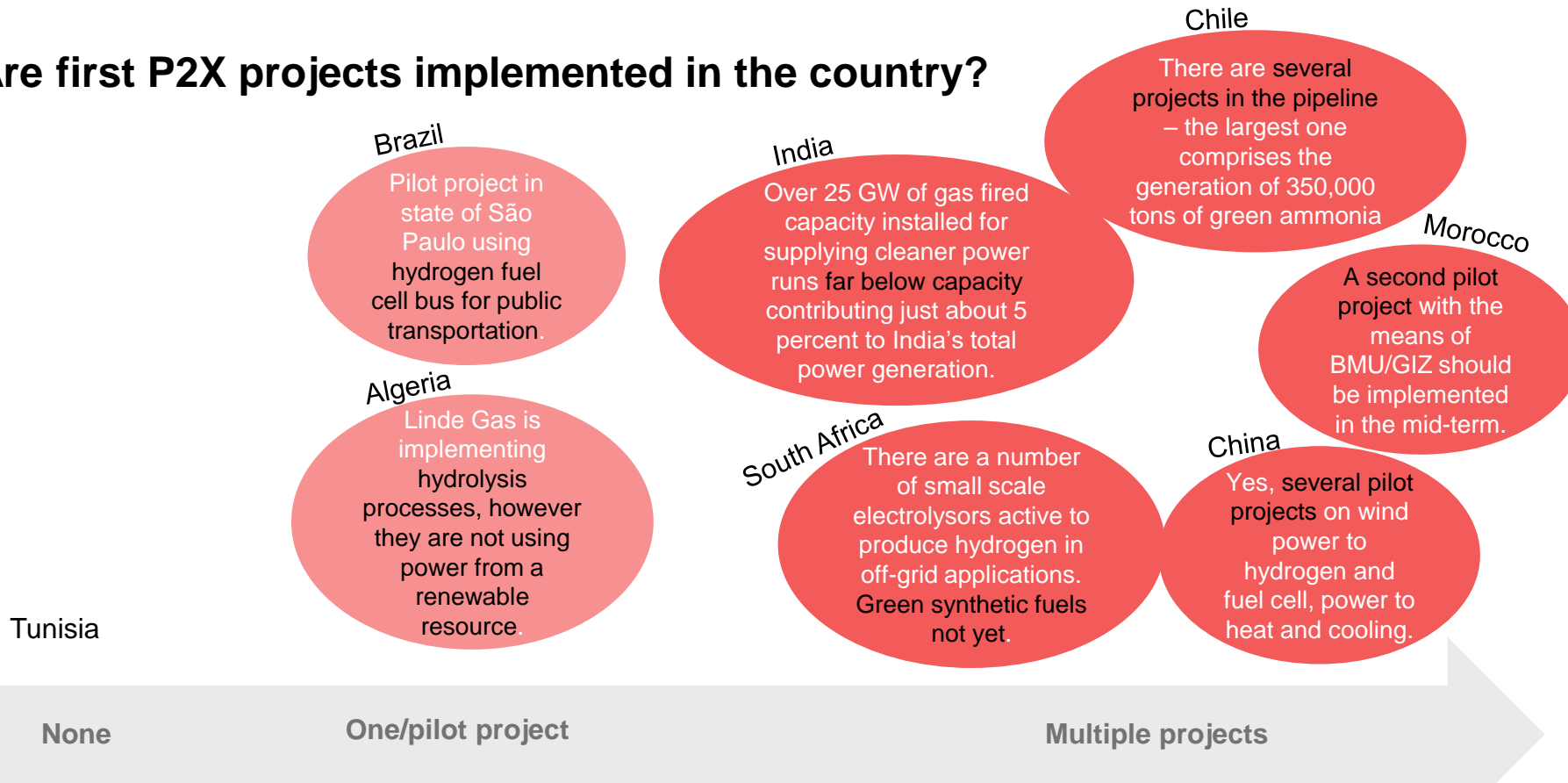
The short and medium term goals are for national use. In the long term, the objective is to export „renewable energy“ (e.g. to California, Japan and Germany).

Local market/no exports

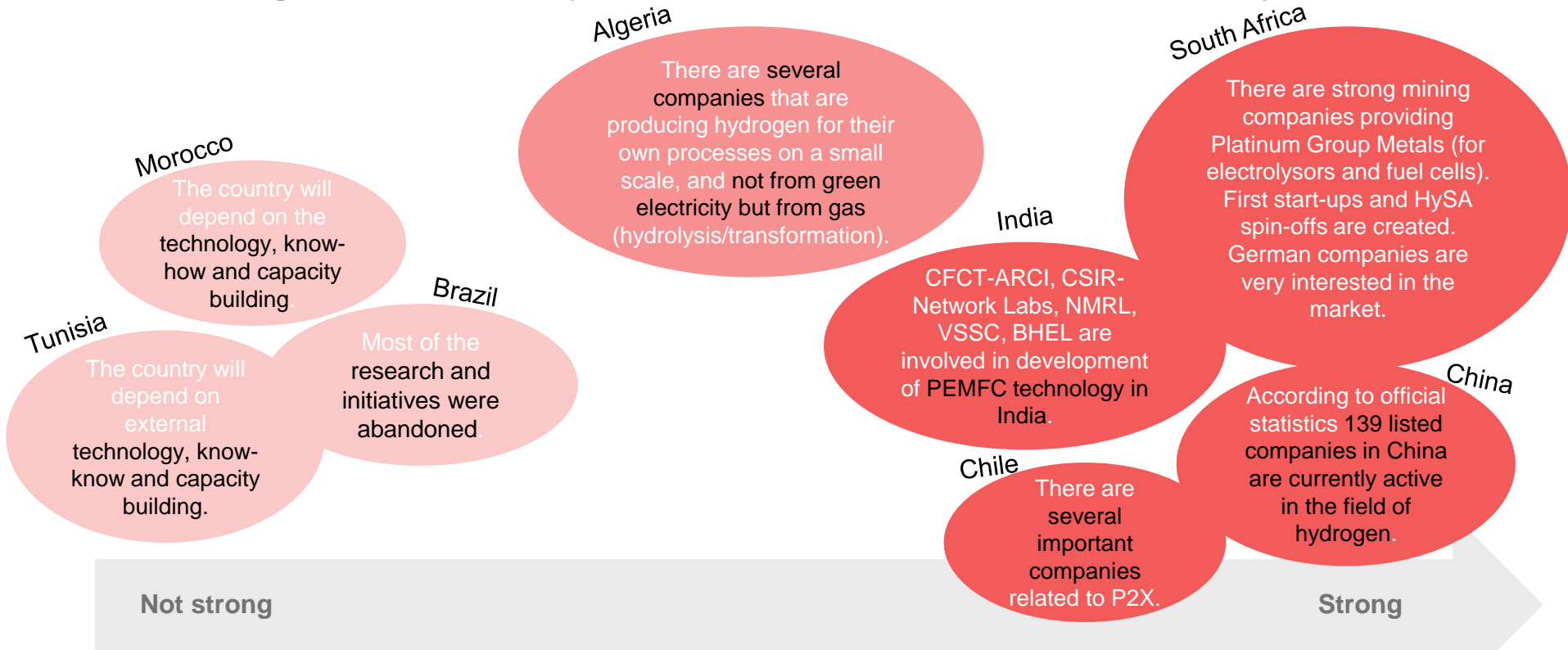
Both

Exports

Are first P2X projects implemented in the country?



How strong is the company landscape in this field in the country?



What support can be offered by Germany to develop a P2X market in the country?

Algeria

The initiation of a discussion with government officials on the perspectives of P2X and its benefits for the energy sector and the economy is recommended.

Morocco

German products along the value chain, capacity building, up-scaling projects.

South Africa

The EP developed a concept for a support organisation following the NOW-example in Germany. Further support would be needed to put pilot projects on the ground.

China

German products and technologies along the value chain, capacity building, up-scaling projects.

Chile

Products related to generation, transport, storage and distribution. Chemical transformation to several products. Scale up, regulations, technical training.

Brazil

Bringing back the discussion with data and applications – especially in a scenario with renewable intermittent generation.

Tunisia

First: Providing information on P2X technology and potential

Dialogue/information

Capacity building/Products

For more information please contact

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