

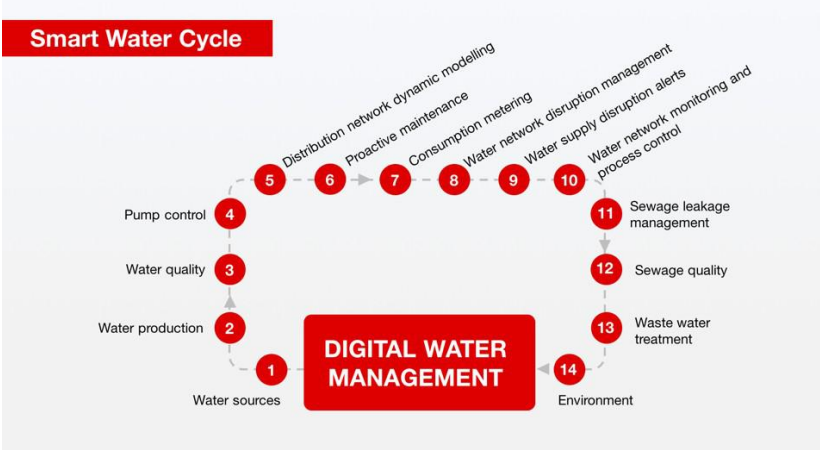
## 2018 全球物联网创新成果点映申报书

### 2018 Global IoT Contest Application Form

申报产品基本信息 / Basic information			
申报单位名称 Company Name	UROS Ltd.		
申报品牌 Brand Name	UROS 		
产品/方案名称 Product/Solution Name	UROS Smart Water Cycle	产品型号 Product Model	方案类可不填写 N/A for Solution Application
市场价格 Market Price	方案类可不填写 N/A for Solution	销售范围 Sales Scope	Globally
上市时间 Time of start selling	January 2018	总销售量/或 销售金额 Sales Volume	€500 million for 2018
核心创新点、或卖点简述 Core point of innovation	<p>UROS smart water cycle puts together leading high end IoT and municipal water management expertise for digitalized asset management and process optimization throughout the <b>entire water cycle</b>. The whole water cycle can be managed digitally under one turn key solution, ensuring consistent management and optimization of all processes of the water cycle from water production to water networks and finally wastewater management.</p> <ol style="list-style-type: none"> <li><b>Thousands of wireless smart sensors</b> being installed throughout the water distribution network, even at most challenging locations, without the constraints of wires and cables</li> <li><b>Award-winning eSIM connectivity</b> with global footprint supporting smart sensor updates, detected data sent over-the-air without geographical boundaries, process and operational communications</li> </ol>		

	<ol style="list-style-type: none"> <li>3. <b>Real-time remote monitoring</b> allowing the water management system to detect and signal any deviations from a predefined good quality finger print seamlessly</li> <li>4. <b>Risk Based Asset Management (RBAM)</b> with versatile digital applications and methods analyzing water supply as asset against long-term goals through defined KPIs, and minimizing risks and cost of water moderate</li> <li>5. <b>Smart User Interface</b> with latest artificial intelligence technologies learning casual connections, predicting upcoming defects within the process, and providing vital insights into root causes</li> <li>6. <b>Prompt alarming system</b> with custom triggers and alarms pushed to water operators and administrators, enabling immediate corrective actions to be taken before wider damages occur</li> <li>7. <b>Compliant with GSMA IoT Security Guidelines &amp; Assessment</b> allowing safe access to collect, process and protect data throughout the water management cycle, preventing unauthorized activities related to security</li> </ol>
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**申报产品详细介绍**  
**Details information**

<p>关键参数/技术指标 Key Parameter/ Technical Index</p>	 <p>The diagram illustrates the Smart Water Cycle as a continuous loop of 14 steps. At the center is a red box labeled 'DIGITAL WATER MANAGEMENT'. The cycle starts at '1 Water sources' and proceeds through '2 Water production', '3 Water quality', '4 Pump control', '5 Distribution network dynamic modelling', '6 Proactive maintenance', '7 Consumption metering', '8 Water network disruption management', '9 Water supply disruption alerts', '10 Water network monitoring and process control', '11 Sewage leakage management', '12 Sewage quality', '13 Waste water treatment', and finally '14 Environment', which then loops back to '1 Water sources'.</p>
<p>产品功能及特点描述 Product function / Feature Description</p>	<p><b>UROS Smart Water Cycle</b> brings the newest applications and expertise in water supply for all cities and municipalities globally. The concept utilizes information and communication technology to optimize the efficiency of municipal water operations and services. Wirelessly connected electronic data collection sensors are used to supply information which is used to manage these municipal assets and resources efficiently in real time. Together with the Smart User Interface, global eSIM connectivity, the wireless quality sensors and risk-based asset management (RBAM)</p>

tools UROS delivers a turnkey solution for digitalized water process optimization.

Every year, undetected contamination of water supplies affects millions of people all around the world. Water suppliers are over-reliant on hit-and-miss sample-taking routines and the late detection of quality issues frequently leads to lengthy and costly supply disruptions.

Multiple smart sensors installed throughout the water distribution network can detect pollutants promptly. The real-time data on Smart User Interface enables immediate corrective actions to be taken by the water operator before wider damage occurs, also providing vital insights into root causes giving plant operators visibility of any abnormal discharge spikes.

The data measured by smart sensors is analyzed and visualized in the Smart User Interface. Detecting the path of possible quality changes helps operator to discover cause-effect relationships, and so facilitates the managing or complete elimination of disruptive factors. In the event of deviation in quality, the user is alerted immediately by SMS or email.

High-quality wireless global M2M connectivity is available via eSIM ecosystem connecting the sensors to present the processed data in real time. UROS technology follows industry standards developed by the GSMA in cooperation with Operator Groups, leading SIM providers and OEMs. The standard provides a de-facto mechanism for remote "over the air" provisioning of an initial operator subscription, and the subsequent change of subscription from one operator to another. Standardized technology ensures security and reliability of the solution for all the players in the ecosystem. The solution uses local 4G, 3G and 2G as well as LoRa and NB networks to enable seamless connectivity in over 120 countries.

Wireless UROS sensors monitor water quality by measuring the electrochemical profile, 'quality fingerprint', of the water at multiple measurement points throughout the distribution network. The water's quality fingerprint at each such location is continuously compared with a pre-defined ideal quality profile, by means of neural network calculations. The data is visualized, in real time, on the Smart User Interface.

Risk-based asset management is a set of systematic measures with which the organization takes care of the assets of water supply optimally and sustainably throughout its life cycle, taking into account the long-term goals, project prioritizing and water supply network data analysing (NIS) tools to mention a few.

The solution was initially developed for the purposes of Jyväskylän Energy, local water provider owned by the City of Jyväskylä in Finland, to monitor its processes and to maintain good condition

	<p>of its water supply network by saving water, decreasing leakages, controlling water quality and making pumping process energy efficient and proactive. It is also a part of Digital Kazakhstan 2020 state program as part of overall goal to increase operational efficiency and to improve the quality of government services and citizen welfare.</p> <p>Improved efficiency within the process means huge cost and water savings potential and is a step towards better future for water.</p>
<p>产品外观照片/宣传彩页 Photo / Brochure</p>	<p>(以附件形式附于申报书后。图片为 jpg 格式，产品图像须完整、清晰。)</p> <p>Provided by attachment, photo provided by jpg. files</p>
<p>企业介绍 Company Profile</p>	<p>UROS provides global turnkey solutions for water management for municipalities as well as for process optimization tool for various industry vertical, and connectivity for people, devices and processes. Our products and services are provisioned by unique M2M platform, enabling global connectivity via eSIM ecosystem.</p> <p>UROS is headquartered in Oulu Finland, one of the innovation capitals of the world. However, we also have international offices in Brazil, China, Germany, Hong Kong, India, Kazakhstan, Luxembourg, South Africa, Switzerland, Taiwan and USA. UROS was recently named the fastest growing company in Finland and placed among the most promising telecoms suppliers in the world.</p> <p>As a leading IoT solution provider globally, UROS is also active in China, with registered offices and expert team in Hong Kong, Shenzhen, Shanghai and Taiwan. With strong focus on IoT and smart city, we work closely with strategic IoT partners, as well as communication and connectivity providers, such as China Telecom and ZTE.</p>

创始人或核心团队  
介绍/附照片  
Introduction of  
core team or  
founder

**Jyrki Hallikainen, Chairman of the Board, Founder**

Jyrki founded UROS in 2011 and has been Chairman of the Board from then on. He worked in the mobile phone business at Nokia until 1997. Since then, Jyrki has founded several Mobile Technology companies, among them Microcell. Currently he also acts as an investor. Jyrki holds a Master's degree in Computer Science, Software Systems and Information Technology.

**Jerry Raatikainen, CEO, Member of the Board**

Jerry has been at UROS since its beginning, and was the first hire to join the company. In May 2017, at a time of significant growth and expansion of the business, he was appointed Group CEO. Jerry has a solid history in production management dating back to his years at Siemens, PKC Group, Flextronics and Nokia. As Board Member and CEO, Jerry works closely with Jyrki in setting and executing UROS's strategy.

**Unna Hallikainen, Member of the Board, Director of Marketing**

Unna joined UROS in 2014 and has since worked within the company's Marketing and Finance departments. She has an international background and holds an MSc in Management from the London School of Economics. Unna joined the Board in 2018 to represent the interest of the shareholders.

**Herbert Chan, CMO**

Herbert heads UROS' global Sales and Marketing activities. Based in Hong Kong, he strengthens the company's reach in Asia. Herbert is a visionary marketing and sales channel professional, with an impressive track record in Telecommunication, Mobile Device and Consumer Electronics industries. His great relationships with operators, retail channel and country level distributors in the EMEA and APAC regions as well as his management experience are great contributions to UROS.

**Marcelo Guimaraes, CTO**

Marcelo adds to UROS' leverage in Latin America for the core businesses of Global Roaming and IoT solutions. During his career of over 35 years in the Telecom industry and in multinational companies such as IBM, Motorola, Brightstar and Antel, he has amassed a wealth of experience in several areas ranging from New Business and Product Development to developing business partnerships globally for the Hi-Tech industry.

**Vladimir Olechshenko, COO, IoT & Smart Cities**

Vladimir has nearly 20 years of experience in managerial roles in both Finnish and international companies including Outotec and Metso Minerals. During his career, Vladimir has built strong relationships all around the world, with both public and private sector players, especially in Russia, the CIS Region, Pakistan and Iran. His extensive skills and understanding of these markets and industries are a valuable asset for him in his new role as UROS

COO, IoT and Smart Cities.

**Aimo Vainio, VP Product Creation, IoT**

Aimo leads UROS' IoT product development. He began his career at Nokia in various Product Development positions and moved up to Product Program Manager, leading large development projects. He has since held several managerial positions at Nokia, MyOrigo, Navicron and Valopaa. Before joining UROS he was the Managing Director at Navicron, and later at Valopaa. Aimo has a Master's degree in Computer Science.

**申报企业确认**  
**Confirm and stamp**

本单位严格按照《2018 全球物联网创新成果点映评选办法》及其有关规定，如实提供相关材料。

不存在任何违反国家有关法律法规的情形，并确认以上申报产品无知识产权纷争。  
如有不符，本单位愿意承担相关后果并接受相应的处理。

Our company well understand and fully accept all rules regarding 2018 Global IOT Contest. All the material we provided is veritable and reliable, without any intellectual property rights dispute.

申报人签字：Zara Kukkamaa

申报单位（章）：申报日期：August 31<sup>st</sup> 2018

Signature and Stamp: *Zara Kukkamaa*

