Current research on knowledge integration offers valuable structural analyses of factors that influence knowledge integration, performance outcomes, and knowledge integration mechanisms. Less attention has been paid to how knowledge integration is carried out over time in cross-functional development projects. This thesis is based on a year-long field study of an Information Systems Development Project. The study shows how the knowledge integration process was repeatedly interrupted by different problems that could not be resolved by merely relying on integration mechanisms that were imposed by the top management. Instead, a bottom-up dynamic evolved where the project members and participating project managers managed to reestablish coordination and knowledge integration through the invention of different ‘collective heuristics’. A novel model of Dynamic Knowledge Integration is presented which claims that knowledge integration contains two interplaying processes; one consisting of different knowledge integration mechanisms and activities, and one consisting of the collective heuristics that were invented and employed when unexpected problems emerged. In general, this research argues that knowledge integration can be understood as a dynamic process, of which both knowledge integration mechanisms and collective heuristics constitute core elements.