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DEVELOPING MOBILE ON-SITE MONITORING SERVICES FOR CITIZENS AND PROFESSIONALS

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ABSTRACT

This paper explores results of a project, which aim was to automate traditional in-situ measurements in environment monitoring by giving up on paper forms in field observations and increased use of on-site sensor measurement. The project has supported objectives of the national environment monitoring strategy.

Requirements for a new common mobile service (data collection and open data service) are defined and piloted with professional observers and citizens. Environment monitoring kits are developed and tested with crowds and professionals. Need based use cases were carried in a summer 2015 in the field of agriculture, fishery and water. Methods used were surveys (motivation, willingness to pay, supply), sensor test (field and laboratory), a linear mixed model, a business model, co-design and a cost benefit analysis of options.

Only very few citizen are interested to pay for an equipment more than 100 euros. From companies perspective most revenue is generate with low end products. Supply of citizen observations is largely influenced by equipment price. Data availability and usability is of interest to water associations and government organizations. Efficiency of using modern field sensors depends largely on crowd (citizen, professional), price of a sensor and especially number of field visits. For government use of modern modelling tools to model expensive variables (biomass) with a low cost variable is shown to create a lot more value. Benefits of using a same service channel for voluntary and government organizations are obvious. We could reorganize our field work efficiently. However, it is not a problem of developing new ideas put rather escaping from old ones like Mr. John Keynes said.



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