**ADVANCED FRAMEWORK FOR RAPID DEVELOPMENT OF IoT SYSTEMS**

An “Everything as a Service” approach for development of IoT Systems-of-Systems

**THE TOOLS FOR BUILDING NEXT GENERATION IOT SYSTEMS**

The bioTope framework provides an open set of building blocks for developing IoT software components and entire IoT systems for Connected Smart Objects – at a fraction of the costs.

**MAKING IOT DATA ACCESSIBLE FROM EVERYWHERE**

Accessing and exploiting IoT data is at the heart of the new innovations and services provide by IoT systems and bioTope provides the tools that bring data from multiple sources and devices together. The bioTope framework provides three components that simplify IoT data handling:

- **01** PUBLICATION & CONSUMPTION COMPONENT
- **02** MARKETPLACE SERVICE CATALOGUE
- **03** MICRO-BILLING & PAYMENT COMPONENT

**SECURITY AND DATA INTEGRATION FOR IOT SYSTEMS MADE EASY**

The bioTope framework provides two key components that streamline implementing secure IoT systems that adapt their behaviours based on local sensor data and knowledge gathered about the current situation of users:

- **04** SECURITY & PRIVACY COMPONENT
- **05** RDF INTEGRATION & SEMANTICS COMPONENT

**RAPID DEPLOYMENT OF IOT SYSTEMS AND APPLICATIONS**

Building complex IoT systems is made easier with tools that accelerate the development and deployment tasks for software developers:

- **06** SERVICE COMPOSITION COMPONENT
- **07** VISUALIZATION COMPONENT
- **08** CONTEXT PROVISION COMPONENT

**EVERYTHING AS A SERVICE PROVIDES FLEXIBILITY IN IOT SYSTEMS DEVELOPMENT**

The components have been designed around Everything-as-a-Services (XaaS) approach, which supports the notion of micro services.