

Stock-and-flow diagram Operational Definitions

Label	Definitions
Stock-and-flow diagram (SFD)	Tool that uses accumulation or depletion of variables (stocks) and rates of change (flow) in a system. It provides a quantitative evaluation of interrelationships between variables in the system.
Stock variable	Stock variables are like reservoirs that represent the quantity (accumulation or depletion) of variables at a point in time. Stock variables are represented by rectangles in the SFD (e.g., “Participation and Training”).
Flow variable	Flow variables are like valves that increases or decreases the stock; that is, they capture rates of change. Flow variables are represented by thick, hollow arrows in the SFD (e.g., “Increase in training”).
Auxiliary variable	Auxiliary variables are additional variables that represent behaviors not captured by stocks or flows. Auxiliary variables are represented by words unbounded by any symbol in the SFD (e.g., “participation rate”).
Time delay	A function that describes the effect of time lags between elements in a system. Time delays are represented by hourglass symbols appearing on top of flow variables in the SFD (e.g., the hourglass on top of “Increase in training”).
Feedback structure	Structure that shows the cause and effect of relationships among variables. Feedback is represented by thin, blue arrows in the SFD (e.g., the arrow connecting “participation rate” and “Increase in training”).