

# 1. ITALY




































## 1.1 TOP MARKET OPPORTUNITIES

The Italian water sector has started to show some positive signals of a modest recovery after years of uncertainty following the June 2011 referendum, which abolished the possibility of remuneration of capital investments in the tariff. The restarting of the water sector has been driven by the regulatory and supervisory actions taken by the national independent water regulator (AEEGSI), which gave more certainty to operators, especially in terms of tariffs and financial balances. The most interesting opportunities in the Italian water market are:

- **Urgent need of additional wastewater treatment capacity:** The country is late in its compliance with the EU Urban Wastewater Treatment Directive (91/271/CEE) and has already received two final sentences and an infringement from the European Court of Justice (for further details see section 1.4). Many projects are under way and expected in future years. They will involve both the upgrade of existing WWTPs and the construction of new treatment plants. The use of more advanced technologies such as membranes is expected in the upgrade of existing WWTPs with limited space availability for plant expansion.
- **Water and wastewater networks:** The system of Italian networks – with an average age of 40 years – is deteriorating. In addition, the decreased level of investment that the sector has experienced after the uncertainty following the 2011 referendum has exacerbated the infrastructure gap. Large parts of the water and wastewater networks therefore need to be upgraded or renewed and extended to increase the coverage of the service in areas that are currently not adequately served.
- **Leakage management:** Water losses are particularly high in Italian water supply networks and have even increased in recent years as a result of the diminished level of investment, increasing from the 2008 level of 32.1% to 37.4% in 2012. Leakage management systems are expected to be an interesting area of investment, which will involve the development of pressure management systems, remote monitoring systems and smart meters.
- **Water supply systems and desalination:** Many areas of the country, especially in the southern regions, are still experiencing disruptions in water supply and sometimes even prolonged situations of water crisis. According to the investment plans of utilities, capital expenditure will be partly addressed in the next three to five years for interventions to increase the coverage and efficiency of water supply services. In some cases desalination – which is already being explored on some Sicilian islands, could represent a good opportunity because of the improved and less expensive technologies that are now available.
- **Water treatment:** Operators of the water service are facing increasingly challenging operational conditions, as drinking water standards are becoming more stringent, and new contaminants, such as endocrine disruptors, are emerging. In addition, as a result of increasing urbanisation, the operational parameters and conditions that utilities have to guarantee are becoming more complex to control and achieve. This is expected to drive opportunities in terms of remote water quality monitoring both in treatment plants and networks and more technologically advanced control systems.

## 1.2 SECTOR STRUCTURE AND REGULATION

Figure 1.1 Water sector regulatory structure

Entity	Level	Description	Roles
General Directorate for Dams, and Water and Hydroelectric Infrastructure – Ministry of Infrastructure and Transport (MIT)	Federal/National	The Directorate of the MIT is responsible for organising and managing the major dams and water networks of strategic national interest.	 
General Directorate for the Safeguard of Land and Water (STA) – Ministry of Environment and Land and Sea Protection (MATTM)	Federal/National	The Directorate of the MATTM is responsible for the safeguarding of national water resources in terms of quantity and quality, and within the integrated water service (SII) defines the quality standards of the service and promotes development of systems for water supply, wastewater collection and treatment in order to comply with EU standards.	  
Governing Body of the Optimal Territorial Area (EGA)	Regional		 
Institute for Environmental Protection and Research (ISPRA)	Federal/National		 
Inter-ministerial Committee for Economic Planning (CIPE)	Federal/National		  
Local Health Unit (ASL)	Regional		
Ministry of Agricultural, Food and Forestry Policies (Mipaaf)	Federal/National		
Ministry of Health	Federal/National		 
Mission structure with a focus on hydrogeological instability and the development of water and wastewater infrastructure	Federal/National		
Municipal utility corporations	Local or Municipal		      
Municipalities	Local or Municipal		     
Regulatory Authority for Electricity, Gas and Water (AEEGSI)	Federal/National		 
River Basin Authority (AdB)	Regional		 
Territorial Environmental Protection Agency (ARPA/APPA)	Regional		 




































Source: GWI












Figure 1.2 Water sector funding organisations

Entity	Description	Finance type	Funding applications
Cassa Depositi e Prestiti (CDP)	A limited company, whose major shareholder is the Ministry of Economy and Finance (MEF), holding 80.1% of shares. Various bank foundations hold 18.4% of shares, while treasury shares account for the remaining 1.5%. CDP supports investment in public infrastructure through project finance, corporate finance and infrastructural private equity funds.	Loans only	    

Source: GWI

Figure 1.3 Regulations applicable to the water sector

Document	Description	Policy areas	Industries covered
Unlock Italy Decree (D.lgs 133/2014)	Regulation with urgent measures for the opening of construction sites and the development of public works to comply with the EU Urban Wastewater Treatment Directive (91/271/CEE). The regulation sets some deadlines and introduces the possibility of the acquisition of power by the Government or the establishment of special administrators. It also includes some prescriptions for the acceleration of the achievement of stable water sector governance and modification to articles regarding the water sector structure of the Environmental Code (D.lgs 152/2006).		
DPCM 27 May 2014			
D.lgs 201/2011			
Law 42/2010			
DM Health 30 March 2010			
D.lgs 128/2010		             	
D.lgs 30/2009			
Law 133/2008			
D.lgs 116/2008			
Environmental Code (D.lgs 152/2006)	Regulation coordinating all previously existing environmental regulations on waste, water, air, soil, etc. It implements the Urban Waste Water Treatment Directive 91/271/EEC.	             	

Document	Description	Policy areas	Industries covered
D.lgs 163/2006	National transposition of EU Directives 2004/17/CE and 2004/18/CE, concerning the procurement of public contracts for works, services and supplies.		
DM Environment 185/2003	Regulation sets technical specifications on the reuse of wastewater.		
D.lgs 269/2003			
D.lgs 27/2002			 
D.lgs 31/2001			 
D.lgs 99/1992			

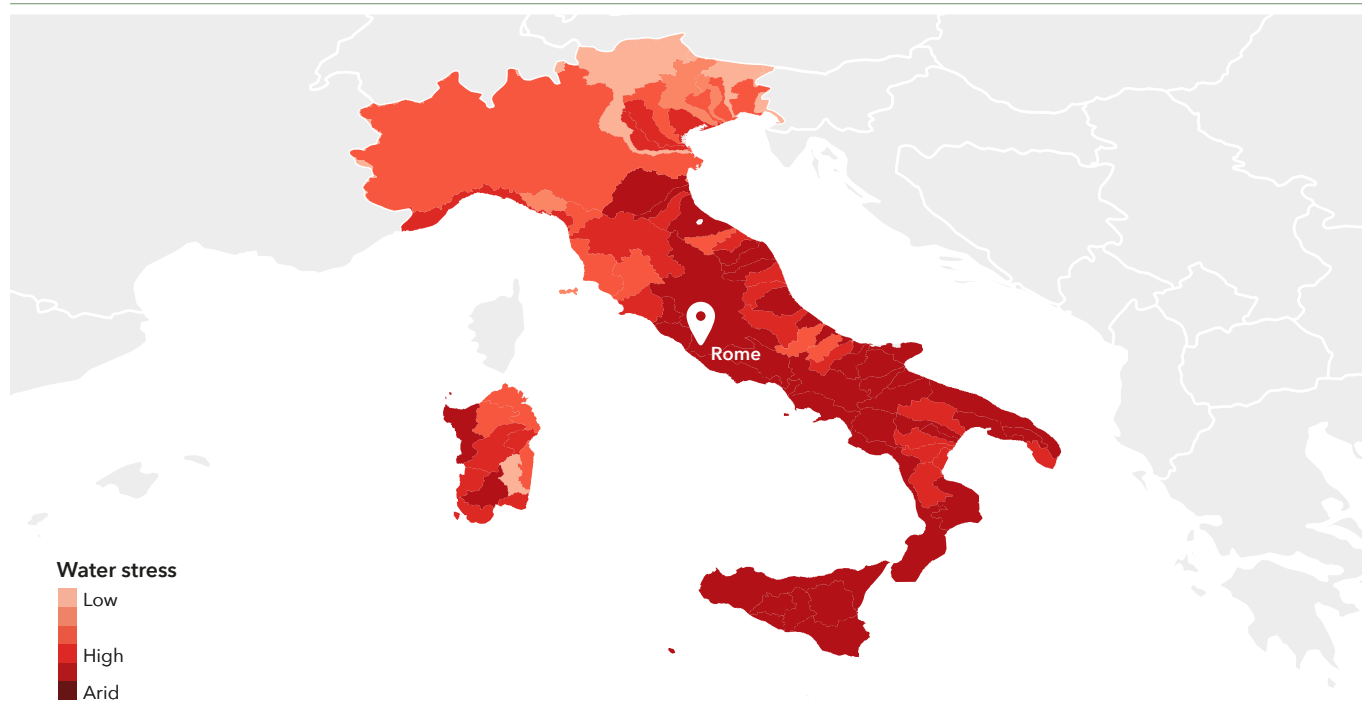
Source: GWI

The most recent policies affecting the Italian water sector were introduced in 2014 to revitalise the market, unlock blocked infrastructure projects and accelerate the creation of a stable and uniform water sector governance. The most recently introduced regulations are:

- **D.lgs 133/2014** (the so-called “Unlock-Italy” decree): The government issued this decree in order to accelerate the process of design and construction of wastewater collection and treatment systems required to resolve the situation of non-compliance with the EU Urban Wastewater Treatment Directive (91/271/CEE). Although funds were assigned back in 2012 and 2013 for the development of projects, very little money had been spent by 2014. Procurement processes and sometimes construction sites were blocked, as regions were slow or incapable of efficiently planning investments. Besides the sluggishness of regions in making investments, some local authorities had also been inefficient in complying with their responsibilities in terms of regional regulation and the constitution of water sector governance as outlined in the D.Lgs 152/2006. The “Unlock-Italy” decree tried to accelerate this process as well and introduced definite times for the constitution of water sector governance in the areas of Italy where it was still missing and the application of substitutive powers in cases where local authorities were not taking actions to comply with regulation. The last deadline for the achievement of the organisation structure was the end of September 2015, and at the time of this report’s publication, seven regions are still not complying with regulation and risk being put under temporary receivership.
- **DPCM 27 May 2014**: This created a special agency with a focus on hydrogeological instability and development of water and wastewater infrastructure. The aim of this agency is to coordinate the various public organisations at the central, regional and local levels and any other private entity involved in these sectors in order to integrate their interventions and make them more efficient, and effectively achieve the completion of the planned and required water and wastewater infrastructure.

### 1.3 WATER RESOURCES

Figure 1.4 Overall water risk



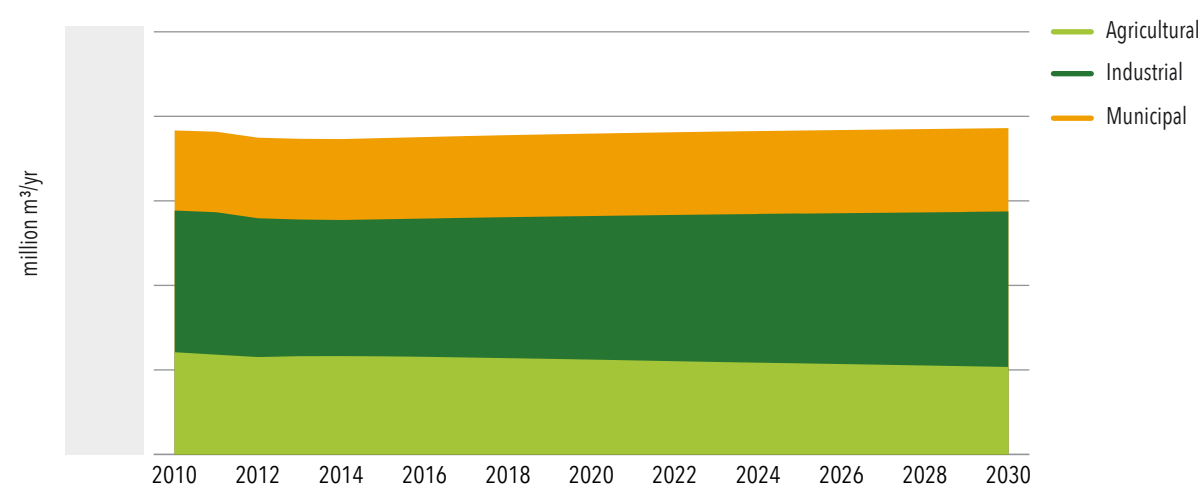
Source: WRI, 2015

Figure 1.5 Water resources

Water resource	Volume (km <sup>3</sup> /yr)	Year
Groundwater (renewable, actual)	43.00	2014
Surface water (renewable, actual)	179.30	2014
<b>Total renewable water resources</b>	<b>222.30</b>	<b>2014</b>

Source: AQUASTAT Main Database, Food and Agriculture Organization of the United Nations, 2015

Figure 1.6 Water withdrawals by sector, 2010-2030



Sector (million m <sup>3</sup> /yr)	2010	2015	2020	2030
Agricultural				
Industrial				
Municipal				
<b>Total</b>				

Source: GWI

### 1.3.1 Desalination

There is no specific strategy for desalination in Italy, but it is increasingly representing a convenient water supply option in water scarce regions and islands located in the south of the country.

### 1.3.2 Water reuse

In recent years there has been increasing interest in water reuse, although no specific action has been taken yet. The government's intention is to increase and encourage water reuse initiatives for industrial and agricultural purposes, initially by making the actual regulation more flexible, clearer and uniform. The regulation is currently the main restraint for the development of water reuse projects, as on the one hand it does not require any internal reuse of process water in industrial manufacturing facilities, but on the other hand presents very restrictive conditions for the reuse of water in different facilities or for irrigation purposes, both in terms of quality standards and environmental controls. Another strategy that is under discussion is the introduction of a system of subsidies to encourage a larger use of treated wastewater, grey water and stormwater.

### 1.3.3 Groundwater protection

The withdrawal of water has increasingly moved from surface water resources to groundwater resources over the years and in some areas of the country over-exploitation of groundwater resources is taking place. Future initiatives aimed at protecting groundwater resources and preventing water scarcity issues could also involve the artificial recharge of aquifers.

### 1.3.4 Reservoirs and storage

The main measure planned for this area is the increase of reservoir and storage capacity in order to have larger water availability for long-term water resources management. This may become important as part of the adaptation strategy for situations of water scarcity and climate change.

### 1.3.5 Demand management

Strategies for demand management are linked to the development of a more integrated and efficient management of water resources. There are no specific demand management initiatives, but the main target is to rationalise the withdrawal and use of water in order to achieve a more sustainable use of water resources, both in terms of quantity and quality.

## 1.4 UTILITY SECTOR

### 1.4.1 Utility sector strategies and investment planning

#### 1.4.1.1 Water service extension

In 2012, 8.6% of Italian families still reported discontinuity in the supply of water. Water supply issues are largely located in the southern regions of the country and are determined by water scarcity and inefficient management of the service. According to AEEGSI data, investment will be made in the area of water supply and distribution, as reported in the ATO's Plans (Piani d'Ambito) approved by the regulator for the period 2014–2017.

This planned expenditure will involve projects aimed at interconnecting aqueducts and protecting water supply sources, reservoirs, intake structures and transmission pipes, besides interventions aimed at resolving water emergencies. Utilitalia, which is the association of Italian utilities, estimated that the country requires 30,000 km of new water networks.

#### 1.4.1.2 Asset management

In recent years, efforts have been made by utilities, especially larger companies at the industrial scale, to achieve more efficient management of assets and reduce operational costs. Interventions required in this area will be the digital mapping of networks (some Italian water and wastewater networks are quite old and are not clearly mapped) and the application of automation technologies and systems to better monitor the infrastructure and improve its efficiency and performance.

#### 1.4.1.3 Non-revenue water

The Italian water network is ageing and, because of the decrease in investment over the last five years, has experienced an increase in the volume of water losses. This will therefore be one of the priority areas of intervention. Future investments are planned in the research and reduction of water losses through the adoption of remote monitoring systems, renewal of pipes (125,000 km according to Utilitalia's estimates), pressure management systems and smart metering systems.

#### 1.4.1.4 Smart water

Investment in the smart water sector in Italy will focus on improving the monitoring coverage of utility operations. The development of smart water systems is expected to be pursued more by utilities managing the integrated water service in north and central regions, where operators are larger companies with industrial economies, large investment capacity and less pressing issues related to water and wastewater services, due to investments they have made in the past. Expenditure on smart water systems in Italy will be made in parallel with investment in more basic infrastructure, such as network development and replacement. Investment is expected in smart meters and smart leakage management systems. In addition, utilities plan to extend the network of remote monitoring systems, particularly in their treatment plants, in order to achieve better monitoring of parameters and improve energy efficiency and operational performance.

#### 1.4.1.5 Wastewater networks

Some areas of the country are still lacking an adequate wastewater collection system. Some investment will be made to increase the coverage of wastewater networks and protect the quality of surface water resources. Besides the need for new wastewater networks, some of the existing parts of the network are deteriorating and need to be replaced. According to Utilitalia data, Italy requires 21,000 km of new wastewater networks and 45,000 km should be replaced.

#### 1.4.1.6 Wastewater treatment

The area of wastewater treatment is in the most urgent need of investment and intervention. Italy has received two final sentences by the European Court of Justice because 151 urban settlements are not complying with the EU Urban Wastewater Treatment Directive (91/271/CEE), which requires the provision of wastewater collection systems and wastewater treatment systems with secondary or better treatment level in all urban conglomerates. In 2014, after the results of the information collected about agglomerations with discharge up to 2,000 PE, the EU started a third infringement procedure, which affects 874 urban settlements spread across the country. If this situation of non-compliance is not resolved, it has been estimated that Italy will have to pay an annual fine of around €482 million from 2016 onwards until the situation is resolved. Projects and investment in this sector will focus on the monitoring and improvement of the operation of existing WWTPs and the construction of new plants in order to increase the country's wastewater treatment capacity.

#### 1.4.1.7 Wastewater polishing

Advanced wastewater treatment systems are not very common in Italy, and are adopted only in cases where the treatment plant needs a small footprint because the land availability is limited, or the plant is located close to the sea or sensitive water resources and wastewater needs to achieve a higher level of treatment before discharge. The increasing interest in water reuse initiatives could drive the adoption of wastewater polishing technologies in the long term.

## 1.4.2 Utility sector structure and performance

Figure 1.7 Utility market structure

Entity	No. of entities	No. of entities serving more than 100,000 people	No. of people served	Volume of water supplied/treated (million m <sup>3</sup> /yr)	Ownership types
River basin authorities	37	n/a	n/a	n/a	
Bulk water utilities					
Bulk wastewater utilities					
Water supply utilities					
Wastewater utilities	688	3	59,408,381	n/a	Majority of utilities are municipalities or publicly-owned companies
Combined water/ wastewater utilities					
Drainage utilities					

Source: GWI

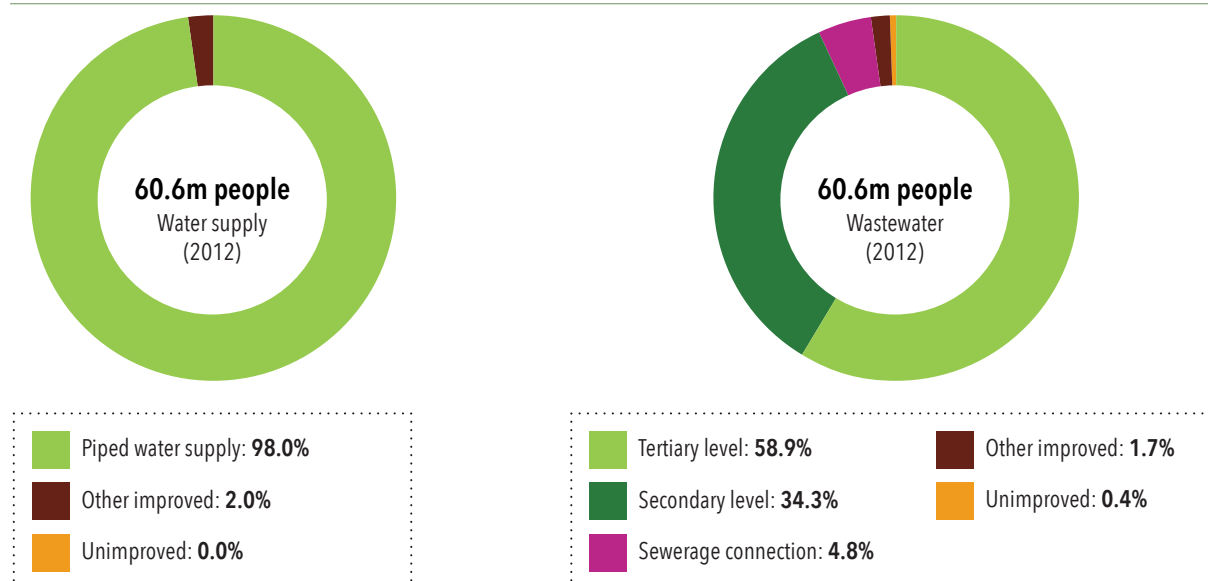
Figure 1.8 Water and wastewater utilities serving greater than 300,000 people

Utility name	Region	Population served – water	Population served – wastewater	No. of water connections	No. of sewerage connections
Acquedotto Pugliese S.p.A.	n/a	4,069,869	4,069,869	1,000,000	1,000,000
Acqua Campania S.p.A.					
Acea Ato 2					
Gruppo Hera S.p.A.					
Società Metropolitana Acque Torino (SMAT)					
Amiacque S.r.l.					
Metropolitana Milanese S.p.A.					
CAP Holding					
ABC Napoli Azienda Speciale (former Arin S.p.A.)					
Siciliacque S.p.A.					
Abbanoa S.p.A.					
Gestione Ottimale Risorse Idriche (G.O.R.I.) S.p.A.					
Publiacqua S.p.A.					
AMAP S.p.A.					
Iren Emilia S.p.A.					
Romagna Acque – Società delle Fonti S.p.A.					
Società azionaria per la condotta di acque potabili S.p.A.					
Acque S.p.A.					
Brianzacque S.r.l.					
VERITAS S.p.A.					
Acque Veronesi S.c.a.r.l.					
Mediterranea delle Acque S.p.A.					
Uniacque S.p.A.					
Etra S.p.A.					
Acquedotto Lucano S.p.A.					
A2A Ciclo Idrico S.p.A.					
Pavia Acque S.r.l.					

Utility name	Region	Population served – water	Population served – wastewater	No. of water connections	No. of sewerage connections
AcegasAps S.p.A.	n/a	530,012	530,012	252,951	222,182
Acqualatina S.p.A.					
TASM S.p.A. Tutela Ambientale Sud Milanese					
Umbra Acque S.p.A.					
Acqua Novara VCO S.p.A.					
Consorzio Idrico Terra di Lavoro (C.I.T.L.)					
CIIP – Cicli Integrati Impianti Primari S.p.A.					
Acea Ato 5					
Alto Calore Servizi S.p.A.					
Alto Trevigiano Servizi					
Multiservizi S.p.A.					
G.A.I.A. S.p.A.					
ASIS Salernitana Reti ed Impianti S.p.A.					
Acquedotto del Fiora S.p.A.					
CAFC S.p.A.					
TAM S.p.A. Tutela Ambientale del Magentino					
Azienda Comprensoriale Acquedottistica (A.C.A.) S.p.A.					
Molise Acque					
Azienda Servizi Ambientali (A.S.A.) S.p.A.					
Girgenti Acque S.p.A.					
Sidra S.p.A.					
Nuove Acque S.p.A.					
Acque Ovest Bresciano Due (A.O.B.2) S.r.l.					
Lario reti holding S.p.A. (Lrh)					

Source: GWI

**Figure 1.9 Utility service performance**



Source: GWI

Figure 1.10 Water supply indicators

Water supply indicator	Value	Year	Source
No. of people connected to water network			
% of people connected to water network			
No. of water connections			
Utility water supply capacity (m <sup>3</sup> /yr)			
Length of water network (km)			
Meter coverage (%)			
Non-revenue water			
No. of WTPs			
Design capacity of WTPs (m <sup>3</sup> /d)			
Operational capacity of WTPs (m <sup>3</sup> /d)			

Source: Given in table

Figure 1.11 Wastewater indicators

Wastewater indicator	Value	Year	Source
No. of people connected to sewerage network			
% of people connected to sewerage network			
No. of sewerage connections			
Volume of wastewater produced (m <sup>3</sup> /yr)			
Wastewater collected (%)			
Wastewater treated to secondary level (%)			
Wastewater treated to tertiary level (%)			
Length of wastewater network (km)			
No. of WWTPs			
Design capacity of WWTPs (m <sup>3</sup> /d)			
Operational capacity of WWTPs (m <sup>3</sup> /d)			

Source: Given in table

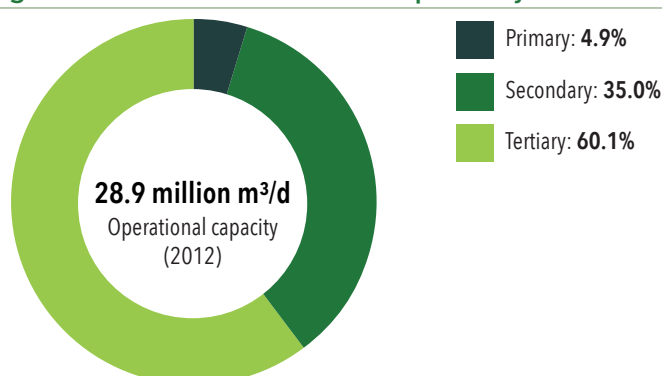
### 1.4.3 Utility infrastructure

Figure 1.12 Major water treatment plants

City	Plant name	Owner	Operator	Design capacity (m <sup>3</sup> /d)
Turin	Po River	Municipality of Turin	Società Metropolitana Acque di Torino (SMAT)	604,800

Source: GWI

Figure 1.13 Wastewater treatment plants by level of treatment



Source: GWI

Figure 1.14 Major wastewater treatment plants

City	Plant name	Owner	Operator	Design capacity (m <sup>3</sup> /d)	Technology
Rome	Roma Sud	Municipality of Rome	Acea ATO2	820,800	Activated sludge/ biofiltration

Source: GWI

Figure 1.15 Major utility and public sector desalination plants

City	Plant name	Owner	Operator	Design capacity (m <sup>3</sup> /d)	Technology
Trapani	Trapani	Sicily Region	Siciliacque	27,397	Multiple-effect distillation

Source: GWI DesalData

Figure 1.16 Major water reuse plants

City	Plant name	Owner	Operator	Design capacity (m³/d)	Technology
Turin	Castiglione Torinese	Municipality of Turin	Società Metropolitana Acque di Torino (SMAT)	600,000	Activated sludge/ anaerobic digestion/ disinfection with sodium hypochlorite

Source: GWI

### 1.4.4 Utility funding

Figure 1.17 Utility water and wastewater tariffs in selected major cities, 2015

City	Utility	Fixed charges (\$/m <sup>3</sup> )	Variable water charges (\$/m <sup>3</sup> )	Variable wastewater charges (\$/m <sup>3</sup> )	Sales tax (\$/m <sup>3</sup> )	Total benchmark price (\$/m <sup>3</sup> )
Genova	Mediterranea delle Acque SpA	0.22	0.98	1.15	0.24	2.59
Milan	Metropolitana Milanese S.p.A.	0.02	0.19	0.52	0.07	0.80
Naples						
Palermo						
Rome						
Venice						

Source: GWI

Figure 1.18 Sources of utility funding

Sources of utility funding	Utility capex	Utility opex
Utility billings		
Grants from other government bodies		
International aid		

Source: GWI

Figure 1.19 Sources of debt used to fund utility investments

Sources of debt/equity	Water	Wastewater
International concessionary loans	○○○	●○○
Concessionary loans from federal government bodies	●○○	●○○
Concessionary loans from state/regional government bodies		
Loans from municipal owner		
Utility bond issuance		
Commercial bank loans to utility		
Private finance		

Source: GWI

In Italy, tariffs are the main source of funding in the water sector and cover on average more than 80% of annual investment. The remaining part of capital expenditure is supplied through public grants provided by the government, with the funds assigned by the Interministerial Committee for Economic Planning (the so-called CIPE funds), and the European Union through the European Structural Funds (FSE). These public grants are addressed to the most critical situations, which are generally located in the southern regions. A limited percentage of investments, which has been decreasing in recent years because of the lower budgets available, also comes from regional governments and municipalities, which contribute to the financing of projects in their local area. Recently, an alternative source of funding has been adopted by some operators in the Veneto region as part of the Viveracqua consortium. They have issued mini-bonds (bonds issued by small or medium-sized companies that are not listed on the stock markets) for a total of €150 million to be invested in projects in wastewater networks, WWTPs and WTPs. This involves the participation of the European Investment Bank (EIB) as principal investor.

### 1.4.5 Utility procurement

Figure 1.20 Procurement models used

Procurement model	Prevalence	Infrastructure
Design-bid-build		
EPC/Design-build only		
Design-build-operate		
Design-build-finance-operate		
Other		

Source: GWI

**Figure 1.21 Criteria for company bids on construction contracts**

Criteria for considering each project bid	Prequalification criteria		
	Minimal	Improved	Restrictive
Low bid only			
Low bid + Lifecycle costs			
Low bid + Technical bid weighting <50%			
Low bid + Technical weighting >50%			
Low bid + Technical weighting + Lifecycle costs			

Source: GWI

### 1.4.6 Private sector participation

Figure 1.22 Models of private sector participation


Contract type	Applicable sectors	Population served
Private utilities		
Utility concessions/ lease contracts		
Affermage contracts		
Utility contract operations/O&M		
Utility management contracts		
Utility performance contracts		
Design-build-operate/EPC+O&M		
Build-own-operate/ Build-operate-transfer		
Asset operations		

Source: GWI

The private sector is involved in the Italian water market mainly in concessions for the management of integrated water services in different regions of the country, especially in the north and centre of Italy. Concessionaire companies are generally mixed public-private companies and sometimes provide other services than water, such as gas, electricity and waste management. In southern regions there are some cases of private companies involved in the water supply sector. The outcome of the 2011 referendum, which meant that utility operators could not recover interest payments through tariffs, represents the main restraint to further involvement of the private sector in Italy. Currently there are no national initiatives in Italy to promote greater participation of the private sector and, as long as a clear regulatory framework on this aspect is not developed, the conditions for private companies to enter the market are not very favourable. In the last five years there have been no major new contracts for the private sector. The only remarkable initiatives of private sector participation have been a BOT contract for the supply of potable water in the Sicilian islands of Pantelleria, Linosa and Lampedusa through the operation of modular desalination units, and two concession contracts for the improvement and management of wastewater collection and treatment in the cities of Catanzaro and Reggio Calabria. Both of these concession contracts include a part of the project financing being provided by the winning concessionaire. The desalination BOT contract and the Reggio Calabria concession were awarded to two Acciona-led consortia, while the Catanzaro concession was awarded to a temporary association of Italian companies.

### 1.4.7 Current and future projects

Figure 1.23 Future utility investment projects

Project name	Tracked by GWI	Project type	Estimated cost	Description
Upgrade of Cuma WWTP – part of the 'Big Project – Environmental reclamation of the Regi Lagni'		WWTP	€138.56 million (\$151.34 million)	Upgrade of the treatment systems in the Cuma WWTP, with the contract including a 5-year O&M of the WWTP and wastewater network.

Source: GWI

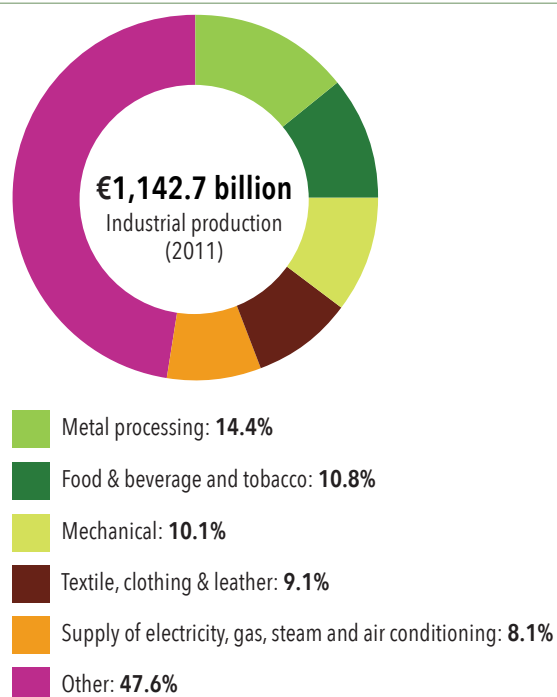
## 1.5 INDUSTRIAL WATER

Figure 1.24 Market significance

Industry	Market significance
Upstream oil & gas	● ○ ○
Refining & petrochemicals	● ○ ○
Power generation	● ● ○
Mining	○ ○ ○
Food & beverage	● ● ○
Pulp & paper	● ○ ○
Textiles & tanneries	● ● ○
Pharmaceuticals	● ○ ○
Microelectronics	○ ○ ○
General manufacturing	● ● ○

Source: GWI

Figure 1.25 Industrial production by industrial sector, 2011



Industry	Production (€ billion)	%
Metal processing		
Food & beverage and tobacco		
Mechanical		
Textile, clothing & leather		
Supply of electricity, gas, steam and air conditioning		
Production of plastic and rubber products		
Automobile and mean of transport		
Furniture		
Chemical products		
Petrochemical & refining		
Pulp & paper		
Electrical equipment		
Supply of water, wastewater and waste services		
Computer, optical and other electronic devices		
Pharmaceutical industry		
Mining		
<b>Total</b>	<b>1,142.7</b>	<b>100.0%</b>


Source: Istat, 2014

An aspect that is expected to drive industrial water management in all industrial sectors is the intention of the Italian government to strengthen the monitoring of industrial effluent discharge and increase the number of onsite controls. This is expected to discourage all the situations of non-compliance with environmental regulations and drive increasing investment in new or more advanced industrial wastewater systems.

## 1.6 MARKET PARTICIPANTS

Figure 1.26 Major water companies

Company	Ownership	Main role	Description	Active sectors
Fisia Italmimpianti	Publicly traded	EPC contractor	EPC contractor for water and wastewater treatment plants	 
Passavant Impianti	Private company	EPC contractor	One of the major EPCs involved in development of municipal and industrial water, wastewater and sludge treatment plants	    

Company	Ownership	Main role	Description	Active sectors
Veolia Water Technologies Italia (VWT Italia)	Publicly traded	EPC contractor	VWT Italia is involved as EPC contractor for municipal and industrial water and wastewater treatment systems, but it also provides services, consumables and chemicals, and has a 'Solutions' division that designs and produces technological systems for the treatment of municipal and industrial effluent streams. The company is also involved as operator of water and wastewater utility services in Italy, directly or as private partner of mixed public-private companies	

Source: GWI

## 1.7 MARKET FORECAST

### 1.7.1 Future market directions

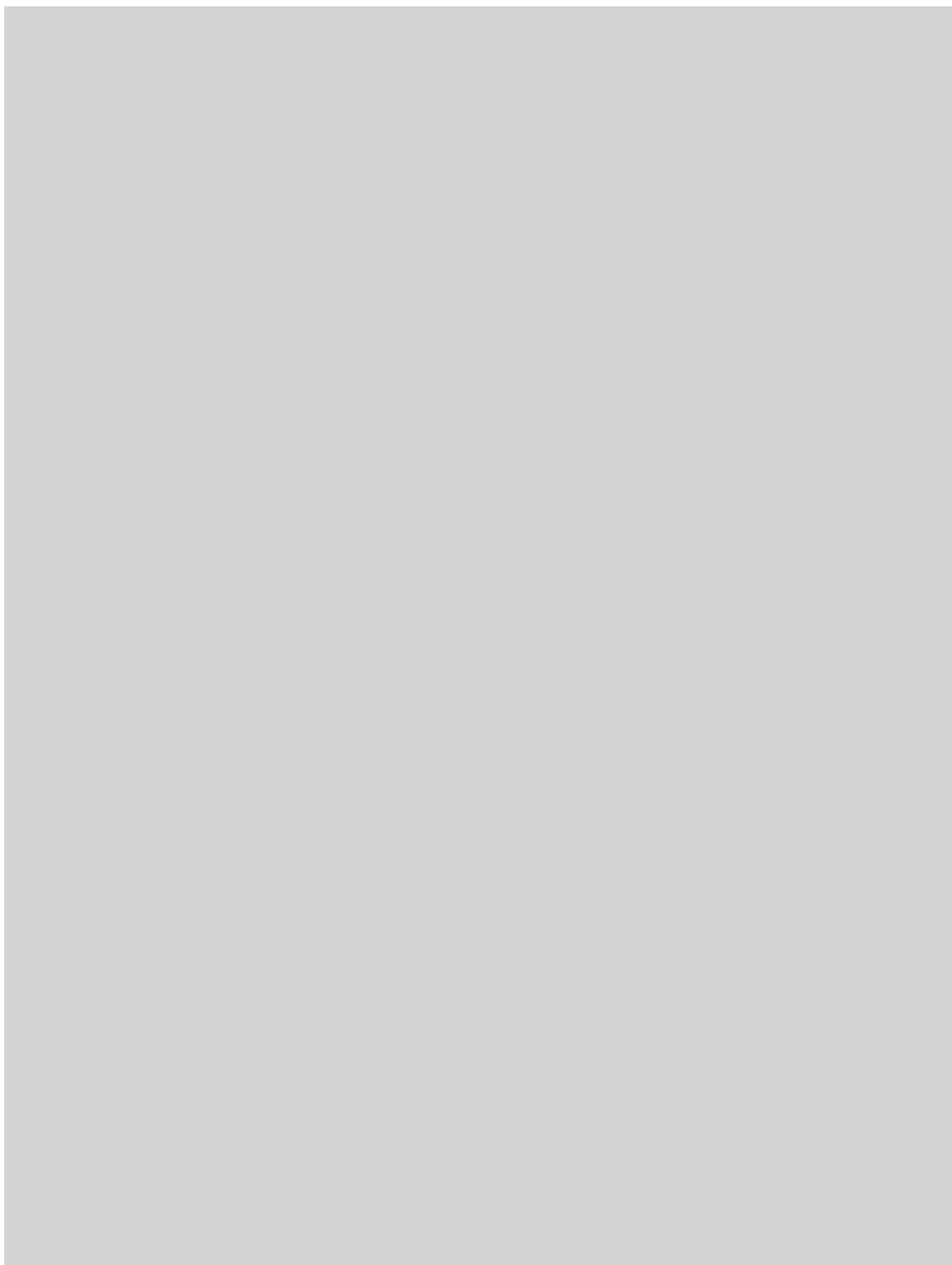
The outlook of the Italian water market and its recent developments are encouraging. The level of investment in the utility sector began to increase again in recent years after a period of uncertainty and stagnation, and this trend is expected to continue for the next three years at least. For the 2014–2017 period, the AEEGSI approved €5.5 billion of investment (net of public grants) planned by operators and local authorities serving two-thirds of the population in Italy. Extending this value to the whole country and adding an average value of

future projects will involve many areas of the water sector:

- 
- 
- 
- 
- 
- 
- 
- 

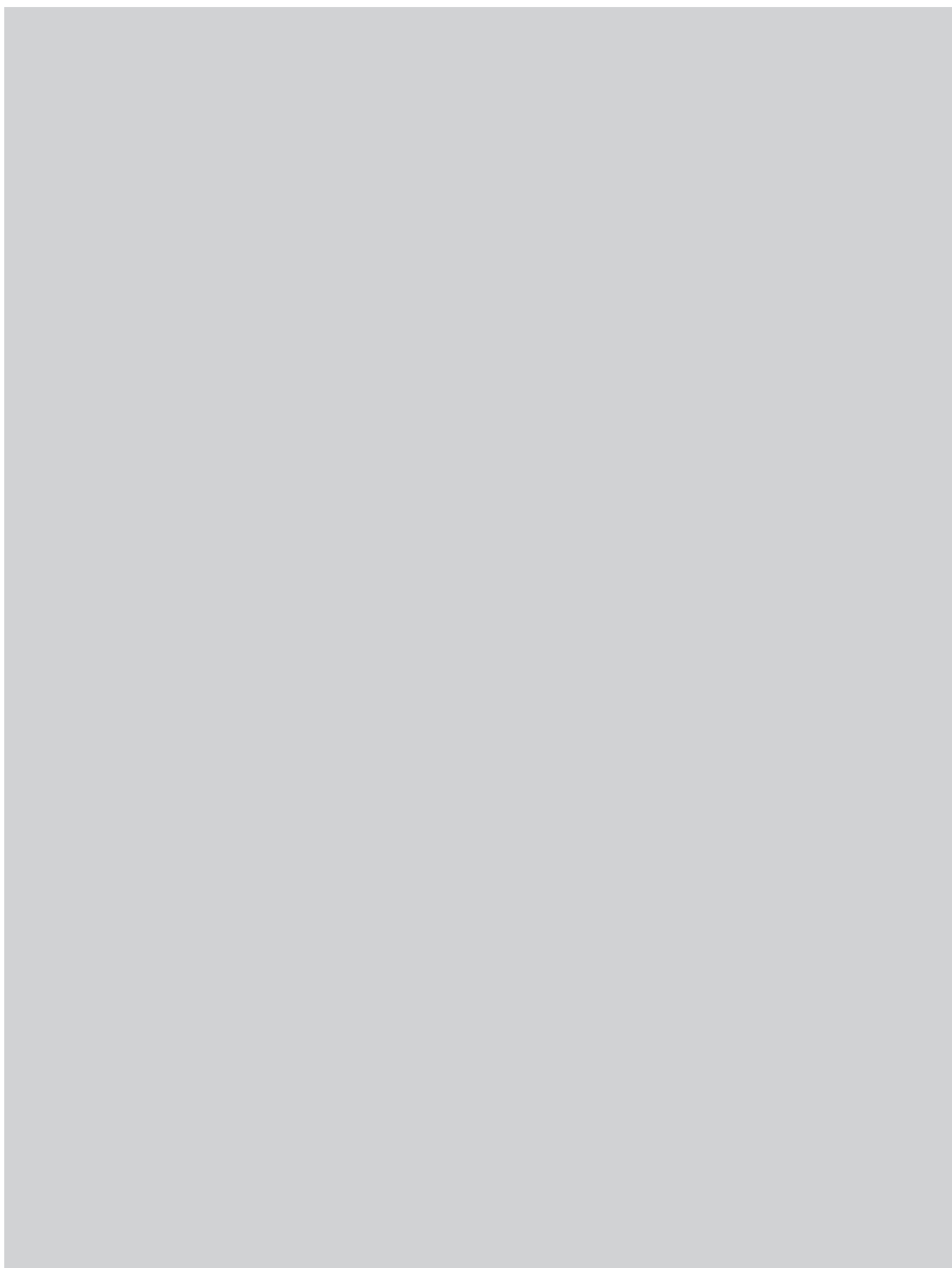
### 1.7.2 Notes on market forecast


Figure 1.27 Market forecast, 2014-2020



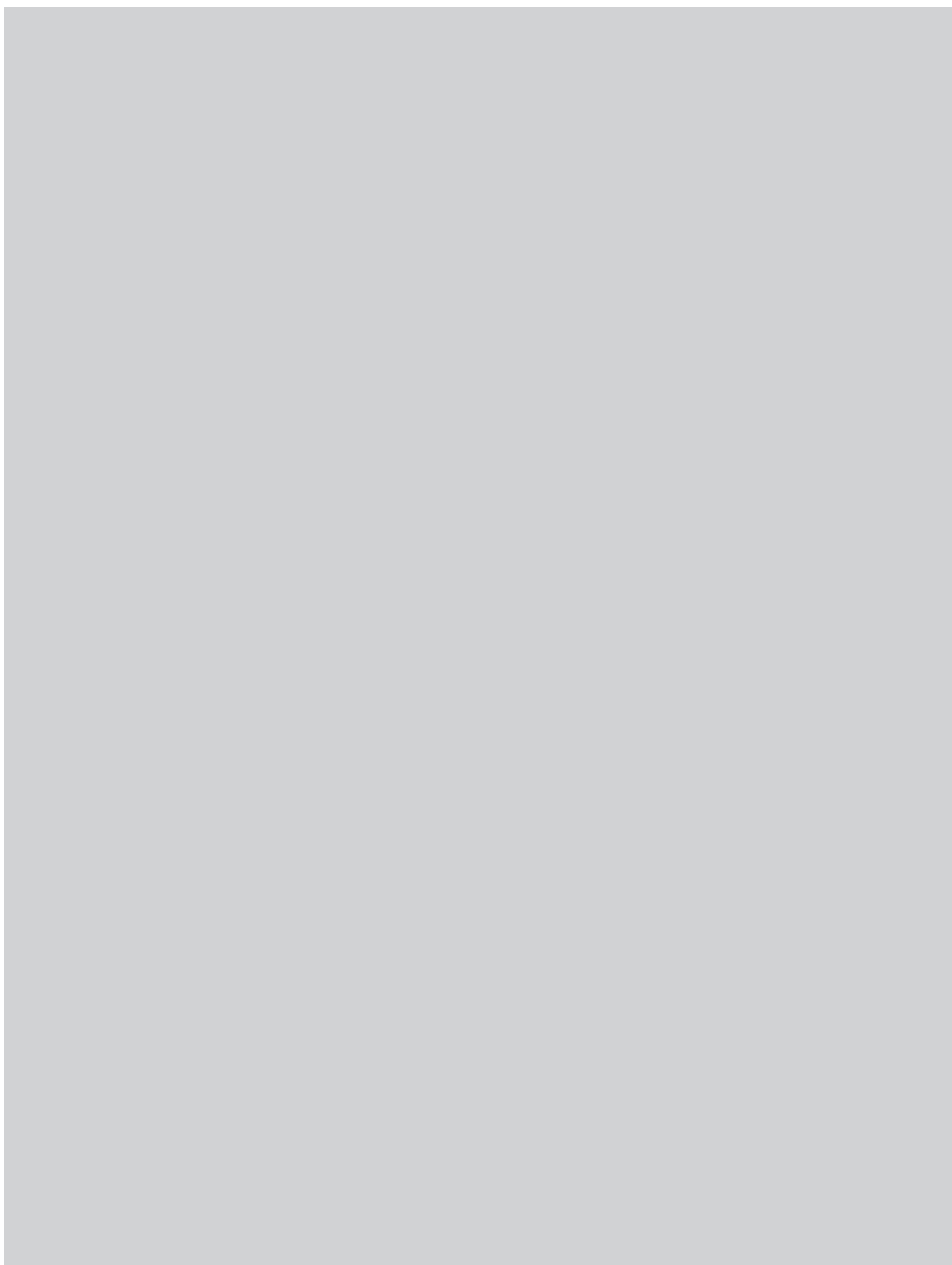
Source: GWI

Figure 1.28 Market forecast breakdown, 2016



Source: GWI

Figure 1.29 Market forecast data, 2014-2020



Source: GWI