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### **The Cooperative City: a Participatory Framework for Using Technology in the City and Beyond.**

The concept of the 'smart city' has often been criticized for its instrumental and technocratic perspective. As a normative and inclusive alternative to the smart city, I propose the framework of the cooperative city. This framework takes a participatory approach to using technology and is meant to evaluate smart city projects in terms of the quality of citizen participation.

First, drawing on theories of participatory democracy, different forms of participation are examined, and important criteria for meaningful participation identified. Subsequently, social-public partnerships are offered in favor of the currently dominant private-public partnerships in cities. In social-public partnerships, decision-making power largely lies with residents and governments have an executive role. Next, drawing on STS literature, citizen science is proposed as alternative form of sensing within the cooperative city. In the practice of citizen science, local communities use the sensor technologies to map their living environments. This gives them both a deeper understanding of their living environment and provides them with data for political action. Concluding the framework, the role of this 'smart citizen' in society is discussed.

The cooperative city framework is then applied in the context of Living Lab Scheveningen (LLS), a new living laboratory in The Hague. An important pillar of LLS is the involvement of local residents and participation by citizens and entrepreneurs of The Hague. Focusing on the organizational structure and several applications, citizen participation in LLS is assessed using the framework. Based on the outcomes, policy recommendations for LLS are provided.