

### **3. Examination of Integrated Analysis to Evaluate Sewage Maintenance Management Business Methods**

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Sewer facilities built in Japan during its period of rapid economic growth continue to deteriorate. The renovation and reconstruction of these facilities have emerged as a major issue. Recommended solutions to date include PFI (Private Finance Initiative)/PPP (Public Private Partnerships), whereby private companies handle maintenance administration. However, due to the scope of interested parties/stakeholders, requirements for consignor and trustee, and other factors, few examples exist of actual implementation of such comprehensive schemes involving pipeline facilities. Additionally, establishing an effective business scheme for all concerned parties is both time- and labor-intensive.

This study establishes a simple procedure for assessing the preliminary steps in establishing a business scheme. In this procedure, based on the financial statements of the management by the local public entity, the total profits of each stakeholder for three different business methods that differ in degree of private company participation are calculated and compared using an existing unification analysis list. Our study confirmed the ease and the efficacy of this assessment procedure.

**Key words:** sewerage system, facility aging, maintenance management, PPP/PFI, integrated analysis