NextGen - EYDAP

Project Information:

Project Acronym	**NextGen**
Title	**Towards a next generation of water systems and services for the circular economy**
Call	**H2020-CIRC-02-2016-2017**
Grant Agreement No	**776541-2**
Starting Date	**1/9/2018**
Duration	**48 Months**
Project Budget	**11,391,606 €**

Project abstract:

The NextGen initiative will evaluate and champion innovative and transformational circular economy solutions and systems that challenge embedded thinking and practices around resource use in the water sector. We will produce new understandings to underpin the exploitation of techniques and technologies that enhance our ability to recover, refine, reuse, repurpose, capture value from, and extend the use-life of, an ever-increasing range of resources and products, thereby projecting the European water and allied sectors as global circular economy pioneers. NextGen will demonstrate innovative technological, business and governance solutions for water in the circular economy in ten high-profile, large-scale, demonstration cases across Europe, and we will develop the necessary approaches, tools and partnerships, to transfer and upscale. The circular economy transition to be driven by NextGen encompasses a wide range of water-embedded resources: water itself (reuse at multiple scales supported by nature-based storage, optimal management strategies, advanced treatment technologies, engineered ecosystems and compact/mobile/scalable systems); energy (combined water-energy management, treatment plants as energy factories, water-enabled heat transfer, storage and recovery for allied industries and commercial sectors) and materials (nutrient mining and reuse, manufacturing new products from waste streams, regenerating and repurposing membranes to reduce water reuse costs, and producing activated carbon from sludge to minimise costs of micro-pollutant removal).

The project mobilises a strong partnership of water companies, industry, specialised SMEs, applied research institutes, technology platforms, city and regional authorities and builds on an impressive portfolio of past research and innovation projects, leveraging multiple European and global networks guaranteeing real impact.

Activities of EYDAP in the project:

- EYDAP will install and operate an innovative pilot wastewater recycling unit based on sewer mining, which will at the same time allow the recovery of energy and nutrients through engineered ecosystems in the area of Goudi.
- EYDAP will test the efficiency of the alternative water treatment technologies and assess their potential in creating a grid of decentralised units that offer the ability of distributed water reuse. Testing will be done through monitoring of the water quality and energy consumption. Another important factor that will be evaluated is the unit usability in terms of ease of use and maintenance/intervention frequency.
- EYDAP will be actively involved in the scientific and administrative management of the project and will also be involved in the participation and organization of workshops and dissemination events.

Benefits of EYDAP from the project:

EYDAP, through the NextGen project, will acquire know-how on an integrated portfolio of circular economy solutions. This includes sewer mining (mobile wastewater treatment units in containers able to treat and provide reused water at the point of demand in dense urban environments), energy and resource reuse

coupled with bio-makeries. This pilot demonstration will be an important step towards autonomous, mobile, local, scalable and sustainable water management solutions supported by circular economy water supply systems and services. The extensive planned dissemination activities of the project results will encourage other authorities and organizations to adopt the proposed solutions. At the same time, through the project, EYDAP will develop strong partnerships and exchange know-how with prominent stakeholders in the water industry.

List of Participants:

No	*Name*	*Short Name*	*Country*
1	KWR Water B.V.	KWR	Netherlands
2	Kompentenzzentrum Wasser Berlin	KWB	Germany
3	Fachhochschule Nordwestschweiz	FHNW	Switzerland
4	Cranfield University	UCRAN	United Kingdom
5	Strane Innovation SAS	STRANE	France
6	Fundacio CTM Centre Technologic	CTM	Spain
7	IVL Swedish Environmental Research Institute	IVL	Sweden
8	National Technical University of Athens	NTUA	Greece
9	The University of Exeter	UNEXE	United kingdom
10	Institute of Communication and Computer systems	ICCS	Greece
11	European Science Communication Institute	ESCI	Germany
12	University of Bath	UBATH	United Kingdom
13	IPStar B.V.	IPSTAR	Netherlands
14	Biopolus Intezet Nonprofit	BIOPOL	Hungary
15	Water Supply and Sanitation Technology Platform	WssTP	Belgium
16	Apa Nova Bucuresti SA	ANB	Romania
17	Abwasserverband Braunschweig	AVB	Germany
18	YTL Land & Property	YTL	United kingdom
19	Severn Trent Water Limited	STW	United kingdom
20	AquaMinerals B.V.	AQM	Netherlands
21	Provincie Zuid-Holland	PZH	Netherlands
22	Waterschap de Dommel	WdD	Netherlands
23	ADASA Sistemas S.A.U.	ADASA	Spain
24	Catalan Water Agency	ACA	Spain
25	**Etaireia Ydreyseos Kai Apochetefseos Proteyoysis**	**EYDAP**	**Greece**
26	Dimos Athinaion (City of Athens)	CoA	Greece
27	Chemitec	CHEM	Greece
28	Region of Gotland	RoG	Sweden
29	Abwasserverband Altenrhein	AVA	Switzerland
30	Clean Technology Universe	CTU	Switzerland
Associate partners:			
AP no 1	Korea Institute of Science and Technology	KIST	South Korea
AP no 2	Taposya Social Welfare Organisation	TSWO	India
AP no 3	Jiangsu (Yixing) Institute of Environmental Industry	JIEI	China