As a means of modeling typical system behavior, we derive from data flow nets a description technique for business processes and provide it with a formal semantics based on functions and their composition. Our description formalism features black box and glass box view on system processes, as well as a concept of refinement which supports behavior modeling across several levels of abstraction. Thus we provide a modeling mechanism that is both easy to understand intuitively and formally well founded, and therefore equally adequate for the needs of application domain experts as well as system engineers in requirements engineering.