

Title: Waste Management Pinch Analysis (WAMPA) with economic assessment

Author/Authors: Sieting Tan, Waishin Ho, Haslenda Hashim, Jeng Shiun Lim, Chewtin Lee

Abstract: Conventional Pinch Analysis (PA) had been widely used to define the target (demand chain) of a process system based on the information of stream quantities and quality (supply chain) for a micro-scale industries planning. With contrast to the conventional Pinch approaches, regional Solid Waste Management (SWM) strategy are often performed via optimisation tool which is often optimized in a "blackbox" optimization mathematical model. However, to enhance understanding and comprehension of the strategy, a visual technique like Pinch Analysis would be vital. A new application of Waste Management Pinch Analysis (WAMPA) for carbon emission was proposed to identify waste management strategies based on specified landfill reduction target and carbon emission target. This study used WAMPA methodology to analysis the effect of recycling target and cost reduction target towards waste management planning.