



Study on Materials in Contact with Drinking Water

Framework Service Contract: Support to the Implementation and Further Development of the Drinking Water Directive (98/83/EC)

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- **Assessment of the situation** **[Task 1]**
 - Analyse the problem of materials and products affecting the quality of drinking water to provide an overview including an indication of its scale;
 - Legislation, standards, scope [1.1]
 - Market, use and mutual recognition [1.2]
 - Drinking water contamination [1.3]
 - Appropriate materials/products and test methods [1.4]
- **Develop a guidance document** **[Task 2]**
 - for users of materials in contact with drinking water
- **Draft Inception Impact Assessment** **[Task 3]**

Materials and Products



- Defining a 'scope' that could be subject to EU legislation by identifying and considering:
 - EU and national legislation
 - Test methods and standards
 - Materials of most concern
 - Common definitions
 - Comparing different approaches

- DWD, CPR, BPR, FCM, SVHC/Reach, Movement of goods.
- Gas Appliance Regulations (EHI)
- National legislation and regulation
- US approach
 - Transatlantic Trade and Investment Partnership
- Requirements in China

- Where are the gaps in standards
- 2016 is a time of change
 - 4MS programme greater emphasis on mutual recognition
 - Draft Portuguese Regulation
 - ICPCDW plastic scheme, elastomers to come
 - Trade association position papers
 - Replacement of Mandate 136

- Providing **documents** that your organisation is able to share:
 - position papers on materials/products in contact with drinking water,
 - experience of members with regulations, testing,
 - views on potential solutions.
 - Comments on the new initiatives that are seeking to speed-up harmonisation

- Identifying the major players
 - Trade associations, authorities, companies
- Economic information
 - Assessing materials and products currently installed,
 - Assessing materials and products annually sold on the EU
 - Identifying market trends,
 - Assessing the intra-EU trade and transboundary sales,
- Assessing if current approvals represent barriers to intra-EU trade,
- Identifying where mutual recognition exists between Member States.

Approvals activity



- Draft table showing numbers of companies holding approvals and total number of approvals for a selection of national approval schemes

Country	Approval	Number of approvals	Number of companies holding approvals
France	ACS	4,269	1,040
Netherlands	Kiwa	345	210
UK	DWI Regulation 31	439	200
	WRAS Materials Approval	2,515	1,161
	WRAS Product Approval	6,723	1,478
Germany	dvgw	2,000+	TBC
Belgium	Hydrocheck	234	118
Denmark	GTD	131	53
USA	NSF 61	TBC	1,603
USA	NSF 60	TBC	1,155

Example of company engagement with approval schemes (ACS)



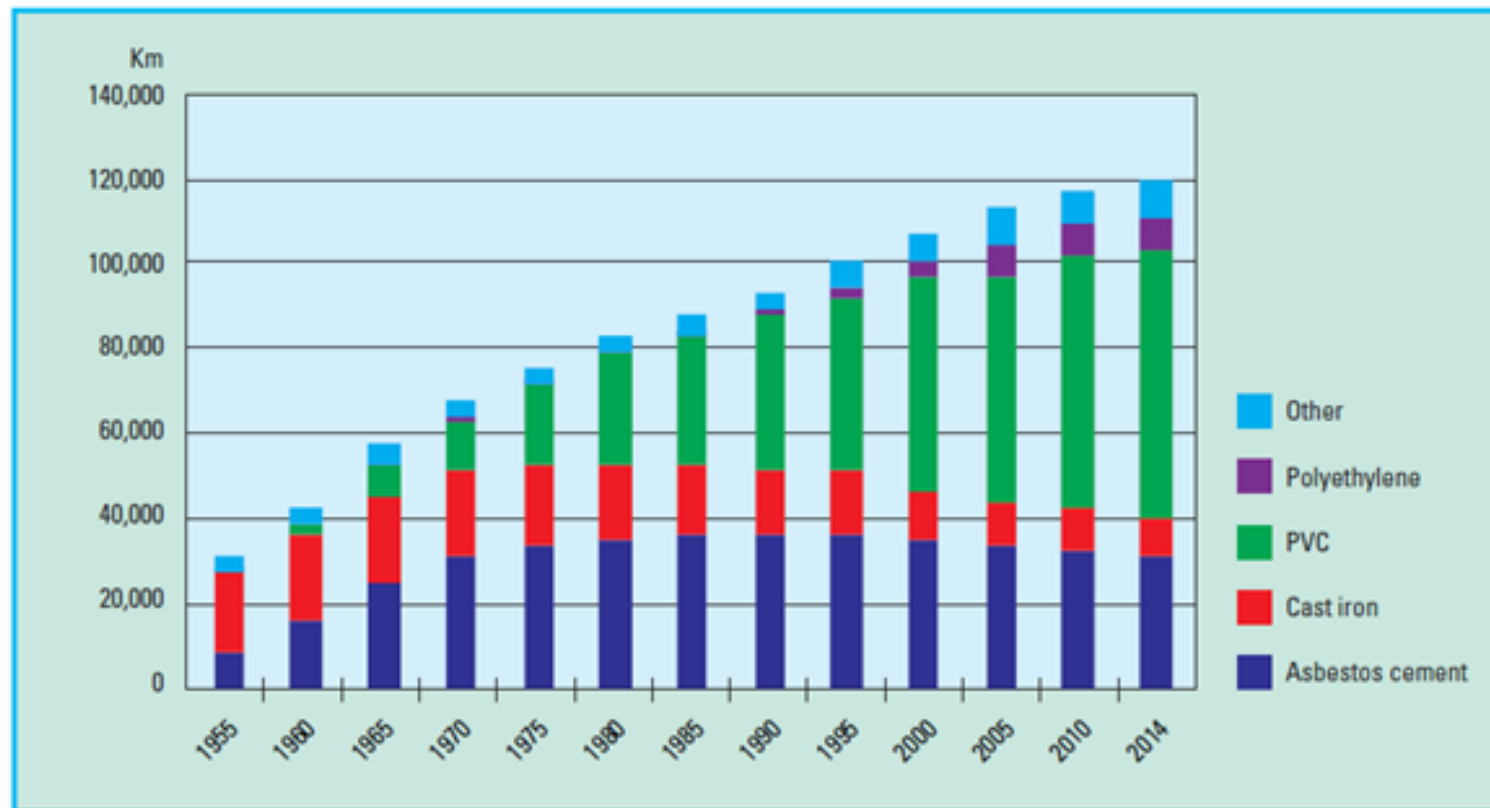
No of ACS Approvals held	Number of companies		No of Approvals held	Number of companies
1	486		21	1
2	219	80%	22	1
3	96		23	5
4	57		24	2
5	32		25	2
6	32	90%	27	1
7	19		28	2
8	12		29	2
9	9		30	2
10	6		37	2
11	10		40	2
12	5		42	1
13	8		45	1
14	1		46	1
15	6		51	1
16	3		56	1
17	2		73	1
18	4		119	1
19	3		185	1
20	4		191	1
			Total	1045

- Asked to roughly estimate installed products
 - Estimate approximately 4.7m km of pipe in the water distribution system of the EU.
 - Estimating proportions of different materials – highly variable between MS
 - Need figures for valves, pumps and other fittings
 - Estimate 130m service pipes
 - Estimating numbers of associated ferrules, stopcocks, meters
 - Estimate 1.22b taps and 406m showers

- Asked to roughly estimate annual investment in products
 - Network pipe replacement rates range from 0.5 to 1.2 % per annum - 80 to 200 years to replace at present rates.
 - EU investment in renewal Euro 10 to 12 billion per annum – of which Euro 1.2 to 1.4 billion on products (pipes, fittings etc).
 - Teppfa estimates EU plastic pipe production @ Euro 3 billion (sewage, drinking, surface water, plumbing, other)
 - Taps – Euro 4.7 billion

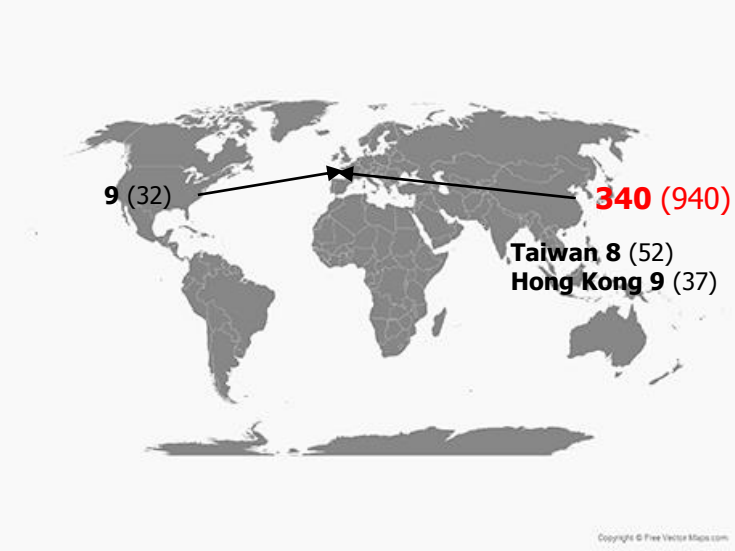
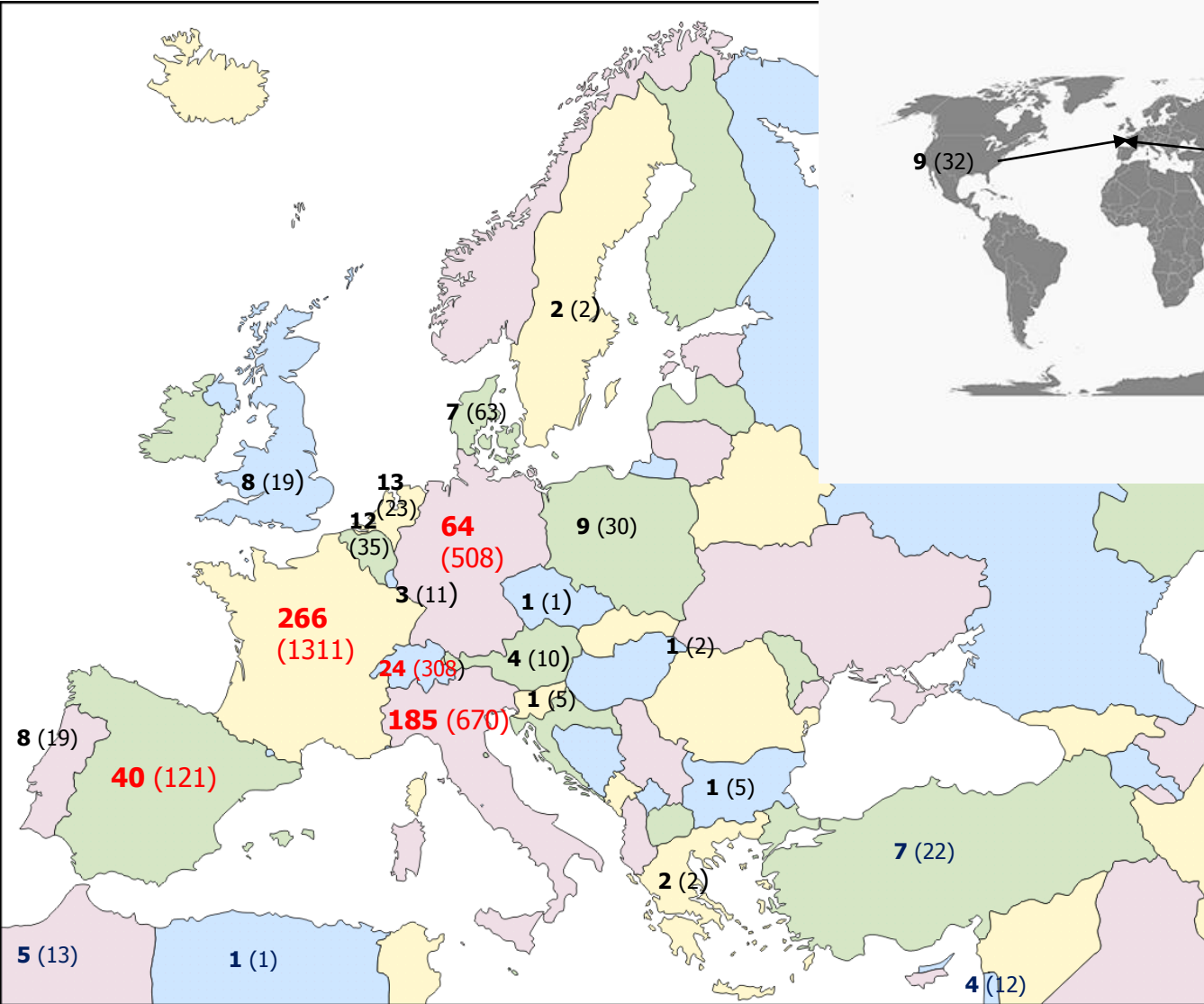
- Graph of trends in Dutch water distribution network - size (km) and proportion of materials

Figure 8 - Development of the mains supply network



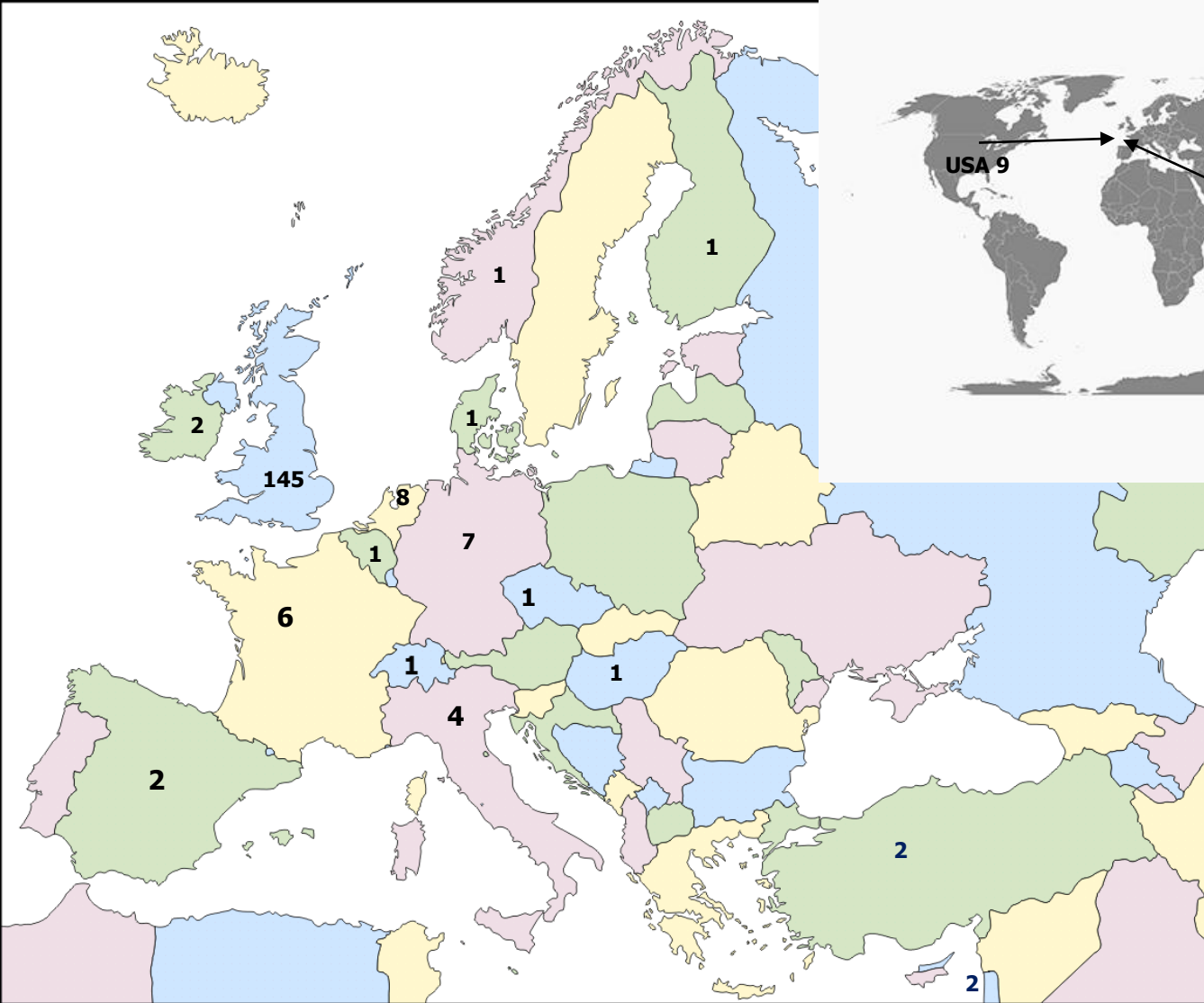
- Currently assessing Eurostat data on production, import and export.
 - Plastic, cementitious, metallic and assembled products
- But, inherently difficult as product categories are wide and do not just cover materials/products in contact with drinking water.
- Indicates substantial production, import and export activity concentrated as expected in the larger MS.

Companies holding French ACS for Assembled Products



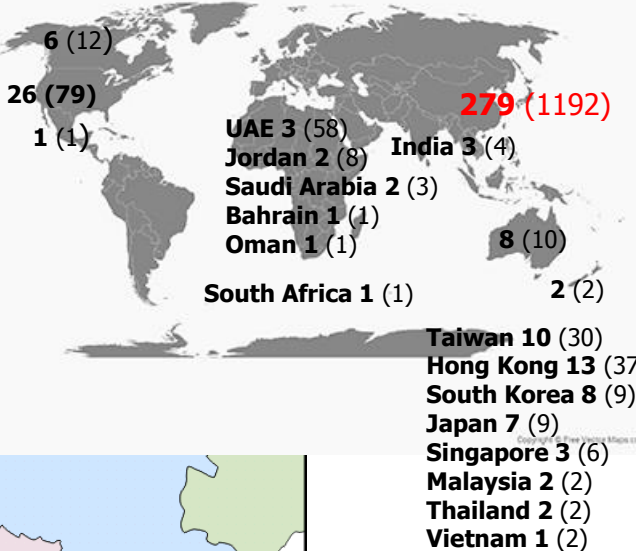
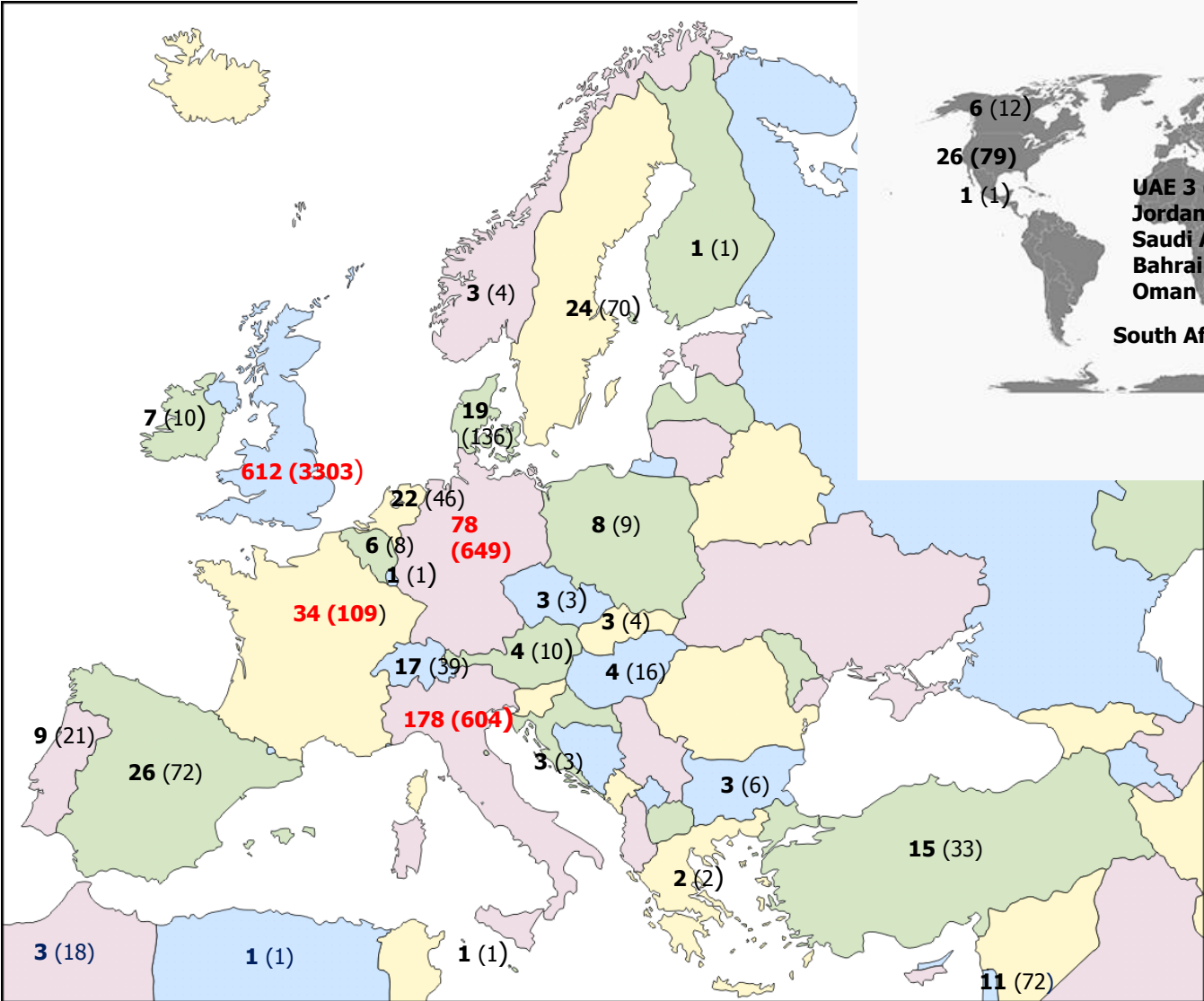
No. Companies
(No. approvals)

Companies listed for DWI Regulation 31



No. Companies
(No. approvals)

Companies holding WRAS Product Approval



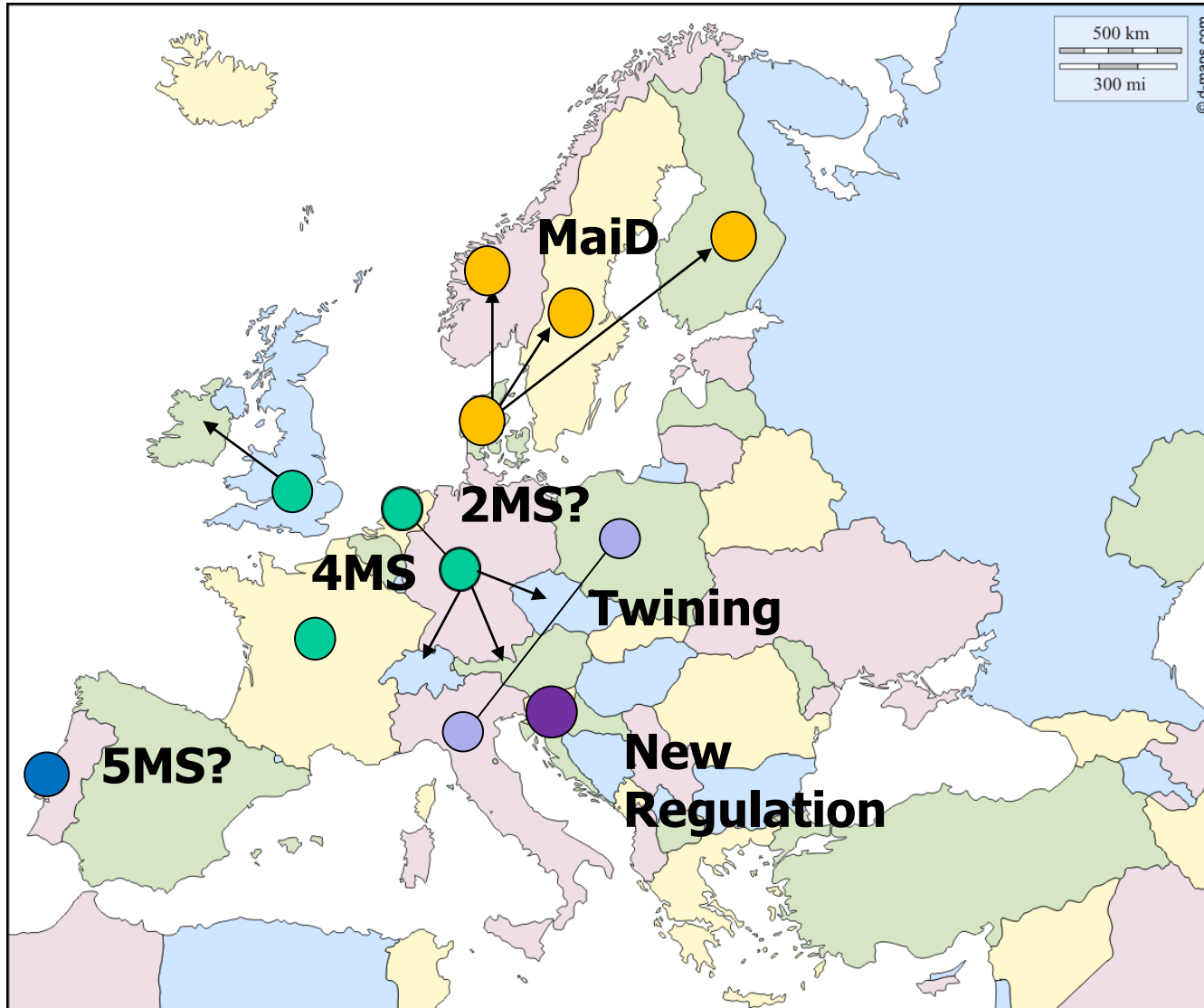
No. Companies
(No. approvals)

- Lack of availability of information
 - Requires investment of resources to understand the differing requirements and for keeping up to date
 - Figawa found few national Product Contact points could respond effectively
- Ongoing development of new schemes and requirements without harmonisation
 - Cannot launch a compliant product simultaneously across Europe
 - May need a portfolio of products to meet all national requirements
- Cost of approvals
 - Familiarising with requirements, application fees, auditing fees, testing fees, certification fees, renewals.
 - Repeating same things for different MS
 - Fees are the same regardless of size of company
- Delays to market,
 - Approval timeframes to long
 - Lost turnover

- Challenge to obtain confidential composition information from supply chain
- Lack of harmonised positive lists
- Need to repeat same procedures for each MS
- Reapprovals
 - Uncertainty – different periods of validity, difficult to synchronise for multi-material/multi-component products.
- Lack of enforcement and market surveillance
 - Unfair competition
- Advantages? Market protection?

- Few examples of ‘mutual recognition’
- More examples of one-way ‘recognition’
- Most national schemes contain clauses for recognising other test results
 - But onerous and require the applicant to make the effort
- 4MS 2016 programme includes development of principles for mutual recognition

Mutual Recognition of Schemes



How can you assist on this task

- Provision of EU market sector information concerning your (organisations) materials/products if interest:
 - volume currently installed, annual sales, trends in demand.
- Case studies on specific experience
 - of national regulations, testing requirements or approvals causing barriers to trade.
- Case studies on specific experience of either 'mutual recognition' or 'acceptance' of approval or test results between member states.

- Identifying materials and products with the highest risk to drinking water quality
 - Literature review
 - Test lab pass/fail results from test labs
 - WRAS has been particularly helpful
 - Case studies of water quality sample failures and incidents linked to materials/products

- The most common effects relate to microbiological, organoleptic and metals contamination rather than chemical contamination.
- We are still seeking:
 - additional data concerning the pass/fail of material types during testing.
 - case studies that describe water quality sample failures and incidents that have been directly attributed to materials or products.

Appropriate Materials/Products and Test Methods (Task 1.4)



- Will identify reliable materials and products and suitable commonly used testing requirements including an estimate of their cost impacts.
 - Drawing up lists and characterising appropriate and reliable materials/products currently in use.
 - Identifying and comparing standards, test methods, pass/fail criteria
 - F, DE, NL, UK, P, D, PL
 - Rough economic assessment of the application of test methods.
 - Analyse how far EN test methods need to be developed/amended.

Appropriate Materials/Products and Test Methods (Task 1.4)



- Make a judgement:
 - Are there significant product//material quality differences
 - Is feasible to set minimum EU requirements or performance classes for materials/products
 - Which test methods and approval systems would be suitable.

- Views on testing
 - Which tests that apply to your materials/products of interest provide the most relevant information on a material or product's fitness for use in contact with drinking water?
 - Which tests, if any, have the least added value? Are all tests always needed?
 - What are the most time consuming and costly aspects in the testing process?

- A simple, non-technical summary aimed at a target audience of householders and plumbers.
- To help them understand which materials are not appropriate for use in household plumbing systems, not public distribution networks.
- Format: 20 to 30 text pages including illustrations

How can you assist the Project Team



- Providing case studies that can be used to illustrate the issues the guide.
- Providing good quality photographs to illustrate materials/products and the issue of impacts on water quality.
- Providing examples of existing national guides for the public that include advice on materials in contact with drinking water.

- Will support the drafting of an Inception Impact by the Commission.
- Will explain why action may be needed at EU level.
- Will allow the Commission to move to consultation in an expeditious manner.
- 10 pages following the accepted structure and content:
 - A. Context, Subsidiarity Check and Objectives
 - B. Option Mapping
 - C. Data Collection and Better Regulation Instruments
 - D. Information on the Impact Assessment Process
 - E. Preliminary Assessment of Expected Impacts

- Approximately half way through, so are completing information collection by end of June and have begun preparing initial conclusions from Task 1.
- Task 2 begins in June
- Task 3 begins in August

- Project concludes in November

Consortium of partners

UBA (Austria) – leader

KWR (Netherlands)

OIEau (France)

IzVRS (Slovenia)

WRc (UK)

Further information

<https://circabc.europa.eu/w/browse/6d5b5402-ab56-452e-baa8-956974cfa929>

To provide information relevant to the contract, please contact:

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