

A Flight Management System (FMS) is an on-board multi-purpose navigation, performance, and aircraft operations computer designed to provide virtual data and operational harmony between closed and open elements associated with a flight from pre-engine start and take-off, to landing and engine shut-down. The aircraft's latitude, longitude, altitude and arrival time requirements can be planned, calculated and subsequently predicted on an ongoing basis. Primary aircraft interfaces with the FMC are the inertial reference system and automatic flight control system, including the autothrottle. Each airline will have its own financial model in terms of fuel and time costs; the FMS can be customised accordingly and expressed as a cost index; this is entered into system within the range 0–100 to represent the extremes of minimum fuel through to minimum time. The two primary components of the system are the FMC and CDU. Flight management systems were introduced at a time of rising operating costs; the contributing factors to these costs include fuel and time. The flight management system (FMS) combines area navigation and performance management into a single system. Four-dimensional navigation is possible with flight management systems.