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RESEARCH

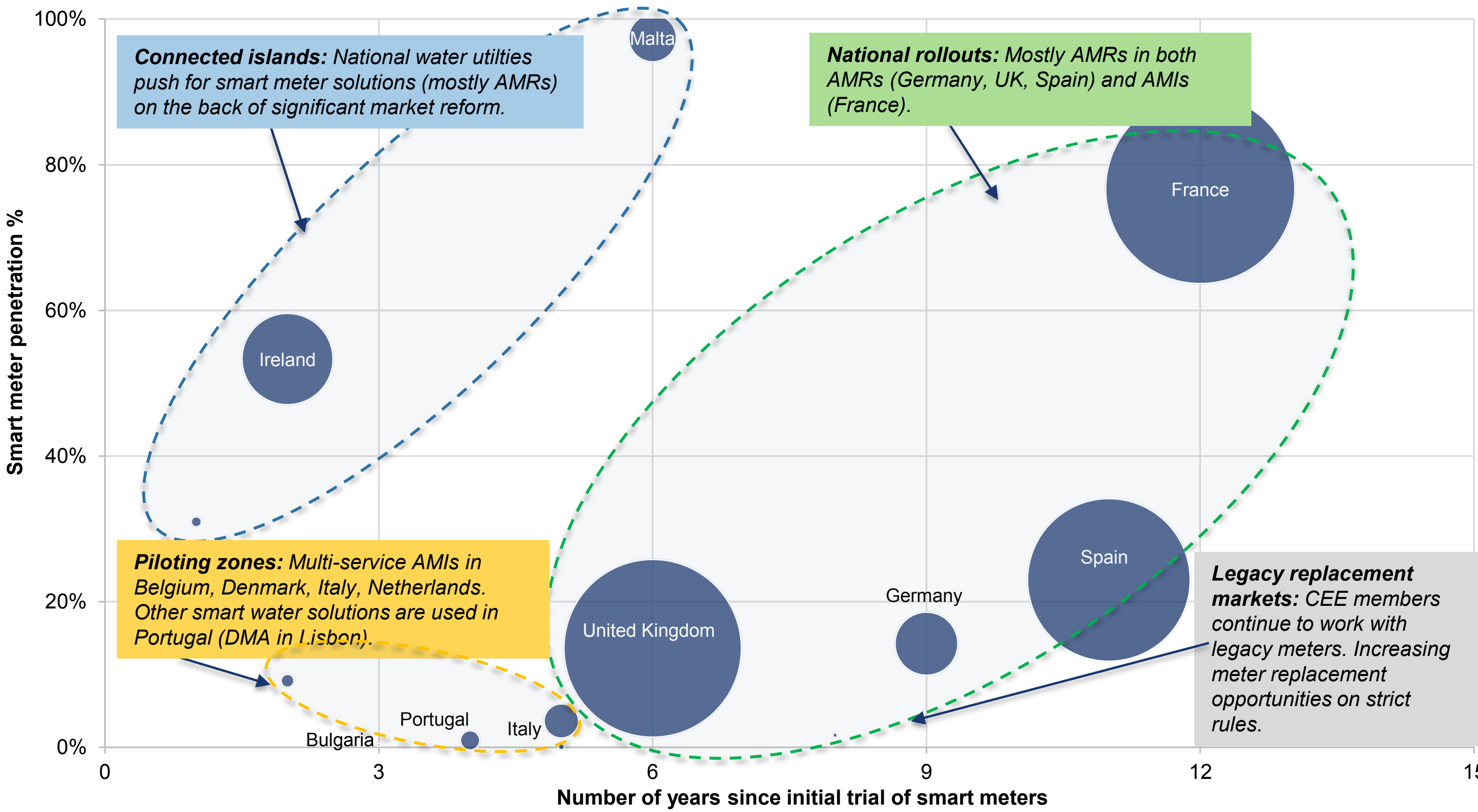
MARKET INSIGHT (SAMPLE SLIDES)

Smart Water Meters in Europe:
Utility Strategies Drive Adoption, 2016-2020

November 2016

Smart Meter Market Maturity and Positioning Overview

Diversion in utility smart metering strategies underpin market maturity and positioning, with three clear groups – the national rollouts (France, Germany, Spain, UK), the connected islands (Estonia, Ireland, Malta) and the pilot zones (Belgium, Denmark, Italy, the Netherlands).



Note: Bubble size refers to the number of smart meters. Data set is based on the group of over 50 utilities under review
Source: Utilities, others, Bluefield Research

Smart Meter Policy Development

EU regulations in electricity and gas smart metering pave the way for national policies to include water smart meter solutions. Other specific water meter and NRW reductions in some markets also support water smart meter development.

Key Policy Developments

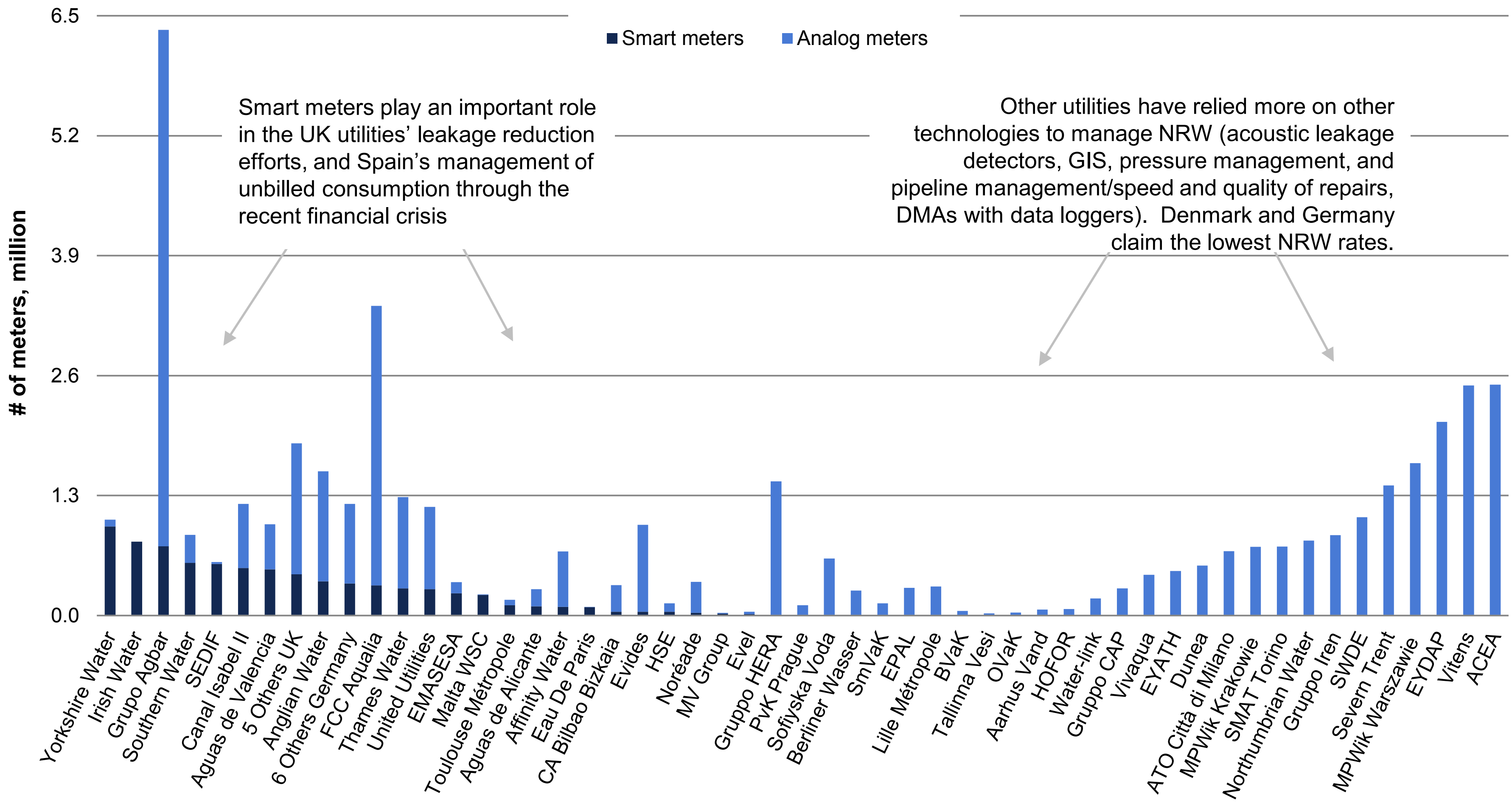
Regulatory aspect	Country	Effective Year	Regulatory development details
Smart Metering for electricity & gas, with water to be included	EU	2009	On the back of EU Directive 2009/72/EC for electricity and 2009/73/EC for gas, the EU aims to replace at least 80% of electricity meters with smart by 2020. An initiative also carried out in 2009 to develop standardization of smart meters (M/441 and European OPEN meter project). Also considers gas, but water is not mandatory.
	United Kingdom	2010	GBP12 billion (US$18.5 billion) Smart Metering Implementation Programme for gas and electricity. Smart grid, with smart metering functionality for the gas and electricity sector, will have the ability to enable new services, including water metering and home energy management.
	Italy	2013-2014	Under Resolution 393/2013/R/gas and Resolution 334/2014/r/gas, the regulator AEEGSI selected nine cities and smaller towns for the multi-service smart metering pilot projects partly funded by €0.1 per year gas consumer.
	Denmark	2014	The Danish Energy Agency stated that all electricity meters should be remotely read by 2020, resulting in several multi-utility companies piloting cross-sector smart grid development.
	Netherlands	2015	Energylink rolled out nationally, with interconnection of water meters in preparation.
	Luxembourg	2015	Law of June 2015 modifying law of July 2012 and August 2007 makes it mandatory to replace all legacy electricity and gas meters with smart meters that will be read by one national central system. The system will be open for other metering data including water and district heat.
Specific water meter	Spain	2006	Technical Building Code (Código Técnico de Edificación) made it mandatory across the country for new buildings and households each have their own water meters.
	Italy	2016	Delibera 218/2016/R/idr defines the responsibilities of the water utilities for the installation of meters, maintenance and meter verification, as well as meter reading (including self-reading) and bill validation.
	Various countries	Multiple	Meter replacement policies in various countries: Every 3-6 years in Central & Eastern Europe and 10-15 years in Wester Europe
NRW reduction	United Kingdom	Multiple	The water regulator Offwat requires annual leakage KPI (measured in ml/d) and sets leakage targets for AMP periods.
	France	2010	Cap NRW rate at 15% in urban areas.
	Bulgaria,Croatia	2014	National 2014-2023 Strategic Water Plans aim to reduce NRW rate to 49% in Bulgaria and to 15-20% in Croatia by 2023.

Source: National regulators, utilities, vendors, Welmec, others, Bluefield Research

Utility Meter Installation Base

Local market-based approaches to reduce leakage, lower NRW, and improve efficiency lead to a range of penetration rates for smart meters among 63 utilities.

Meter Installation by Utility and Meter Type, 2015



Source: Utilities, vendors, others, Bluefield Research.

Country / Regional Strongholds Underpin Sales

Aside from EU common regulation on drinking water quality and urban wastewater treatment, municipal water services' diverse organizational structures lead to uneven market saturation.

Meter Vendor Geographical Footprint

Note: *Based on compilation of announced projects between 2010-2016
High: 3+ Vendors, Medium: 2 Vendors, Low: 1 Vendor active
Source: Annual reports and press releases from meter vendors, Bluefield Research

Analysis

Smart water meter vendors compete across the European region yet local strongholds have developed.

- UK, Spain, and France host the most competitive markets in terms of the largest vendors with significant market share.
- Vendors' regional influence is concentrated around local subsidiaries and acquisitions, and manufacturing facilities.

Specific vendor approaches have evolved based on country positions:

- Kamstrup dominates more in the Nordic smart water meter market, securing recent contracts in Norway, Estonia, and Denmark.
- Arad Group's purchase of Contazara in Spain positions it well for the Iberian market, winning three contracts in 2015.
- Itron's manufacturing facilities in Northern Germany and Northern Italy provide access to Western Europe.
- Elster's two UK facilities are helping secure recent supply contracts with utility consortia.
- Sensus' strategic partnership SmartReach is providing access to Thames Water and potentially Scotland.
- Political uncertainty surrounding consumption-based billing in Ireland has delayed Diehl Metering fulfilling a substantial order of meters.
- Smaller, more regional players such as Apator and Bmeters are increasing competition in marginal, up-and-coming markets in Eastern and South-Eastern Europe.

Affinity Water – United Kingdom

Water Service Details

Affinity Water Services Ltd is a private limited company acquired in 2012 from Veolia by an investment fund (Infracapital, Morgan Stanley Infrastructure partners – Veolia retains 10%). Affinity Water is England's 8th largest private water utility by population served. Under the control of national regulator Ofwat, it plans investment under 5-year investment programs. In its recent AMP6 2020 review, the firm is required to reduce bills by 5.5%.

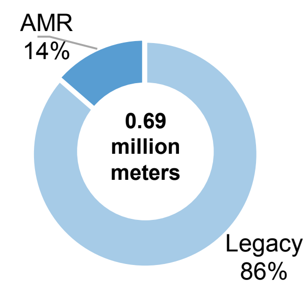
Location:	Hertfordshire, UK
Water revenues:	US$456 million
Population served:	3.6 million
Number of water connections:	1.4 million
Drinking volume introduced into network:	328.4 million m3
Meter penetration:	50% (over 90% in southeast alone)
Nº. of smart meters:	30,000 AMRs

Key Projects / Initiatives

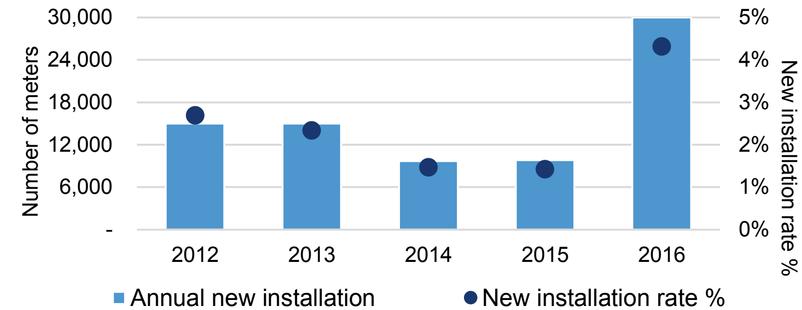
- Within AMP 6, Affinity Water committed to water saving, through metering and a water efficiency program. 60% of the AMP 6 new investment will go to metering program.
- Compulsory metering introduced in the southeast region in AMP 4, and a universal metering program now aims to achieve 90% of meter penetration in the central region.
- All meters installed during AMP 4 were legacy, but trials of AMR systems in AMP 5 has rendered the technology to be used for new installation in AMP 6. The company's study has shown that equipping AMR for existing legacy meters is not cost-benefit justifiable.

Source: Affinity Water, Bluefield Research

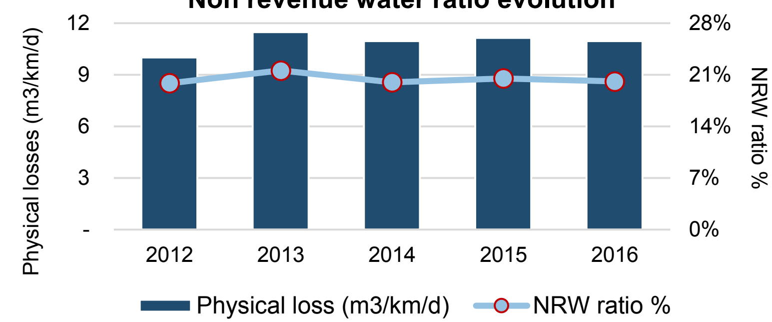
Water meter breakdown by types, March 2016



Meter replacement & new installation trends



Non revenue water ratio evolution



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Global companies across the value chain are developing strategies to capitalize on greenfield opportunities in water -- new build, new business models, and private investment. Bluefield Research supports a growing roster of companies across key technology segments and industry verticals addressing risks and opportunities in the new water landscape.

Companies are turning to Bluefield for in-depth, actionable intelligence into the water sector and the sector's impacts on key industries. The insights draw on primary research from the water, energy, power, mining, agriculture, financial sectors and their respective supply chains.

Bluefield works with key decision-makers at utilities, project development companies, independent water and power providers, EPC companies, technology suppliers, manufacturers, and investment firms, giving them tools to define and execute strategies.

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