



Les systèmes énergétiques du futur

Vision d'Elia à l'horizon 2030

Cycle de Rencontres de l'Energie, 11.03.2016

What we understood from CWaPe's vision

Energy mix is mainly oriented towards RES

- Resources are mainly decentralised
- Seems technically feasible

The “smart” grid is for everyone

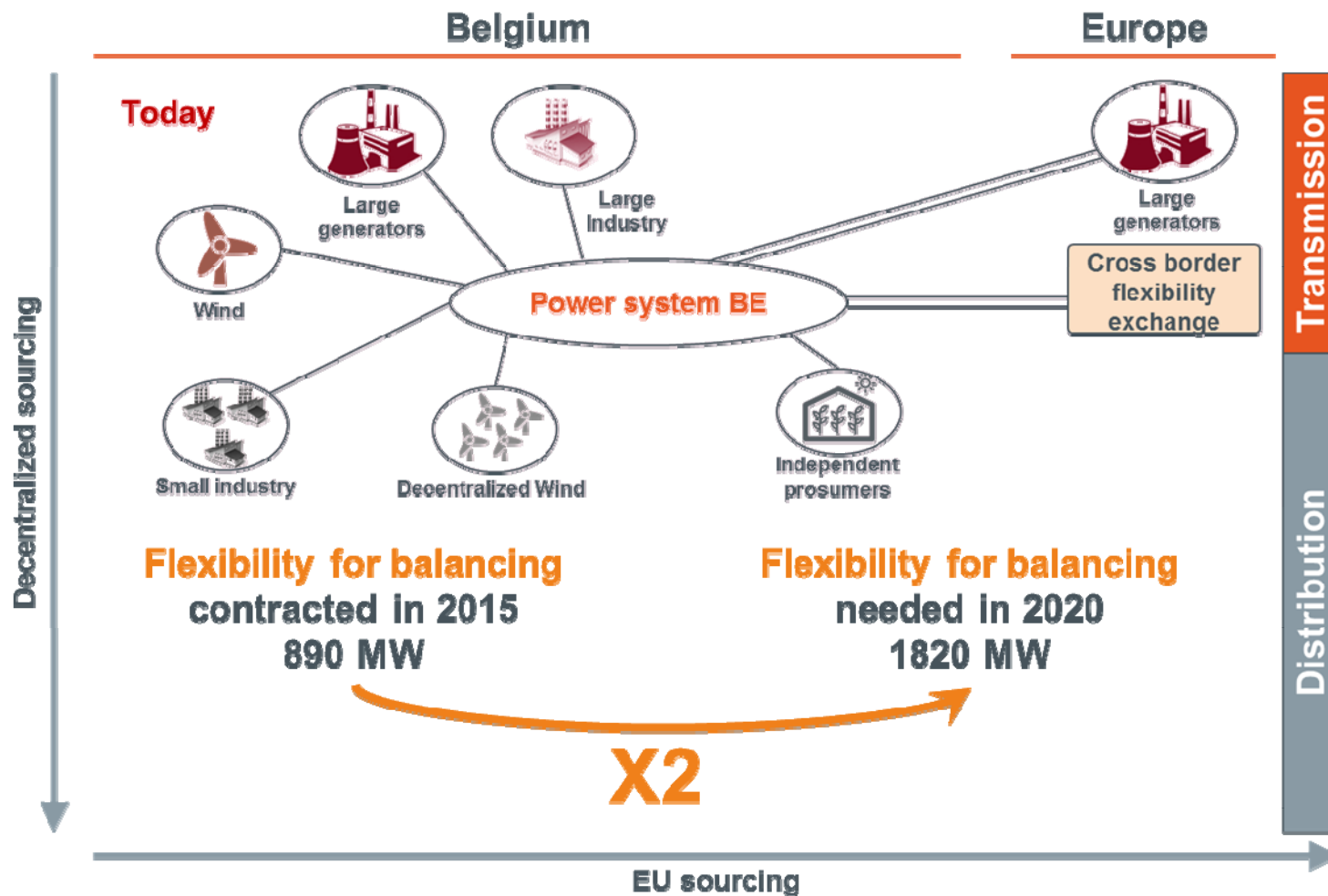
Supported by:

- Flexibility from generation and demand
- Cost minimisation and cost socialisation
- Adaptation to power electronics (enhanced security measures, provision of decentralised ancillary services)

Clearly defined roles are needed

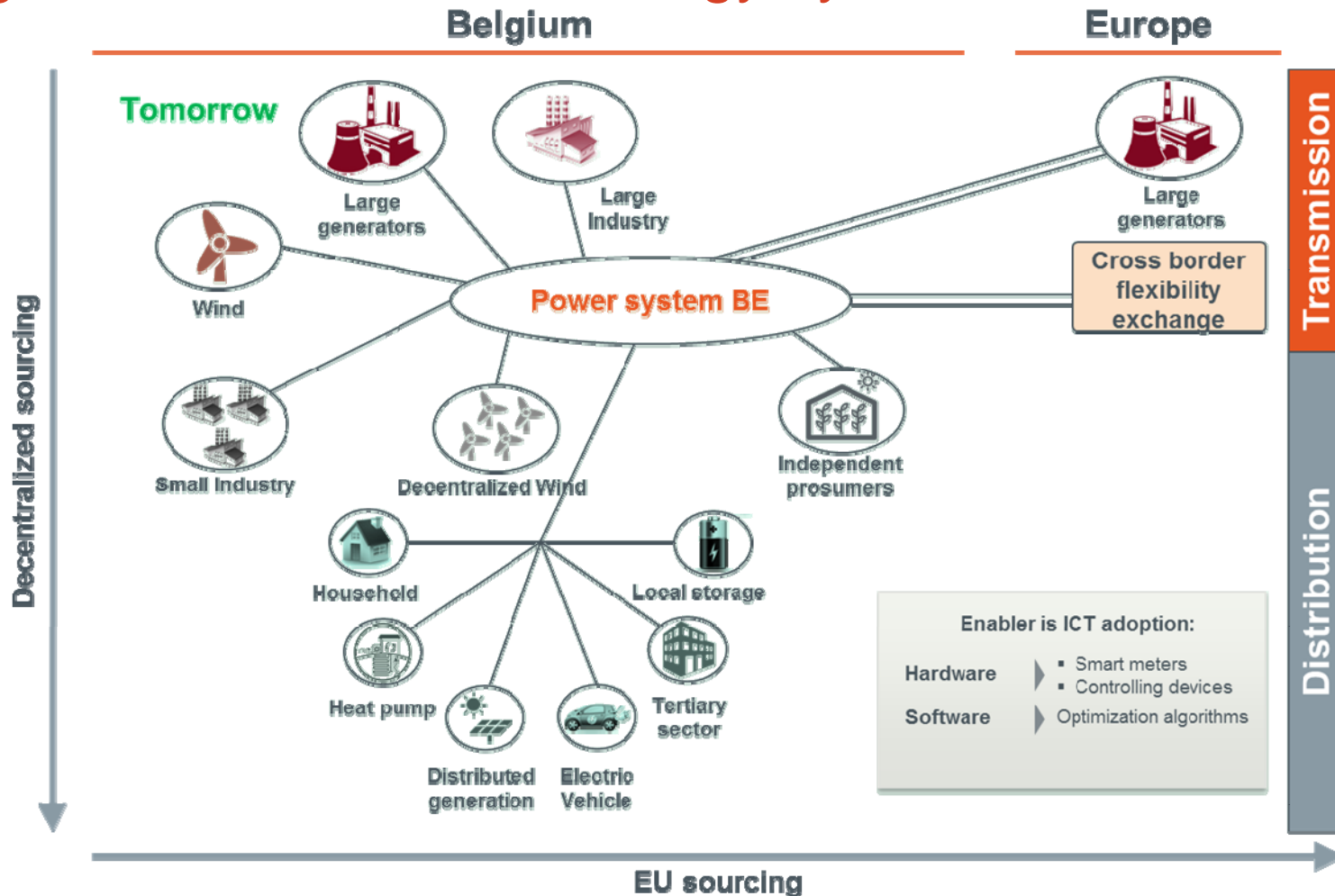
- DSO: Responsible until the meter, provides “incentive” tariffs
- Supplier: Single point of contact, invoicing responsibility
- Intermediaries (aggregator, ESCO¹): chosen by the end-user, in an adapted market model

Already today: the electricity system is evolving due to more renewables and digitalisation



The flexibility needed to maintain the system balancing is increasing. Balancing is becoming more and more pan-European

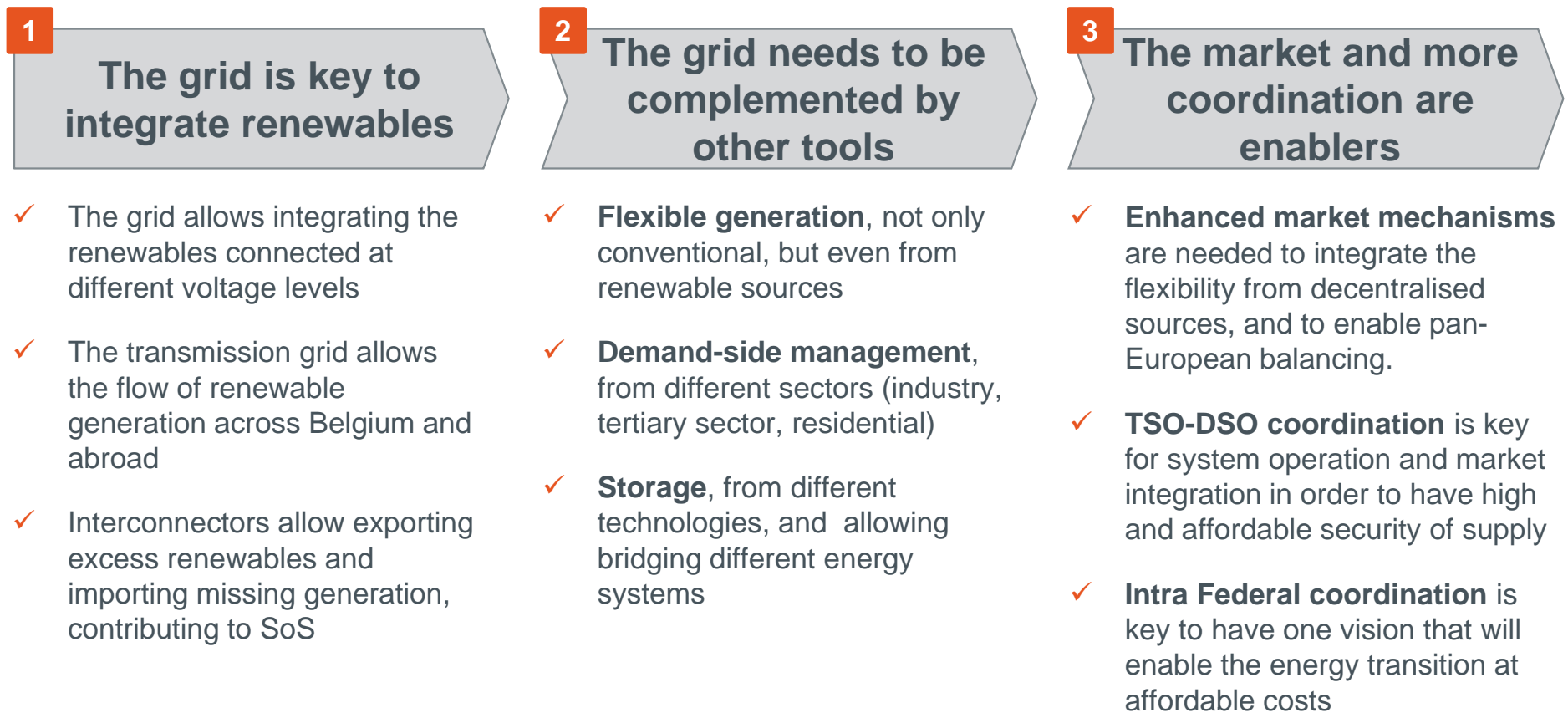
Elia's vision of the future: more European integration with integrated decentralised energy system



Flexibility from decentralised energy resources (even at end-user level) participates actively in the balancing, and supports the massive integration of renewables

To implement our vision, key elements are needed

To manage an even more complex electricity system in the future, **we need a consistent, long-term and stable approach** to guarantee security of supply at affordable costs



Conclusion

- ✓ The future will be with more renewables (connected at different levels) in the energy mix
- ✓ Our vision is more European integration (balancing is pan-European) with integrated decentralised energy system (flexibility from decentralised resources contributing to the balancing)
- ✓ To build such a vision while guarantee secure and affordable security of supply, we will need different key elements
 - ✓ The grid, to integrate renewables at different levels and transport their energy within Belgium and abroad
 - ✓ Flexible generation, demand-side management and storage, which complement the grid
 - ✓ Enhanced market mechanisms and TSO-DSO coordination, to enable the optimal use of the different elements

Many thanks for your attention!

