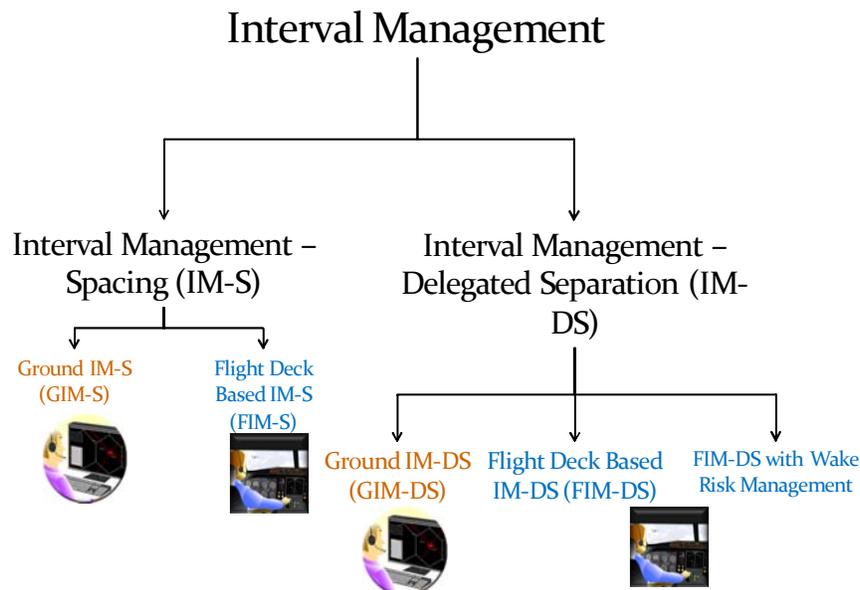


## Ground Based Interval Management for Spacing (GIM-S)

In response to projected increases in air traffic volume and complexity for the National Airspace System (NAS), applications for Interval Management (IM) are being developed to enhance interval management, including merging and spacing operations in en route and terminal areas for the near-term and mid-term timeframes. These applications include Flight deck-based IM (FIM), in which the flight crew makes use of specialized avionics that provides speed and turn commands. The utilization of FIM in the NAS presupposes the existence of appropriate and integrated Ground-based IM (GIM) capabilities that provides controllers the capabilities to initiate, monitor, and terminate FIM-S operations as well as manage non FIM equipped flights. During IM operations, responsibility for separation may reside with the controller (referred to as spacing applications or GIM/FIM-S) or with the flight crew (referred to as delegated separation applications or GIM/FIM-DS). The figure below provides an overview of the various applications that can be part of IM.



**Figure 1 Overview of IM Applications**

GIM-S applications, either together with the use of FIM-S or by itself, improve aircraft spacing during departure, arrival, and cruise phase of flight. The GIM-S applications assist in reducing the effect of airborne congestion, while increasing runway throughput, and increase the efficiency and capacity of interval management, including merging and spacing operations. The GIM-S application utilizes Automatic Dependent Surveillance – Broadcast (ADS-B) that increases accuracy in trajectory prediction and facilitates more efficient spacing control through the use of speed advisories. While GIM-S can be operated without FIM-S, benefits are expected to increase with the participation of FIM-S aircraft to deliver aircraft at higher accuracy, consistency, and at comparable or lower controller workload.