

The Total Waste Stream : Innovative Intervention Evaluation Tool

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Waste treatment technologies in industrialised nations have matured over many decades of application with established methods that deal with both segregated and mixed waste streams now widespread. Thus, with domestic markets mature, the most enticing opportunities for manufacturers to expand are into the emerging waste management markets of 'developing' countries. As waste production in developing countries is greatly tied to economic growth, the opportunity is amplified and correspondingly becomes a political focal point. All levels of government - national, regional and local - are being forced to seek pragmatic and affordable solutions to their waste crises. This task is daunting as the balance of necessity versus the required resources to accomplish these goals is often virtually overwhelming, especially given other municipal priorities and constituent demands for services.

Then, added to these basic challenges is the often-applied political pressure to tie waste management to electrical energy needs and GHG mitigation – as waste management is typically thought of as a 'low-hanging fruit.'

Many solutions are being promoted that offer varying levels of results. However, many times the proposed solutions are insensitive to specific local conditions, and the enabling environment is lacking.

Politicians and senior civil servants don't typically have adequate tools to make comprehensive evaluations, yet are often being inundated with a panacea of both solicited and unsolicited bids for technology uses by a multiplicity of private waste management operators - both local and international.

Based on experiences in a number of developing countries, an intervention evaluation tool has been developed that addresses the appropriateness of available technologies, including those that are well established as well as those that are less so. There are the 'hard interventions,' such as feedstock, availability of resources (land, water, energy), and technical support structure, that can include addressing CAPEX, OPEX, and GHG mitigation. In addition, there are the soft interventions that are the institutional and socio-economic conditions (e.g. institutional requirements, regulatory environment, contracts, landfill pricing, etc.). Our examples are presented that can enable rapid evaluation of local conditions and assist identification of appropriate total integrated waste stream (including solid and liquid) management solutions for the unique local challenges within emerging markets.

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