

Inter-organisational relationships in operations and maintenance

The role of SMEs

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Industry User Panel

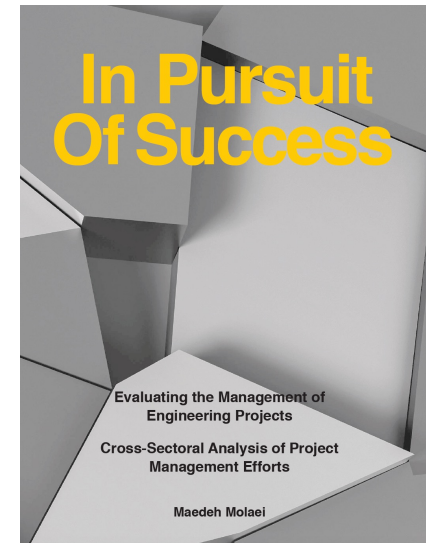
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Personal Background

- BSc in Civil Engineering (Iran University of Science and Technology): 2006-2010
- MSs in Construction Management and Engineering (CITG, TU Delft): 2011-2013
- PhD in project management (CITG, TU Delft): 2016-2021
 - Titel of research: Evaluating the management of engineering projects
- Postdoc (ABE, TU Delft): 2020-2024
 - Chair of Public commissioning





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Question slide

What percentage of the total procurement value by the Dutch government is below the EU threshold?

30-40%

0%

40-50%

0%

50-60%

0%

60-70%

0%



The number of public procurement procedures and the total value of procurement in the Netherlands 2017-2019

	2017		2018		2019	
	Total number of procedures	Total value of procurement (in billion euros)	Total number of procedures	Total value of procurement (in billion euros)	Total number of procedures	Total value of procurement (in billion euros)
Above the EU thresholds	5.031	27,3	5.790	29,7	6.397	29,8
Below EU thresholds (estimated)	130.900	52	150.400	56,6	163.500	57,7
Totaal	135.900 *	79,3	156.200 *	86,3	169.900 *	86,6

Source: Ministry for Economic Affairs and Climate Policy, 2021

Problem definition

Current social challenges calls for alternative forms of collaboration .

Although 80-90% of the activities in the water sector are repetitive in nature, this field has not attracted sufficient attention.

Few to no studies address the small (and medium) and repetitive activities of public client organisations in construction, in which SMEs are typically involved.

Our definition of repetitive activities:

tasks, activities, or operations that are performed frequently on objects or assets at a specific location or works that are carried out on objects with similar characteristics at various locations. These activities are procured by the public organisations and are performed by the market parties.

Research steps

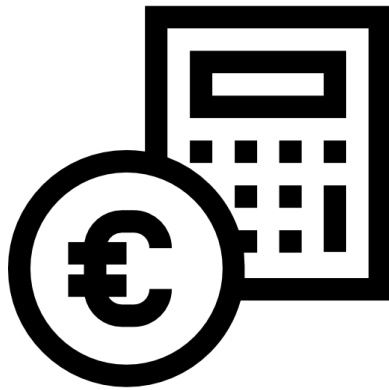
Phase I: Overview of the portfolio of water authorities

Phase II: Insight into inter-organisational relations in repetitive activities



Phase 1: Overview of the portfolio of public client (1/2)

3 databases:



Multi-year budgeting



Projectenkalender
(EIB)



Purchase orders of
5 water authorities

Phase 1: Overview of the portfolio of public client (2/2)

Using content analysis, we analysed the billing information (purchase orders) of 5 water authorities:

Spend analysis of 405.249 purchase orders

Classifications of repetitive activities

Overview of the key suppliers in the supply base (93% SMEs)

5 types of repetitive activities



1. Activities related to waterways



2. Mechanical and electrical works



4. Maintenance and installation of equipment in sewage treatment plants

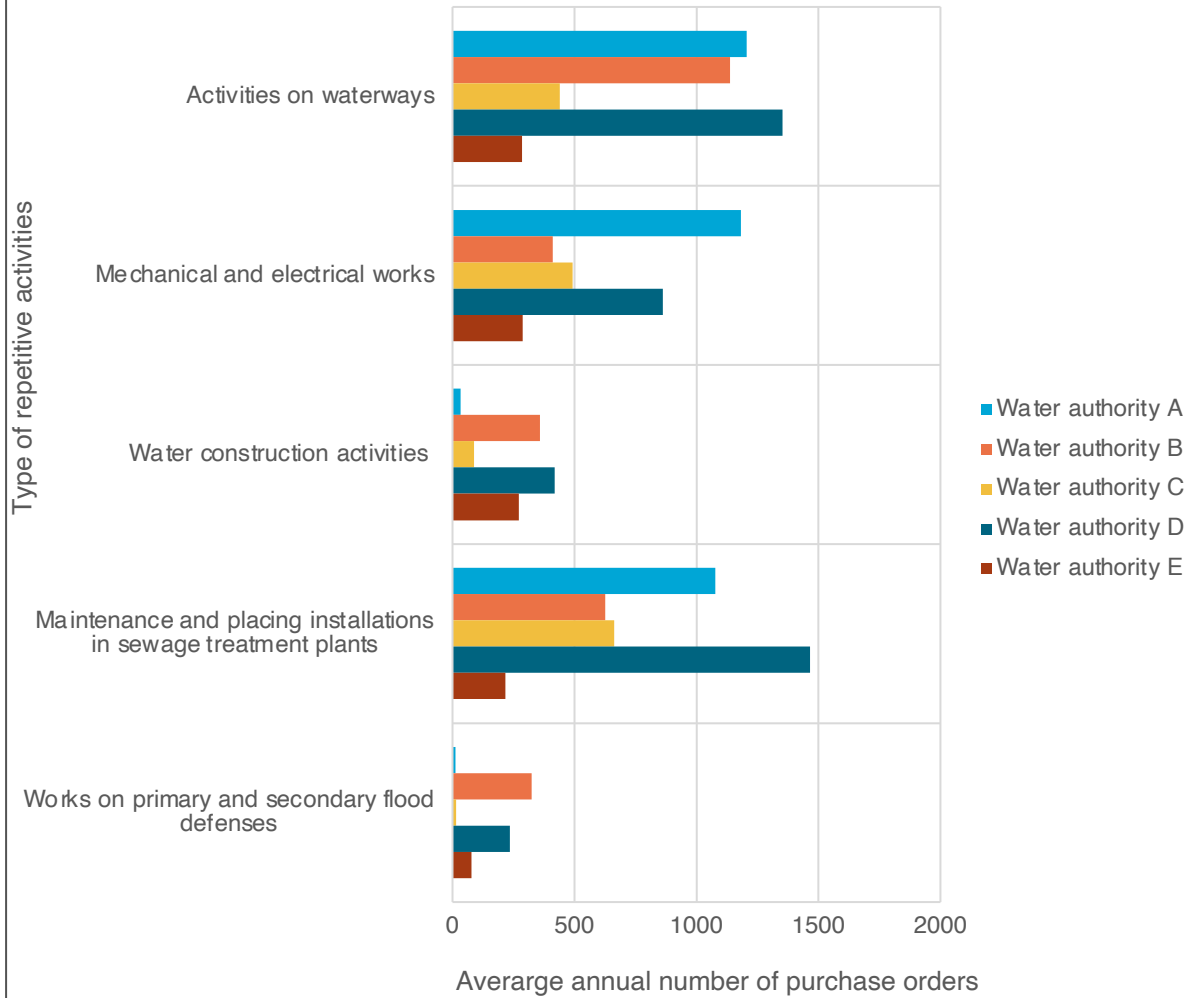


3. Construction, and maintenance of water-related infrastructure assets

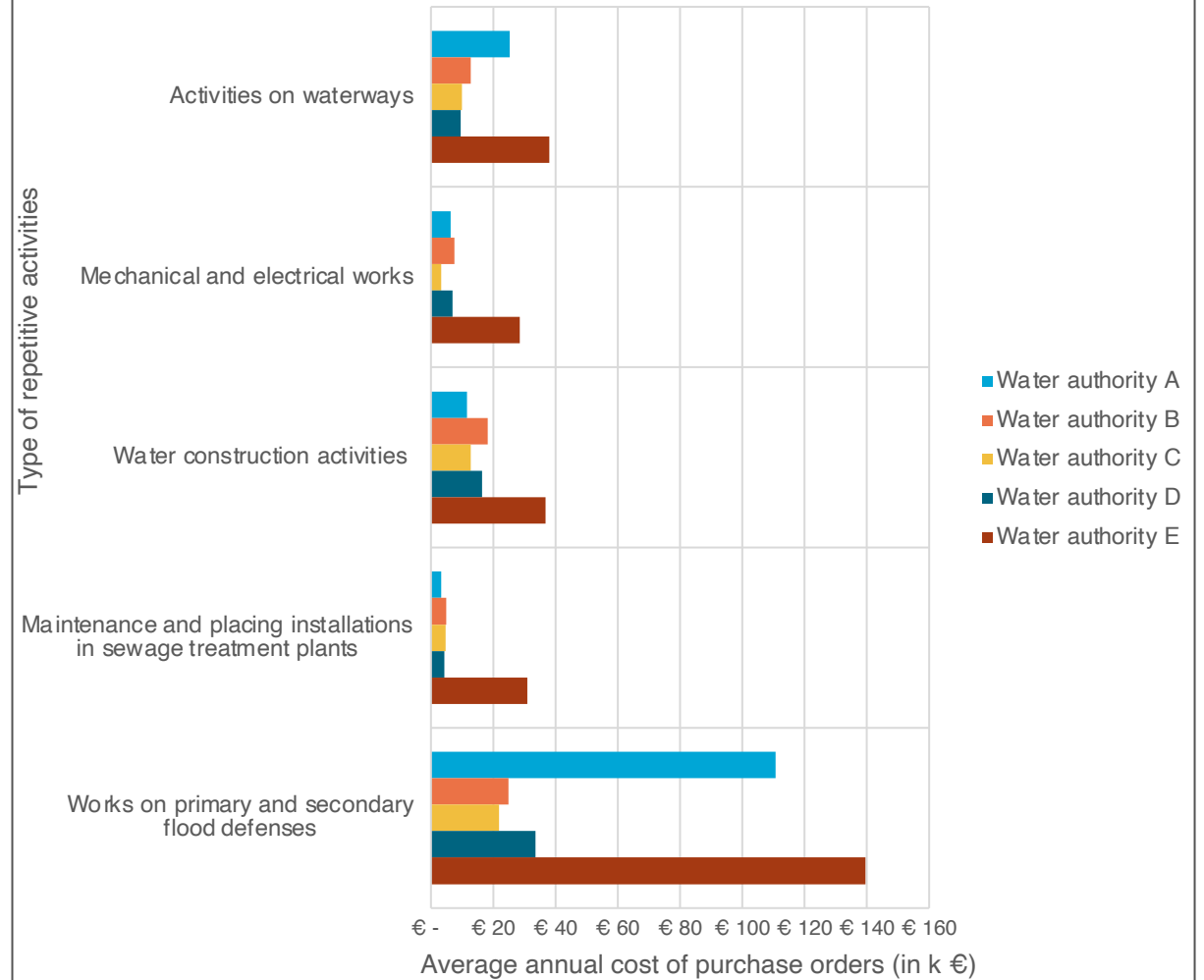


5. Civil construction work and the maintenance of primary and secondary flood defences

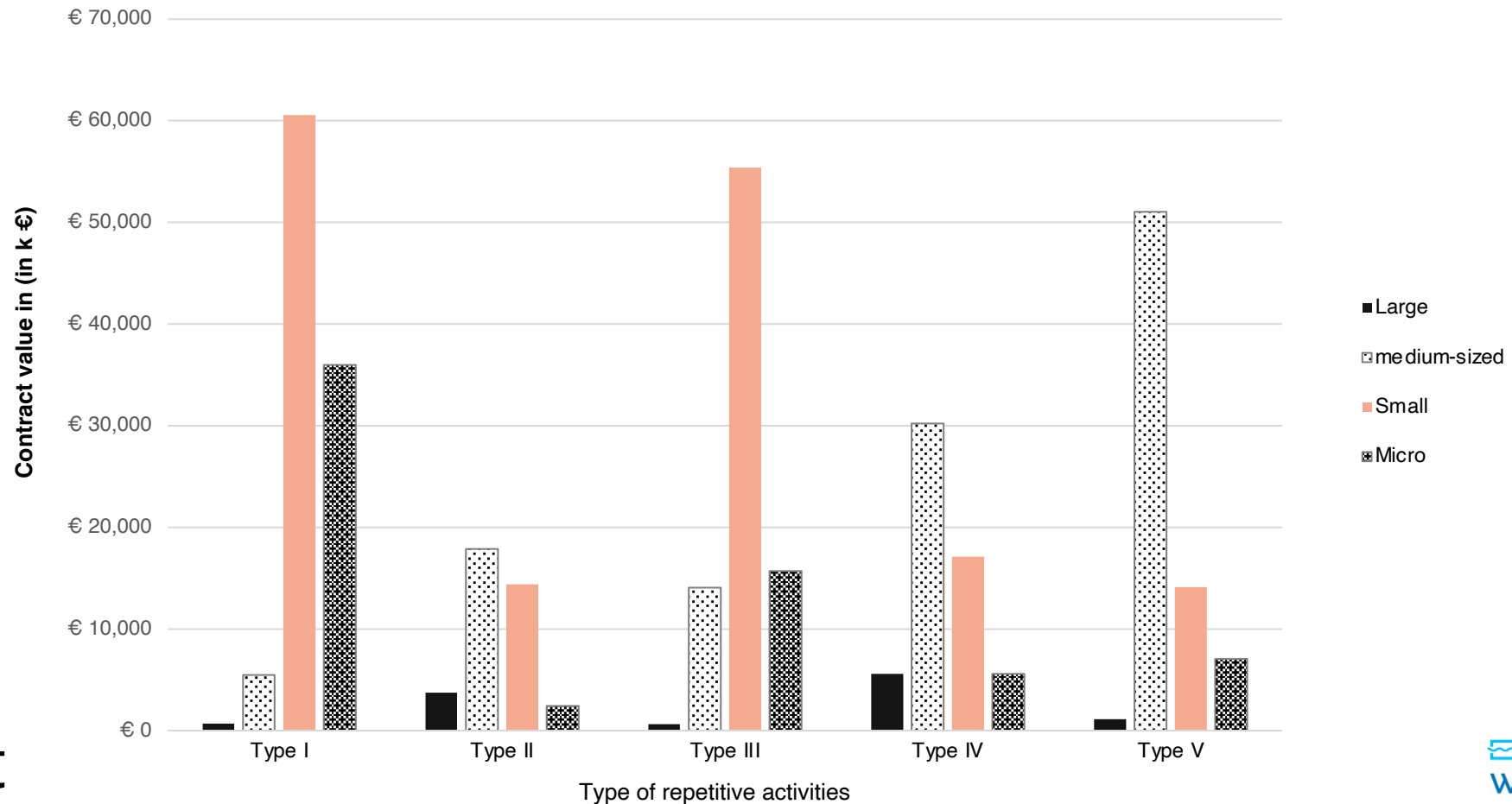
Annual average number of purchase orders per type of activity and per water authority

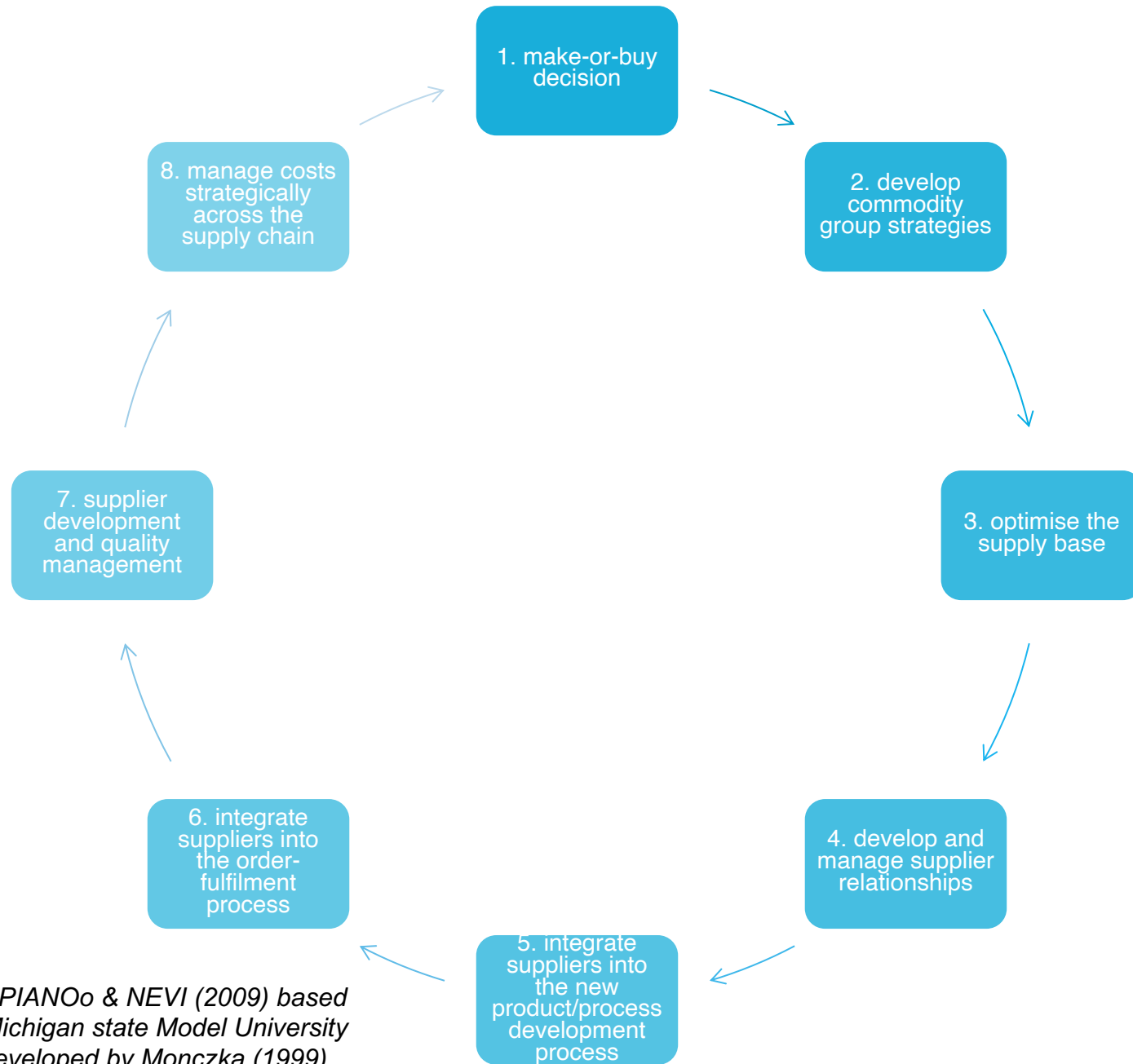


Average annual cost of purchase orders per type of activity and per water authority



Configuration of SME participation by type of repetitive activities and by contract value





Phase II: Insight into inter-organisational relations in repetitive activities

Interviews with client and contractor (mostly SMEs).

Elements of inter-organisational relationships:

1. Overview of the market
2. Establishing the procurement process
3. Bundling by client(s) in relation to entrepreneurship by supplier(s)
4. Communication
5. Learning capability
6. Formal contract management
7. Informal interpretation of the contractual relationship

Main findings (1/5)

1. Although clients do not always recognise repetition in their portfolios, the market parties do, given their specialisation in a specific [local] market and its 'core business'.

Main findings (2/5)

2. To gain a comprehensive insight into the market supply, water authorities should actively engage in more (informal) interactions with SMEs beyond project and assignment relationships.

Main findings (3/5)

3. The market desires that the client acknowledges their well-executed work. Although the client indicates an intention to reward high performance by the market, this recognition is often neither systematic nor visible.

Main findings (4/5)

4. For repetitive activities for water authorities, possessing area or location-specific knowledge is crucial. While this is acknowledged by the client, it is not used as a prominent selection criterion in the procurement process.

Main findings (5/5)

5. The market demonstrates adaptability but tends to be reactive regarding innovations in repetitive activities. The client should create room for innovations and the market should be more active in identifying opportunities.



Which of these findings do you also recognise in your sector or domain of work?

- | | |
|--|----|
| Although clients do not recognise repetition in their portfolios, market parties recognise such patterns. | 0% |
| Client should engage in more (informal) interactions with market parties to gain comprehensive insights into the market. | 0% |
| Clients' recognition of the high performance of market parties is not always systematic. | 0% |
| Selection criteria do not always match the type of activity or project procured. | 0% |
| The market demonstrates adaptability but tends to be reactive regarding innovations. | 0% |



Recommendations for public clients

At the portfolio level:

- Overview of and for the market
Different high-level perspective
Internal structure
Matching procurement strategy
Organising the learning

At the sector level:

Uniform frameworks and direction in the sector

Recommendations for market parties

- Proactive knowledge sharing with client(s)
- Sharing insights on the potential of innovative technologies
- Horizontal collaboration

[Link](#) to the research report

More information:

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Thanks for your attention