

The characteristics of outsourcing IT Vendors / IT giants and In-house R&D are the following description. Outsourcing to them may be possible to reduce installation cost by utilizing incumbent platform or solution as current cost reduction and solve bottleneck of In-house skillful human resources. But we should be careful to result to excessive dependence upon them and lose the opportunity of improvement in in-house data management. By implementing for In-house, although the employment and resources are limited, it is possible to efficiently reflect own company's needs and to acquire expertise through accumulating know-how as future value.

	IT / RI	IT Giants	In-house R&D
Skillful human resources	◎ only in specific solution	◎	△ employment or limited
Installation cost	◎ if adopting their platform	◎	△ w/ employment cost
Engineering Judgement	△ less flexible	△ less flexible	◎ flexible and quick
Flexibility of customization	△ less flexible	△ less flexible	◎ flexible
Accumulating know-hows	x	x	◎

In the electric power industry, the number of Japanese electric power companies is very limited, and each company has exclusive possession of its own enormous amounts of operational data that is not-structurally-organized. Therefore, it isn't appropriate to fully outsource to them in terms of protecting enterprise value, and we need to do requirement definition how to utilize enormous existing data. The facility's operational data is the core value that only facility owners can possess in Electric Power Industry.

Regarding consideration of the value of intelligent IT Solutions, I consider implementing intelligent IT solutions from perspectives of hybrid approaches. (1) Developing technical person so that simple models and mocks-up can be created in-house. (2) Getting the technical skills to determine which parts can be produced in-house and which parts need to be outsourced when creating full-scale models and systems. When creating full-scale models and systems, the work to be outsourced should be the improvement of processing speed and accuracy for function of support for In-house. Each electric power company should draw Blueprint of "to-be" and make flexible and selective decisions as simultaneous achievement of enterprise future value and current cost.

As one of the success case of "Hybrid" methodology in the Japanese Electric Power Industry, this is AI anomaly detection system for wind turbine generator blades. This system automatically extracts anomaly images of wind turbine blades taken by auto flight drones. Defining requirement, basic design and programming of anomaly detection system is developed for In-house. And programing for GUI improvements and pre-processing efficiency is outsourced. This case tried to use outsourcing only as an auxiliary function for developing in-house. It is possible to efficiently reflect own company's needs and to acquire expertise through engineering decisions as an owner of the facilities.