Water Meters Smart and Standard Ed 3 2021
Chapter Summaries

EXECUTIVE SUMMARY

Chapter 1 - WATER CONSUMERS AND THE WATER METER LANDSCAPE

Demand for water meters by region and meter type from 2018 to 2022, together with diagrammatic schema of how the water metering population is distributed; bulk, C&I, residential utility meters and sub meters.

Chapter 2 - ANALYSIS OF GLOBAL DEMAND

Demand in units and $ value by region, 2019 to 2025.

Chapter 3 – THE IMACT OF COVID 19

Resume of impact of Covid on market. Full outline of Covid by country and timeline in Appendix.

Chapter 4 - SMART AND STANDARD METERS

The smart metering landscape outlined, for all utilities and water, with the structure of water metering and the conversion from AMR to AMI.

Chapter 5 - METER ING CATEGORIES ANA ACCURACY CLASSES

Water meters can be divided into four categories according to their application. Details of classes A. B, C, D.

Chapter 6 – RESIDENTIAL METERING - UTILITY AND SUB-METERS

Outline of water metering levels and categories and methods of billing for apartments.

Chapter 7 - THE MARKET FOR WATER METERS IN EUROPE

Tables of sales in units and $ value for each country in Europe, with base year 2019 forecast to 2025.

Detailed analysis for individual major countries; France, Germany, Ireland, Italy, Malta, Netherlands, Poland, Spain, Turkey, United Kingdom. Analysis of demographic base, number of households with access to piped water, by single family household and multi-family apartments. Outline of the water supply sector, with legislation and the water utility structure, regulatory environment, utilities and municipals, details of private suppliers and contractors; legal framework; state of smart metering; sub metering; meter market participants and market shares , vendors of utility billing meters, sub meters and RBC metering services.

Chapter 8- THE MARKET FOR WATER METERS IN THE CIS

Tables of sales in units and $ value for each country in the CIS, with base year 2019 forecast to 2025.

Detailed analysis for individual major countries; Russia and Ukraine. Analysis of demographic base, number of households with access to piped water, by single family household and multi-family apartments; description of housing and water consumption. Outline of the water supply sector, with legislation and the water utility structure, utilities and municipals, details of private suppliers and contractors; legal framework; state of smart metering; sub metering; meter market participants and market shares, vendors of utility billing meters.

Chapter 9 - THE MARKET FOR WATER METERS IN THE MIDDLE EAST

Tables of sales in units and $ value for each country in the Middle East, with base year 2019 forecast to 2025

Chapter 10 - THE MARKET FOR WATER METERS IN NORTH AFRICA]

Tables of sales in units and $ value for each country in North Africa, with base year 2019 forecast to 2025.

Detailed analysis for individual major countries; Algeria, Egypt, Morocco and Tunisia. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector, the water utility structure, utilities and municipals, details of private suppliers and contractors; legal framework; state of smart metering; sub metering; meter market participants .

Chapter 11 - THE MARKET FOR WATER METERS IN SUB-SAHARAN AFRICA

Tables of sales in units and $ value for each country in Sub-Saharan Africa, with base year 2019 forecast to 2025. List of all water utilities in sub-Saharan Africa.

Detailed analysis for South Africa. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector; meter market participants.

Chapter 12 - THE MARKET FOR WATER METERS IN ASIA PACIFIC

Tables of sales in units and $ value for each country in Asia Pacific, with base year 2019 forecast to 2025. List of all water utilities in Asia Pacific.

Detailed analysis for individual major countries; Australia, China, India, Indonesia, Japan, Malaysia, Philippines, South Korea, Taiwan, Thailand. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector, with the water utility structure, regulatory environment, municipals; legal framework; state of smart metering; meter market participants and market shares.

Chapter 13 - THE MARKET FOR WATER METERS IN NORTH AMERICA

Tables of sales in units and $ value for each country in North America, with base year 2019 forecast to 2025.

Detailed analysis for USA and Canada. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector, with legislation and the water utility structure, regulatory environment, municipals, details of private suppliers and contractors; legal framework; state of smart metering; sub metering; meter market participants and market shares.

Chapter 14 - THE MARKET FOR WATER METERS IN CENTRAL AMERICA

Tables of sales in units and $ value for each country in Central America, with base year 2019 forecast to 2025. List of all water utilities in Central America.

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Detailed analysis Mexico. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector, with legislation and the water utility structure, regulatory environment; meter market participants and market shares , vendors of utility billing meters.

Chapter 15 - THE MARKET FOR WATER METERS IN SOUTH AMERICA

Tables of sales in units and $ value for each country in South America, with base year 2019 forecast to 2025. List of all water utilities in South America.

Detailed analysis for individual major countries; Argentina and Brazil. Analysis of demographic base, number of households with access to piped water. Outline of the water supply sector, regulatory environment and the water utility structure, municipals, details of private suppliers and contractors; legal framework; state of smart metering; meter market participants

Chapter 16 - METER TRENDS AND DEMAND DRIVERS

Similar to gas and electricity meters, the basic demand drivers are the increase in the number of households with access to piped water, the need for the replacement of aged meters, and the introduction of smart metering. There are other important drivers of demand specific to the water supply sector, which are also important for smart applications.

Chapter 17 - DIGITISATION, BLOCKCHAIN AND SMART GRID APPLICATIONS

The usage and benefits of digitisation in water management and customer relations. Blockchain and smart grid telecommunications technologies, with details of wired and wireless options. Profiles of individual vendor technologies; Aclara Star AMI , Sensus FlexNet, Badger Beacon, Mueller MiNet, Elster Falcon, Itron Choice Connect, Neptune R450, Arad Group Dialog, Kamstrup AMI.

Chapter 18 - WATER METER AND SMART TECHNOLOGY VENDORS - PROFILES AND MARKET SHARES

The international water metering industry is divided into three groups producing meters. The larger the company, the wider is the portfolio of products and services. The global leaders have significant assets in the technology and IT side of the market as well as producing meters. Profiles of Elster, Itron, Sensus, Badger, Arad, Neptune, Diehl, Aclara. Global market shares. Three German companies lie in the second tier although they are RBC (read, billing, collect) services companies and they sell sub meters; ista, Techem and Minol Brunata Zenner.

METHODOLOGY

APPENDIX – COVID CHRONICLE

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With a global population of 7.8 billion at the end of 2020 the total number of households was 2.1 billion, consisting of single family houses and apartments in multi-family blocks. 70% of these households have access to piped water inside the house or apartment. A further proportion have water piped to an outside pipe on their property.

In 2020 demand for meters, residential, industrial, commercial and bulk/irrigation totalled 131 million units with a sales value of $4.5 billion. 27% or 36 million of these meters were smart, either AMR or AMI.

Table 1: Population, households, access to piped water, meter demand in units and $ value, 2020

	Population	Households	Households with piped water		Meter demand units	Meter demand $ value
	Million	**Million**	**Million**	**%**	**Million**	**Million**
Europe						
CIS						
Middle East						
North Africa						
Sub-Saharan Africa						
Asia Pacific						
North America						
South America						
Central America						
World						

The residential and small commercial market constitutes 96% of the meter market in units and 84% in terms of value. The high proportion in terms of value is raised because of the deployments of smart meters, priced much higher than standard water meters. In earlier years before smart metering began, the value of the non-residential segment was the same but the proportion of the total was much higher, due to the much higher prices of commercial, industrial, bulk and irrigation meters.

Water in the C&I segment is billed ………………………..

The figures under multi-family apartments are the distribution of payment methods used in the United States.

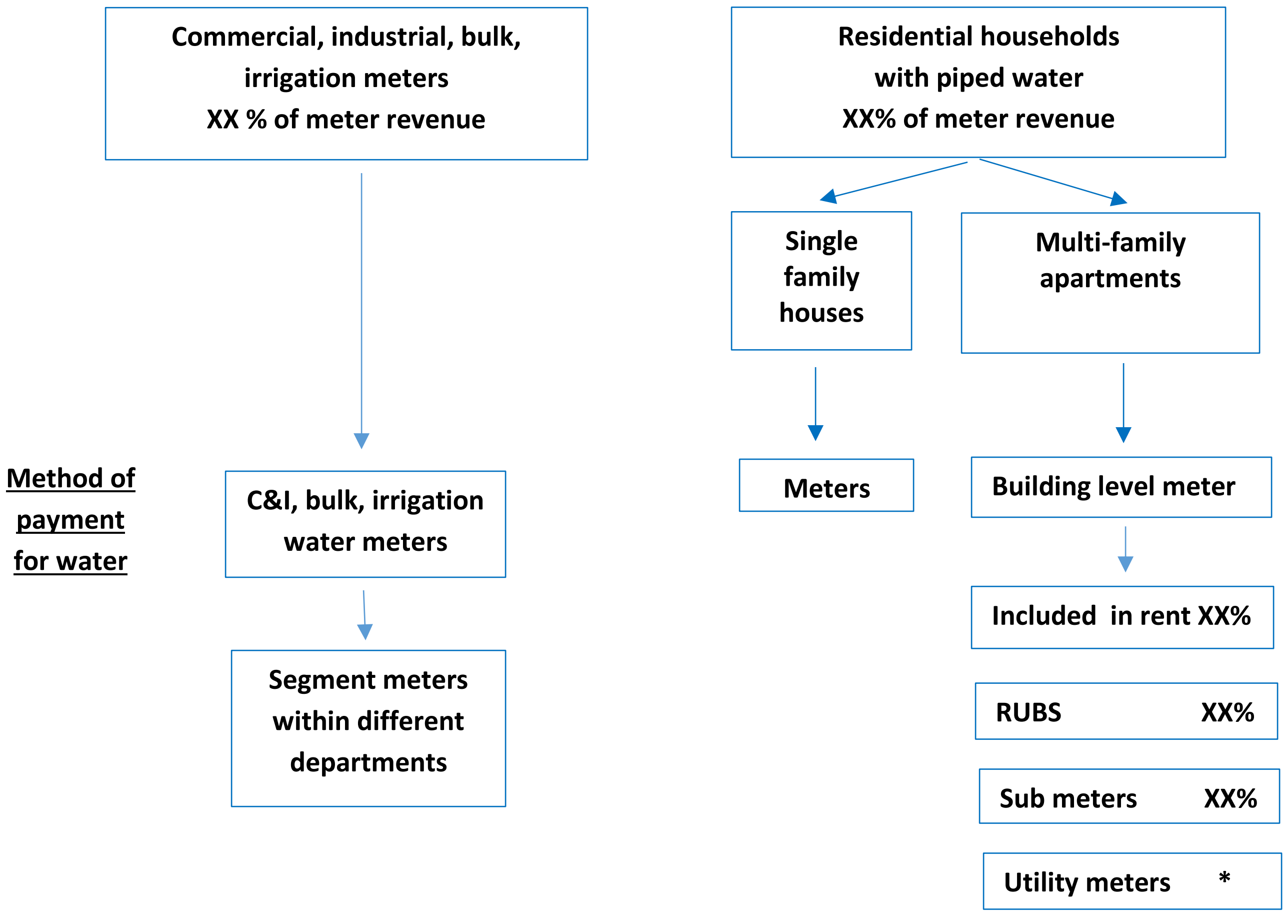

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Table 2: Global sales of water meters in units, by meter type, 2019-2025

000 units	2019	2020	2021	2022	2023	2024	2025
Residential							
Billing 15-25 mm							
Prepayment meters							
Sub meters							
AMI							
AMR							
Apartment/Small Commercial Buildings							
> 25-50 mm							
ICI Industrial Commercial Institutional							
75-100 mm							
Bulk Transfer/Custody Transfer							
≥ 300 mm							
Network Management (Non-custodial)							
≥ 300 mm							
World							

Table 3: Global sales of water meters in value, by meter type, 2019-2025

$ '000	2019	2020	2021	2022	2023	2024	2025
Residential							
Billing 15-25 mm							
Prepayment meters							
Sub meters							
AMI							
AMR							
Apartment/Small Commercial Buildings							
> 25-50 mm							
ICI Industrial Commercial Institutional							
75-100 mm							
Bulk Transfer/Custody Transfer							
≥ 300 mm							
Network Management (Non-custodial)							
≥ 300 mm							
World							

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The structure of water metering

In 2012 AMR and AMI water meters comprised XX% of the units sold and XX% in value. By 2025 this will amount to XX% in units and XX% in value. This increase in the value share is due to the growth of high priced AMI meters, both as conversions from basic meters and upgrades of AMR to AMI, which is already happening………………………………..

Figure 1: Water meters sales by meter category AMI/AMR, world, units, 2012 to 2025

Figure 3: Water meters sales by meter category AMI/AMR, world, units, 2012 to 2025

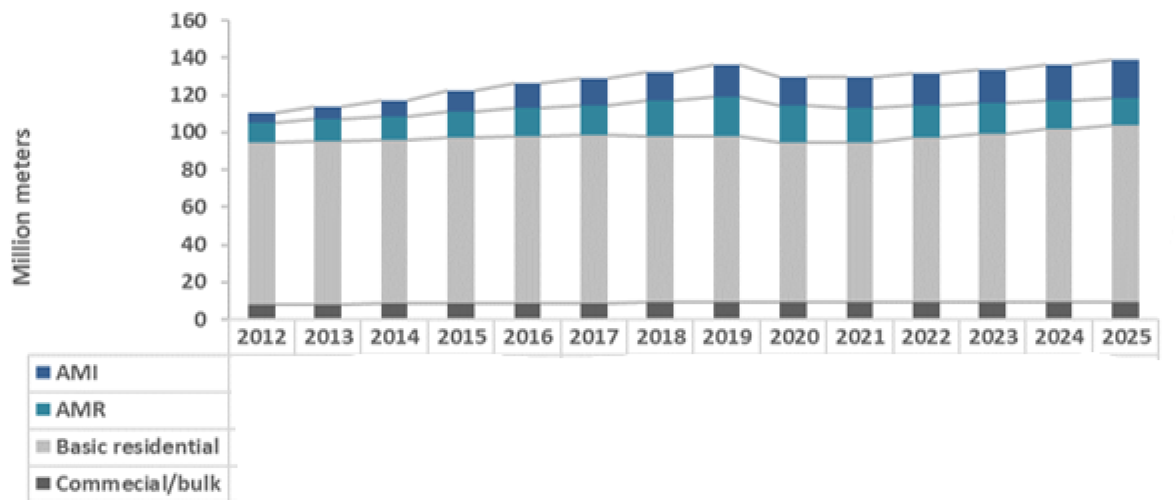

Figure 4: Water meters sales by meter category AMI/AMR, world, $ value, 2012 to 2025

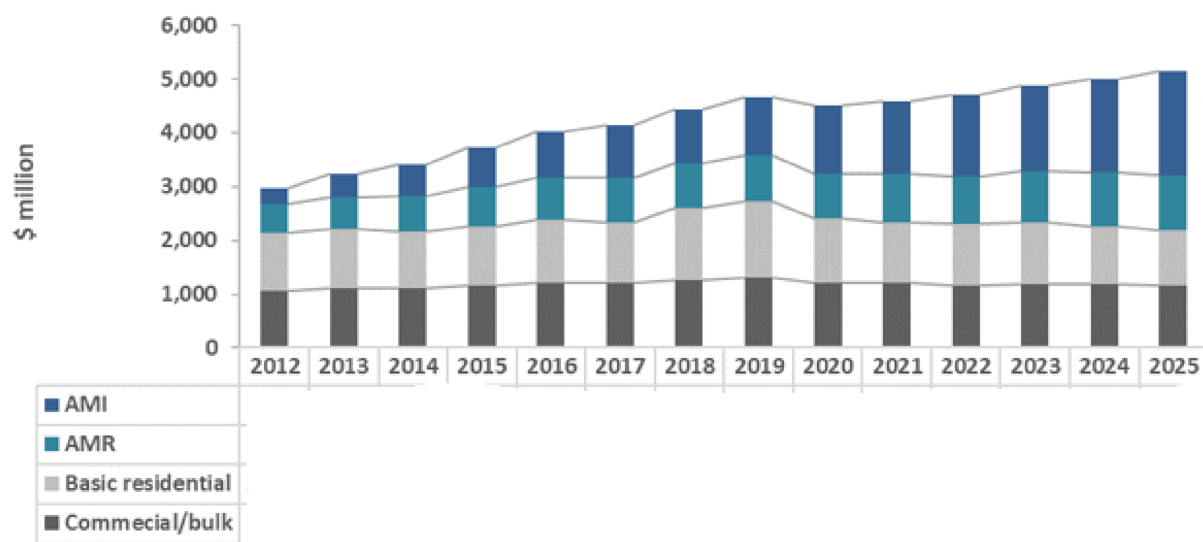

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Table 4: Demand for water meters in all European countries by countries, units, 2019 to 2025

Units '000	2019	2020	2021	2022	2023	2024	2025
Albania							
Austria							
Belgium							
Bosnia and Herzegovina							
Bulgaria							
Croatia							
Cyprus							
Czech Republic							
Denmark							
Estonia							
Finland							
France							
Germany							
Greece							
Hungary							
Iceland							
Ireland							
Italy							
Latvia							
Lithuania							
Luxembourg							
Macedonia							
Malta							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Serbia and Montenegro							
Slovakia							
Slovenia							
Spain							
Sweden							
Switzerland							
Turkey							
United Kingdom							
Europe							

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Table 5: Demand for water meters in all European countries by countries, value, 2019 to 2025

$ '000	2019	2020	2021	2022	2023	2024	2025
Albania							
Austria							
Belgium							
Bosnia and Herzegovina							
Bulgaria							
Croatia							
Cyprus							
Czech Republic							
Denmark							
Estonia							
Finland							
France							
Germany							
Greece							
Hungary							
Iceland							
Ireland							
Italy							
Latvia							
Lithuania							
Luxembourg							
Macedonia							
Malta							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Serbia and Montenegro							
Slovakia							
Slovenia							
Spain							
Sweden							
Switzerland							
Turkey							
United Kingdom							
Europe							