A Framework for Problem Definition Process – A joint Method of Design Thinking and Systems Thinking

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Innovative system development is crucial to survive the global competition for many organizations. To make it happen, engineers are turning their focus on the early phase of system development where the customers’ needs and wants are defined and problems are defined. Combination of design thinking and systems thinking is considered as a beneficial prescription. And today, some kind of recipes are in great demand. This research focuses on problem definition process in the early concept stage and introduces a framework for generating creative and innovative problem statements that would bring out more chances for innovative solutions. The framework had been developed for a project-based learning (PBL) program in Keio University Graduate School of System Design and Management. The framework consists of three approaches and introduces methods for each approach. Most of them require users to exert design thinking and systems thinking at the same time. This framework has been applied in our PBL program for two years. We introduce some examples from our classroom.