

# DigIPlat

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# Improving Flexibility Procurement: Option for Product Standardisation

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Sarah Fanta, Ksenia Tolstrup, Viktor Zobernig, Markus Riegler, Lukas Obernosterer

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1. **Project Overview**
2. Two levels of standardization
3. Product integration:
  - Bid linking and forwarding vs. product harmonization
  - Standardization roadmap and timeline

# Project Partners

# DigIPlat



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Supported by:



on the basis of a decision  
by the German Bundestag



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# Project Overview



## Main Goal:

Development of a standardized framework for interoperable flexibility platforms and standardized flexibility products

Challenge 1:

**Coupling of different flexibility platforms/markets**

Approach:

Definition and analyzation of three different UCs

Challenge 2:

**Standardization/Harmonization of different flexibility products**

Approach:

Based on a classification of flexibility attributes we analyze different standardization approaches

# Project Output: Use Cases

## UC 1: Use of Balancing Energy considering network restrictions

BE

Focus: preventing BE calls with critical effects on grid congestion

Implements an optimisation approach that takes into account available network capacities for the use of BE

Implementation for Demo

## UC 2: Coordinated Capacity Procurement

BC

RD

Focus: procurement of BC together with additional information to be applicable for RD

Approach:

- BC bids with locational information

Agent-based model

- Identification of economic impact
- Investigation of strategies and incentives of market participants

## UC 3: Balancing Energy and Intra-Day Market

BE

CID

Focus: integration of ID products into the BE market

Approach:

- Parallel ID and BE market, forwarding of ID bids to BE market at BE GCT, releasing of not awarded ID bids afterward
- market coupling via order books via integrating the BE market into the CID market as additional segment

Basis for economic evaluation (impact on prices, market liquidity)

# Classification of flexibility attributes

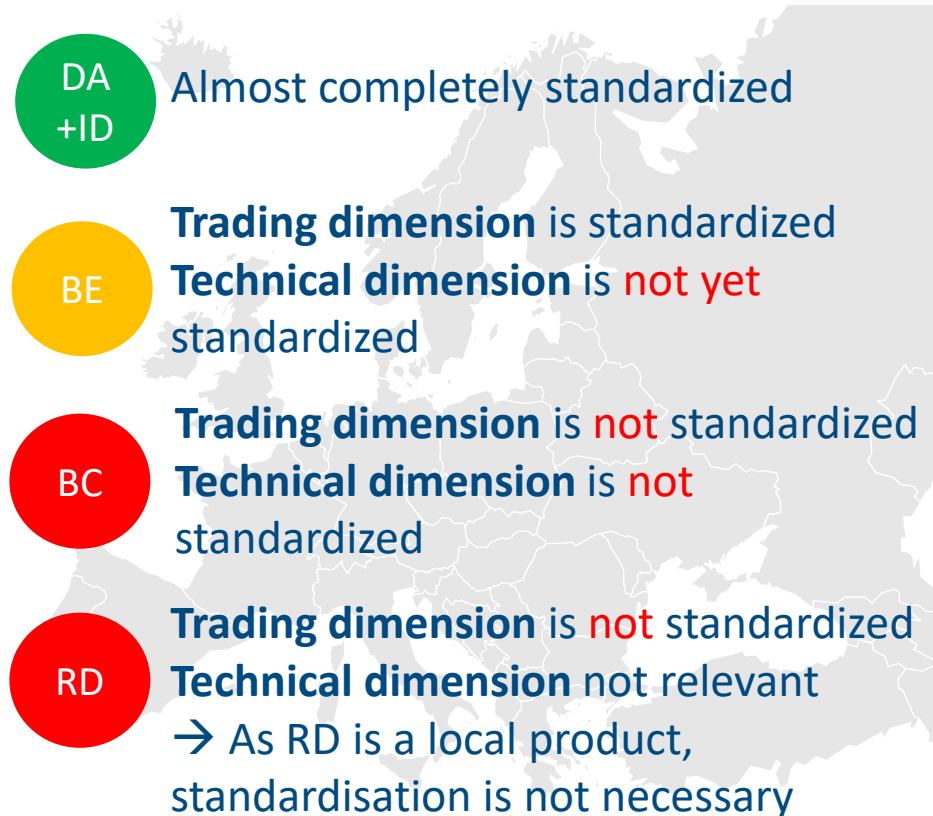
Technical dimension	Trading dimension		
Type of flexibility Mode of activation Portfolio/Unit-based prequalification  Preparation period Ramping period Full activation time Deactivation period Location /Spatial specification  Communication criteria	Timing	Product rules	Auction/procurement rules
	GOT GCT Activation time Product resolution	Min bid size Max bid size Bid information Bid symmetry Bid adjustment Bid increment	Pricing rule/ remuneration Winner determination Bid divisibility Price cap Unit-/portfolio-based bidding

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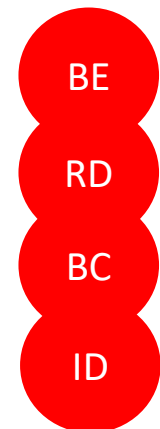


# Standardization – 2 possible approaches

## CROSS-COUNTRY STANDARDISATION



## CROSS-PRODUCT INTEGRATION

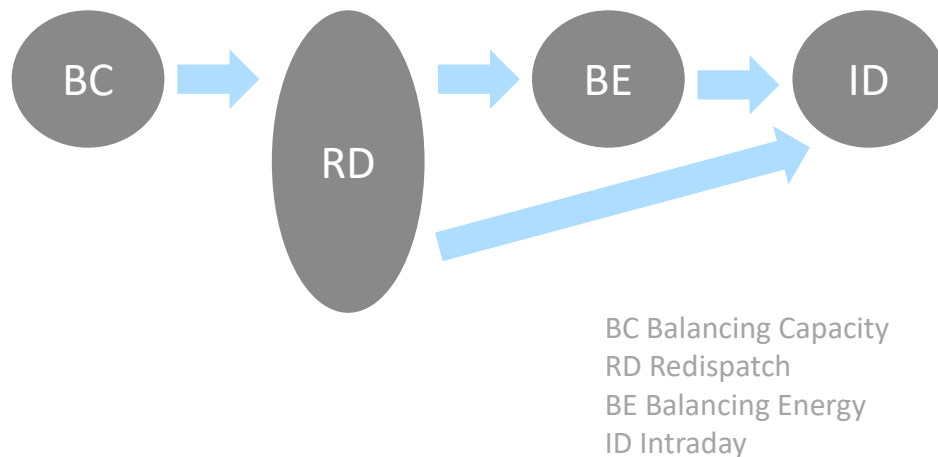
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- There are two ways of achieving product integration:
- **Linking and forwarding** of product-specific bids
  - product **harmonization**

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# Bid forwarding and linking

Bid forwarding allows for forwarding of non-awarded bids to other markets with subsequent gate closure times\*.

\*necessary assumption: FSP is prequalified for each market the bid is forwarded to



## Advantages

- FSPs can participate in more than one market with the **same flex**
- most of existing product characteristics can be preserved
- in case exclusive linking is used:
  - bids can be used in more than one market in the same timeframe

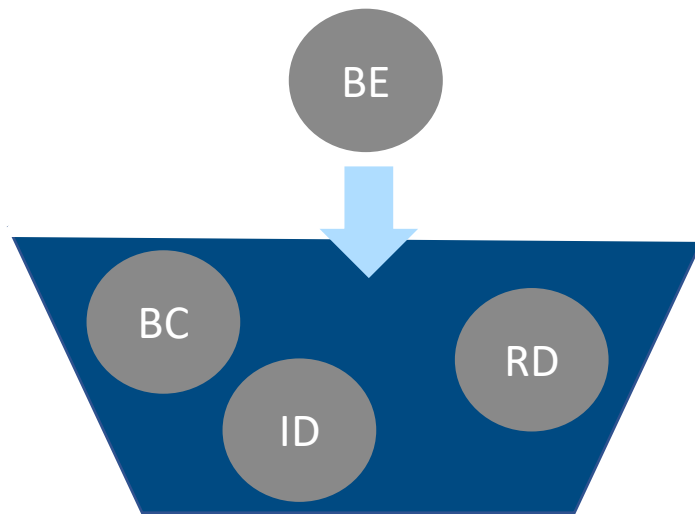
## Disadvantages

- less transparency for FSP
- no co-optimization possible

# Partial product harmonization

Products are standardized/harmonized to a large extent yet retain their individual qualities.

“Mixed bag of products”:



BC Balancing Capacity  
RD Redispatch  
BE Balancing Energy  
ID Intraday

## Advantages

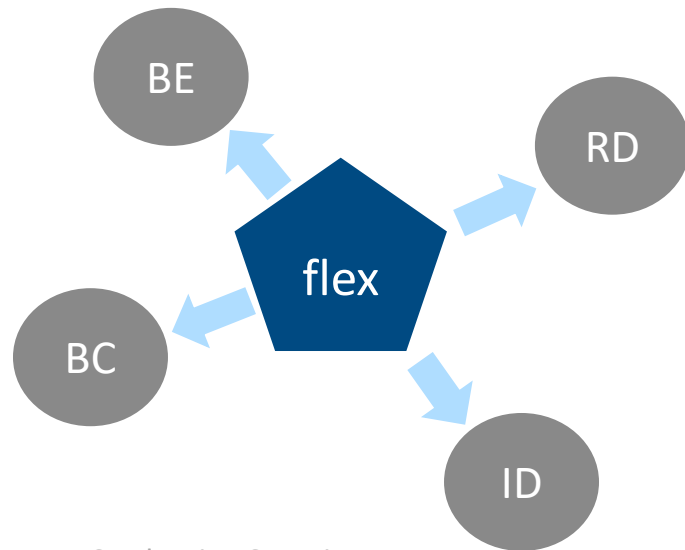
- some product characteristics can be preserved
- no excluded flex potential
- flex resources can be used for several applications if qualify (e.g., via exclusive linking)
- co-optimization possible

## Disadvantages

- less transparency for FSP
- all flexibility products are submitted to the same platform with the **same GCT**

# Full product harmonization

A product attribute is **harmonized** when no divergence is allowed between different purposes. Therefore, a 'common value' will be agreed upon for this attribute.



BC Balancing Capacity  
RD Redispatch  
BE Balancing Energy  
ID Intraday

## Universal flexibility product:

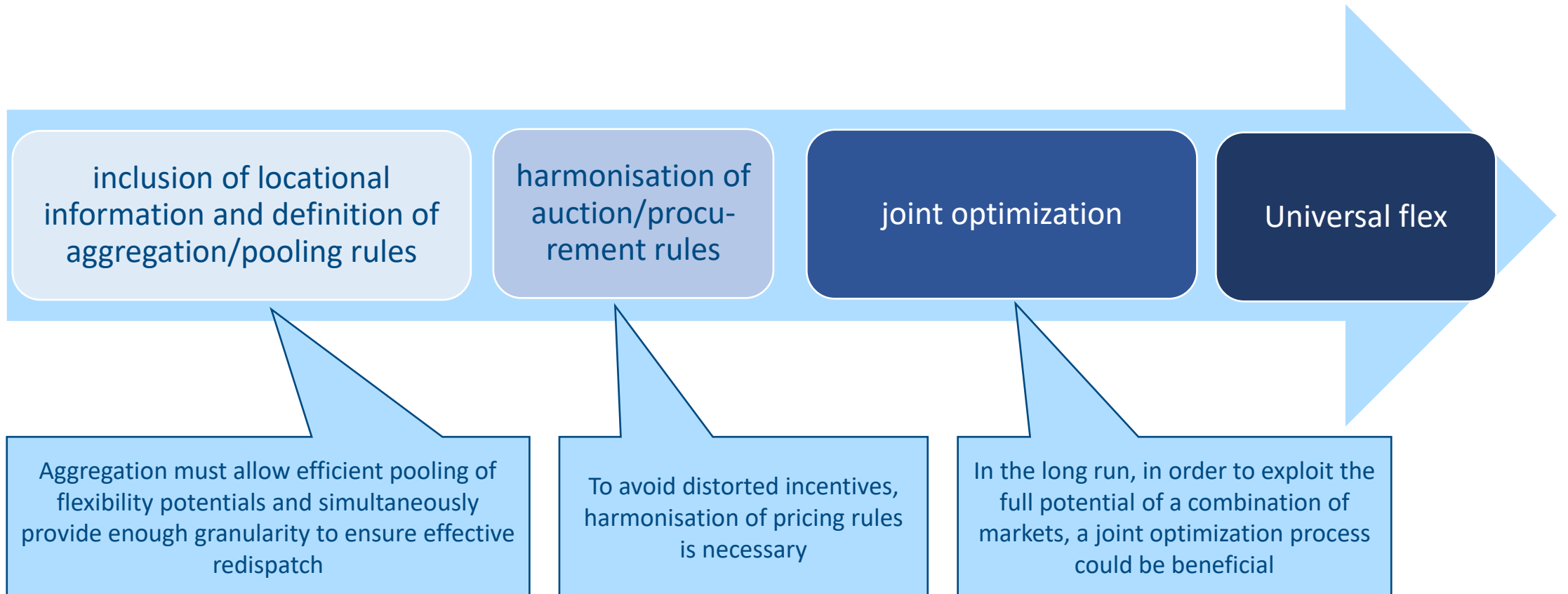
### Advantages

- potential to exchange flexibility for different services
- Simplified decision-making for FSP
- product is more versatile for TSO
- Co-optimization by TSO

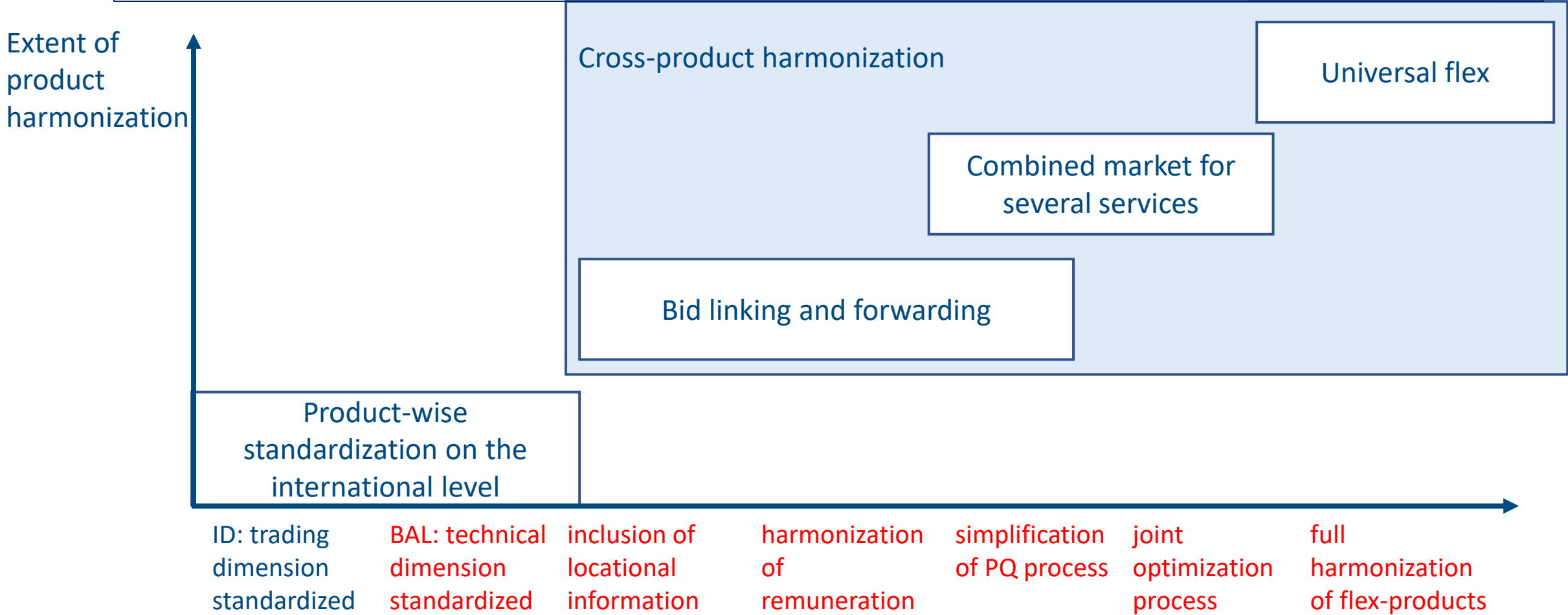
### Disadvantages

- Potential of excluding FSPs due to high product requirements
- product is more restrictive for FSP

# Standardisation roadmap



# Standardization timeline



# Sarah Fanta

AIT Austrian Institute of Technology GmbH  
Integrated Energy Systems  
Center for Energy  
sarah.fanta@ait.ac.at