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New Modes of Constructive Technology Assessment for Developing Countries

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An old piece of conventional wisdom warns against unsustainable 'white elephants' in any attempts at international transferal, adoption or development of technologies in developing countries. After more than half a century of failed attempts to introduce technologies in such settings mostly through donor-driven projects and programs, it has become accepted that any disregard of social and local cultural preferences is likely to result in a low rate of technological adoption. Attention ought to therefore be brought upon the socio-cultural perspective when technology undergoes a process of transformation or co-creation in a movement from one context to another, i.e. from the North to South. The question here is how to affect a proactive intake of relevant knowledge in decision-making in a technological innovation process so as to increase the likelihood of developing sustainable solutions.

A co-creation perspective recognizes technology as something that is shaped by the social actors configured around the various stages of technological development. When such co-creation processes involve actor configurations in complex multi-sectorial partnerships, however, the literature only sparingly offers guiding principles for involving input from multiple knowledge domains. Co-creation in multi-actor partnerships requires a nimble facilitation of such knowledge input, and implies a delicate challenge of linking users and producers: One the one hand are the actual users, potential users or those simply affected by a product or process in a developing country. On the other hand are those who design, develop and promote the technological solution. If the latter group is to follow the call for proactively taking in socio-cultural and user knowledge, what methods may be employed? This paper revisits the literature on 'technology assessment' in a search for inspiration. Technology assessment originally featured prominently as a discussion topic two decades ago, but is worth returning to because some principles embedded herein are especially relevant for sustainable co-creation process today targeting developing countries.

Technology assessment helps assess the potential positive or negative impacts following in the wake of introducing a new technology of any conceivable type. It has an overall philosophy of reducing the cost of learning in society's handling of new technologies, anticipating impacts and feeding these insights into actor strategies and decision-making processes. There is a variant of 'constructive' technology assessment that stands out as useful in multi-actor partnership settings. Placing emphasis on interactive processes, constructive technology assessment embraces active negotiation among involved parties in influencing technological change. In developing countries, technology assessment has received relatively little attention, but recent developments have expressed a 'call-to-arms' to tailor flexible approaches by ensuring the involvement of diverse stakeholders and citizens and continual learning among universities, NGO's, firms and users/citizens.

In addressing this 'call-to-arms', this paper:

- Revisits the technology assessment discussion, exploring its contemporary relevance for co-creation processes for developing countries.
- Identifies how technology assessment principles may be brought into new decision-making arenas outside of its traditional application area of e.g. parliamentary governance systems.
- Explores constructive technology assessment in particular, including the use of social experiments and multi-sectorial network and partnership approaches.