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Sommario/riassunto	Legal mandates for airspace modernization, certification requirements, and minimum aircraft capability and equipment standards aim to improve the efficiency and safety of air traffic, particularly within the world's busiest airspace. Mandates drive changes in technical and operational standards, but they can also deny access to premium altitudes, routing, and even airports for noncompliant aircraft. Aircraft modernization ensures continued access to fuel-efficient cruising altitudes and congested airspace, but these future benefits require an upfront investment in avionics upgrade programs. In a fiscally constrained environment, such decisions must take into account the quantifiable future costs that would be avoided by upgrades, weighed against the costs of modernization. Building on 2009 RAND work examining the cost-effectiveness of modernizing the U.S. Air Force's KC-10 aerial refueling tanker, this study extended the analysis to the C-5, C-17, C-130, and KC-135 fleets, evaluating the cost-

effectiveness of modernizing these aircraft for compliance with forthcoming communication, navigation, and surveillance/air traffic management mandates. It found that, overall, the Air Force operates these aircraft in regions where some important future mandates will not be met without modernization, but the cost-effectiveness of upgrades depends to a great extent on fuel prices and the characteristics of missions conducted by each aircraft type.
