

Overview of Energy Communities Value Chain : Technologies and digital tools Example from WALLONIA

23/02/2021 - SmartEnergy - Renaud Dachouffe - Cluster TWEED

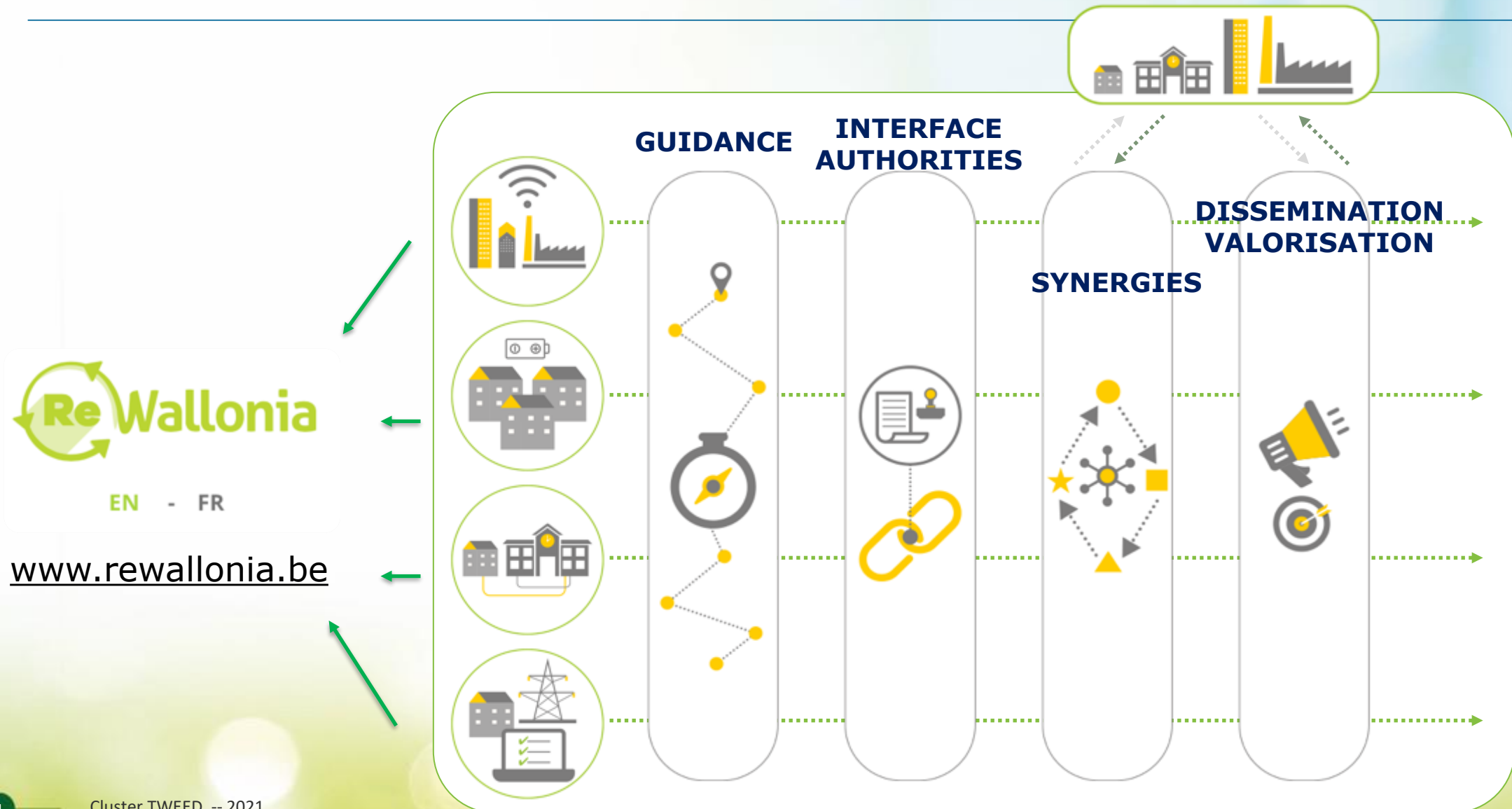
Summary of the presentation

1. Introduction of the context in Wallonia (Belgium)
2. Main projects
3. Value Chain of the technologies and digital tools

LEGAL : situation

- Government : Regulation « 2019 May 02 »
https://wallex.wallonie.be/files/medias/10/EV_01-01-20_-decret_electricite.pdf
 - Gives the lines of the REC only (E.U. Dir. RED II)
- Has to be completed → **New "Decree"** in preparation !
 - 1st approval by Walloon Gov. on 16/12/20
 - Massive reaction of large types of actors (citizens, industrial, tertiary, etc.)
- Interface with Pilotes & Rnd Projects → ..2nd ..3rd version of the text

OFFER : Management of TWEED (link ROLECS)

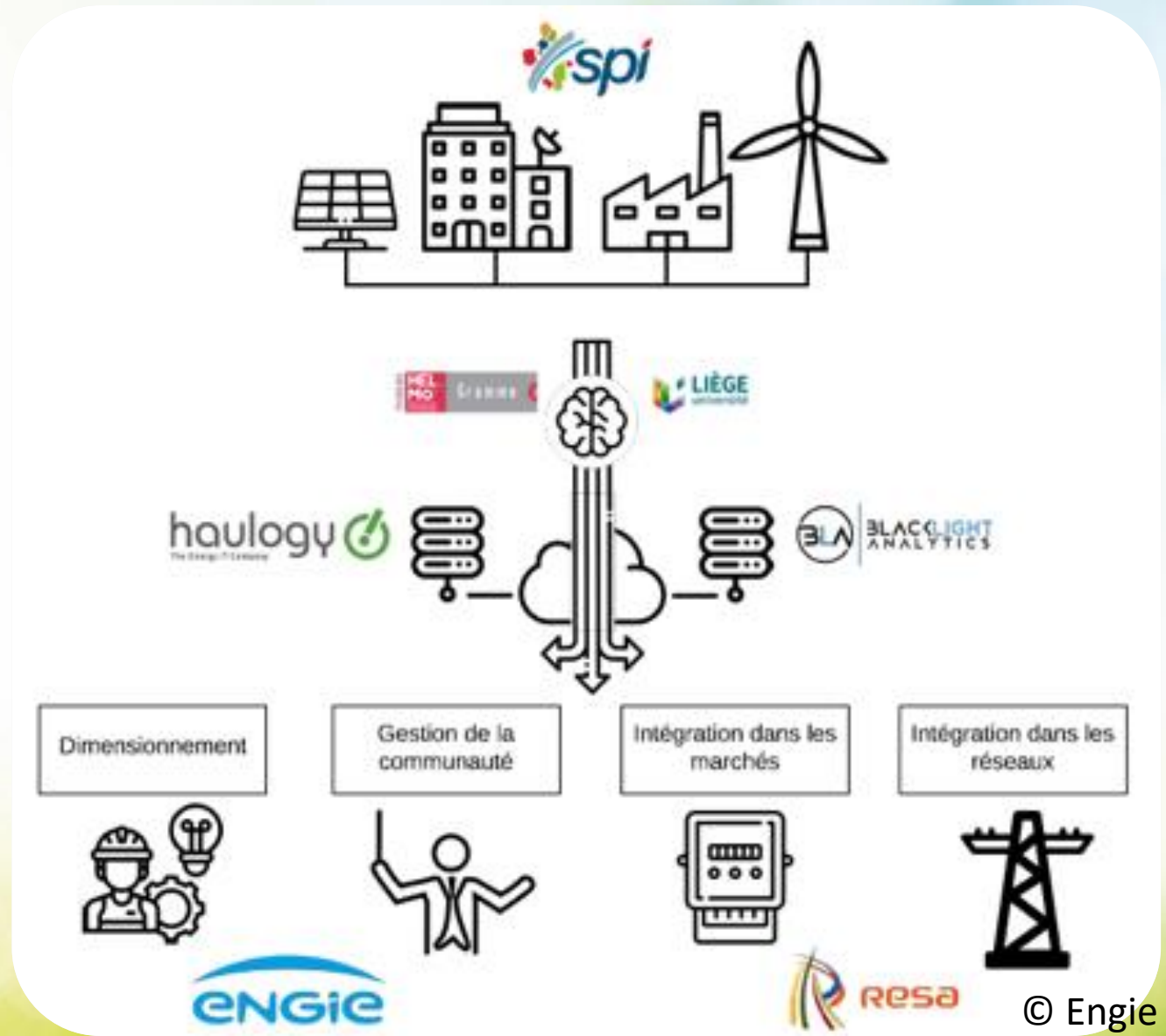


OFFER : Quick overview of the Projects



IntegCER

- Digital Tools:
 - Design of the C/R EC
 - Integration into the grids and the markets
 - Operational Management
- Pilot
 - 27 companies
 - 22 GWh consump.



H2 Coop Storage

● Digital Tools:

— MultiEnergy Management

- H2
- Elec (incl. Storage)
- Heat

— provider minded

● Pilot in Wallonia:

- mix market / hotel / flat



Partners :

- ATM [ULB]
- CLEF
- Fabricom
- Cenaer
- Memoco)
- Zuidtrant
- NTNU
- SIF



NORWAY

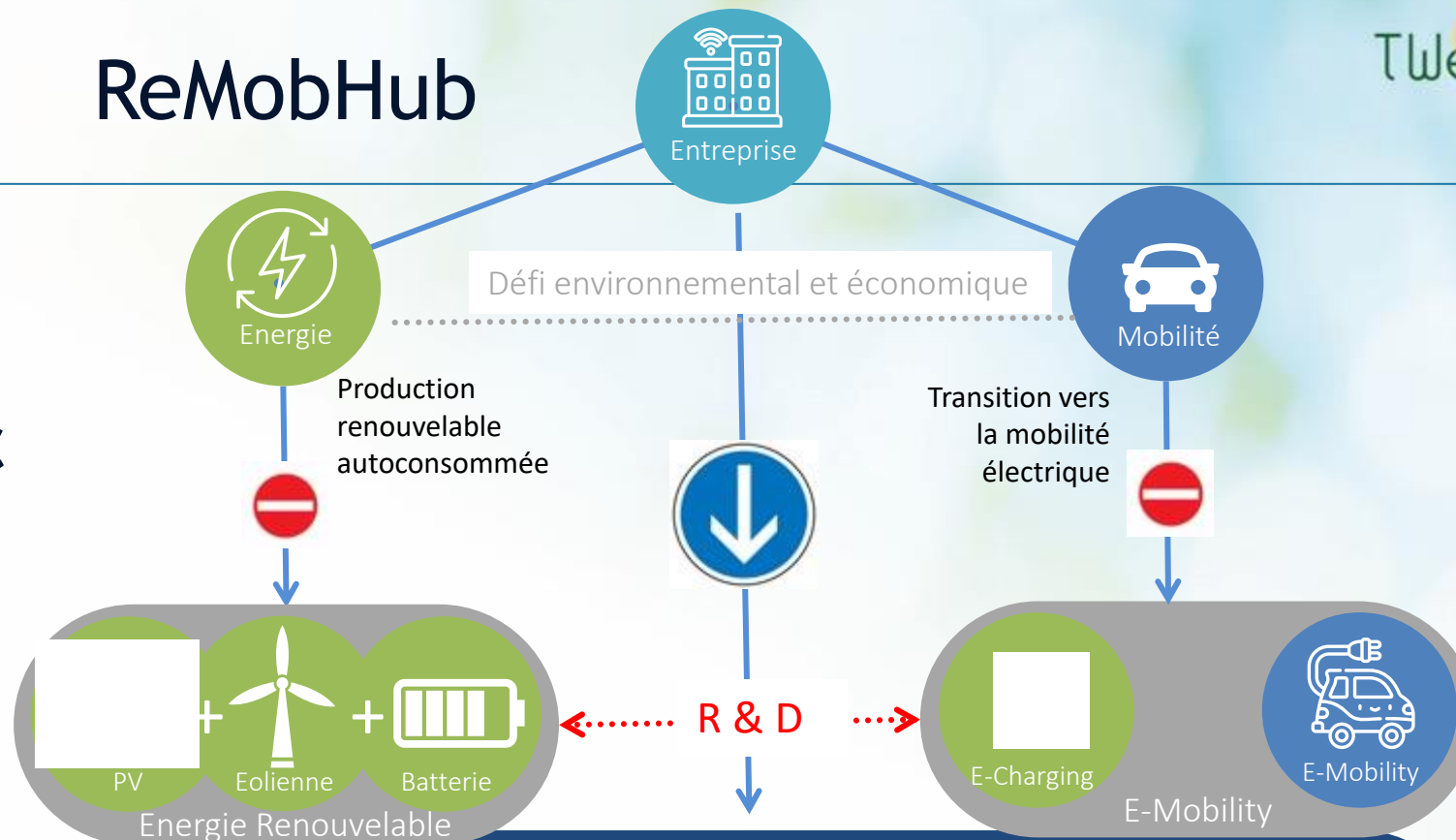


ICELAND

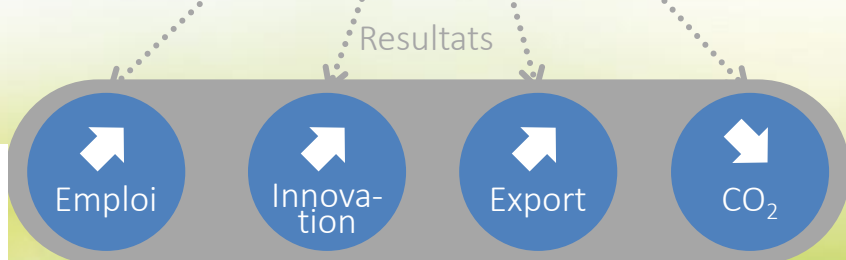
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ReMobHub

- Digital Tools:
 - Mobility charging
 - New converters DC/DC
- Pilot
 - WTG, PV, 2nd life batt.
 - Pool sharing



ReMoBHub
 Business Case par la combinaison optimisée de la production, du stockage et de l'utilisation pour la mobilité électrique



© Enersol



PEPS

- Digital Tools:
 - Design
- Pilot
 - Intensive extraction company
 - Specific BM

TRACTEBEL

PEPS makes small pumped hydro storage competitive

Integration

Standardization

Box "Pre-sized" Standardization (<1M€/MWh)

with

- Few MWh Capacity
- Reservoir size ~30 000 m³
- Selection criteria $\Delta h > 50$ m

Why Small Pumped Storage ?

- Environmental footprint Existing/Old quarries
- Robustness As simple as possible

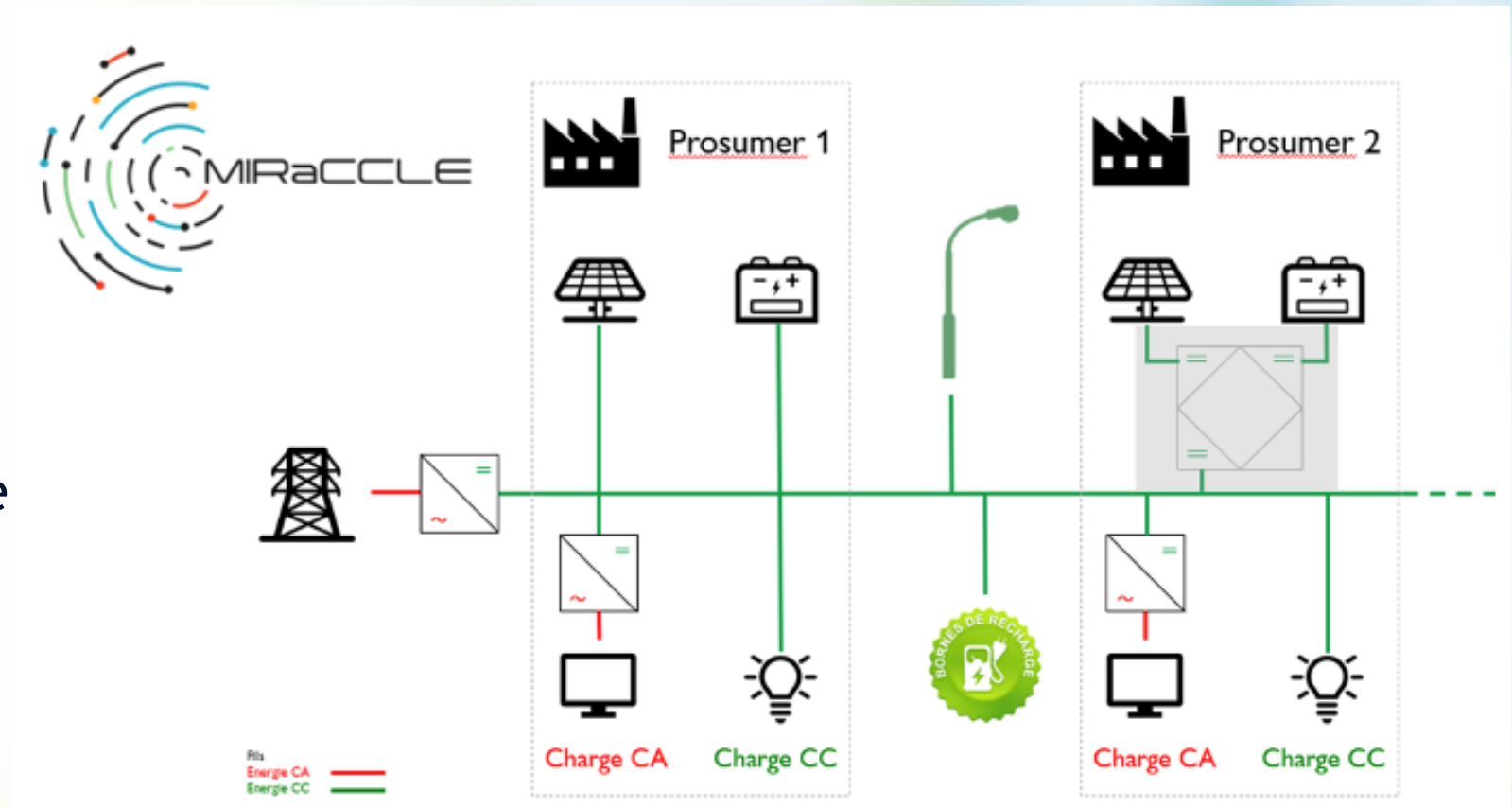
The power of water for a greener and cleaner future

TRACTEBEL ENGIE Icare LEPAGE

07/01/2021 PEPS - Innovative solution of small pumped hydro storage

Miraccle

- Digital Tools:
 - Design DC Grid
 - DC drivers
- Pilot
 - 7 companies in Liège
 - Specific BM



© Klinkenberg

SmartACC

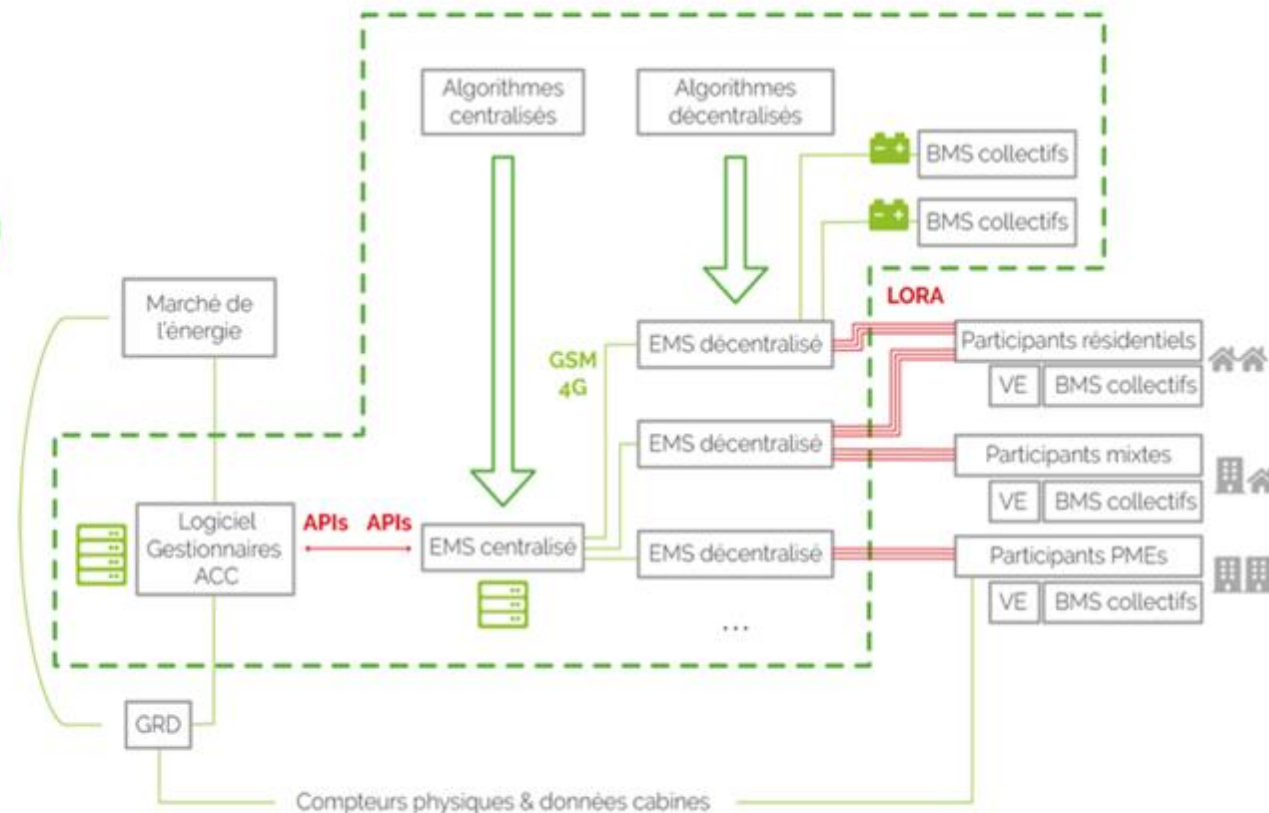
- Digital Tools:
 - Gateways
 - Flex activation soft
 - EMS
 - Forecasting
- Pilot
 - 100 households & entrep.



Arewal



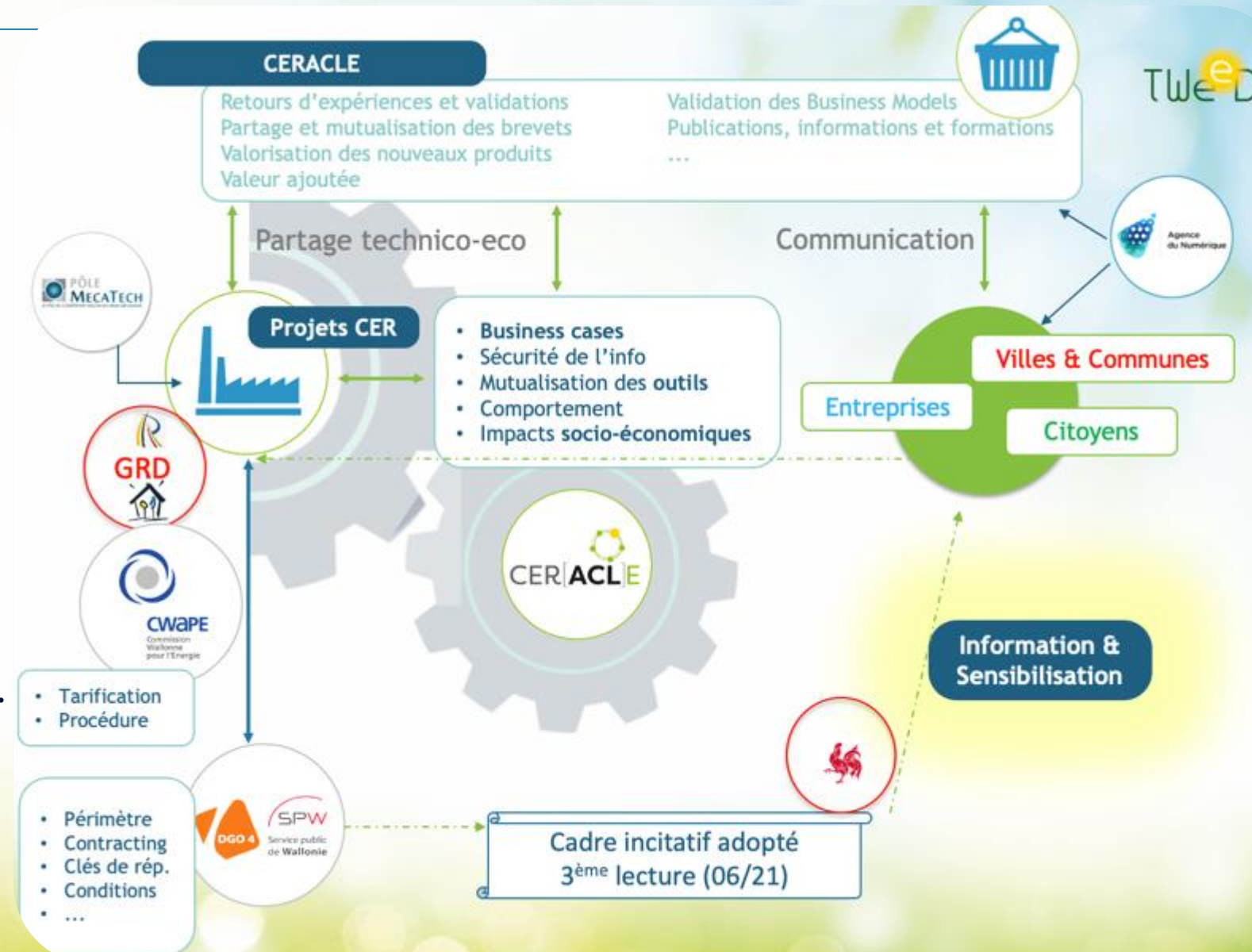
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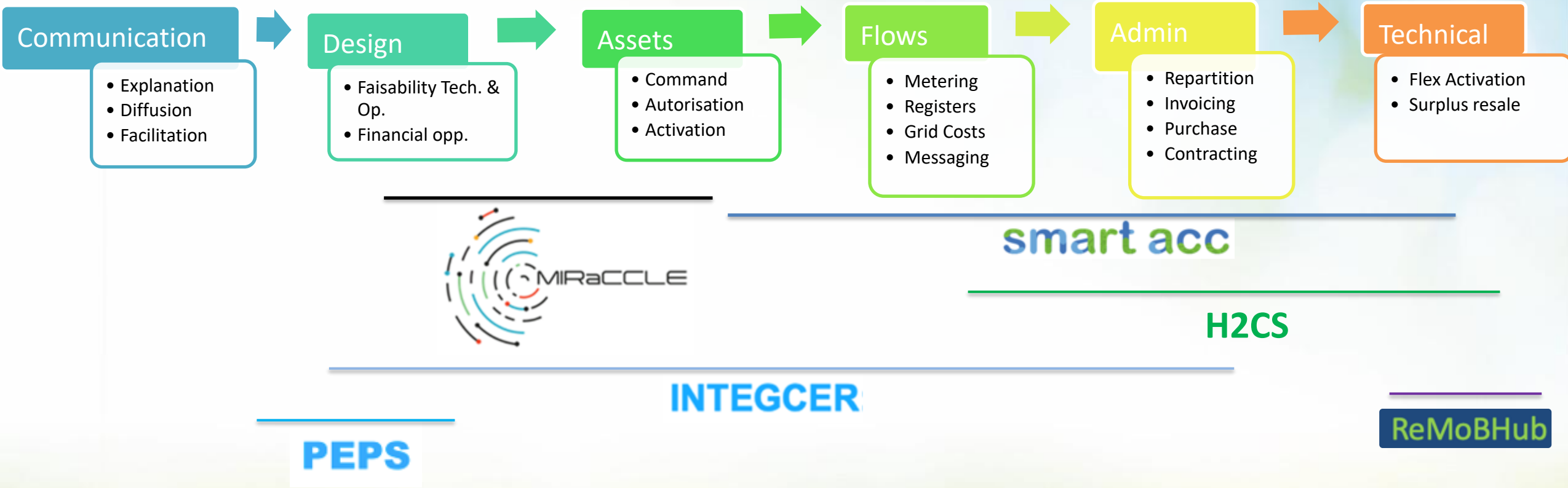
MANAGEMENT of initiatives : Creation of CERACLE

METHOD :

- Communication & mapping
- RnD 'coordination'
- Projects following
- Synergizing development
- Stakeholders Committee
- Linking
 - in : Wallonia Government
 - out : Flanders, Brussel, E.U
- Communication
 - specific : roadshows, municipal.
 - global : massive message



Mapping





www.clustertweed.be

Cluster TWEED

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