The Mission Day
A New Metric to Evaluate Peacetime Demands on Mobility Air Forces

Mobility air forces (MAF), which provide airlift and aerial refueling capabilities to U.S. armed forces, have two objectives during peacetime: to maintain readiness for major wars through training and education and to support peacetime engagements such as humanitarian relief, peacekeeping operations, and small-scale contingencies. Normally, the level of demand for such activities—expressed as operational tempo (OPTEMPO)—has allowed the MAF to participate in certain peacetime operations and still maintain readiness for war. In the past decade, however, the number of peacetime military engagements (such as Operation Allied Force in Kosovo) has risen substantially. More recently, the MAF has surged operations to support the wars in Afghanistan and Iraq. As the wartime demands eventually decline and operations resume their peacetime tempo, it will be important for the MAF to be able to assess whether force training, readiness, and retention remain at the needed levels.

A New Metric Balances Readiness, Engagement Missions, and Quality of Life

The Air Force needs tools and metrics to understand the stresses placed on the mobility forces so that training, OPTEMPO, and other demands can be managed appropriately. Unfortunately, current metrics do not provide an easy way to predict, detect, or identify stresses or their causes.

To help remedy this problem, RAND Project AIR FORCE (PAF) has developed a new metric—the mission day—that measures how much manpower is available for peacetime engagement missions after training requirements, quality-of-life standards, and other needs have been met. The metric is based on the following steps:

1. Begin with the number of authorized or assigned crewmembers by crew position, multiplied by the number of days in a month.
2. Subtract the number of weekends, holidays, sick days, and leave days necessary to maintain an acceptable quality of life.
3. Subtract the number of person-days per month in each crew position that are needed for ground training, simulator flying, local flying training, service schools, and other duties.
4. Arrive at the number of mission days per month (for each crew position) that are available for peacetime engagement missions. If this capacity is exceeded, then either more resources are needed to support engagement activities or such activities would need to be curtailed in favor of maintaining war readiness.

The Mission-Day Metric Can Improve Planning
The mission-day metric can help the Air Force forecast supply and demand, plan unit training, and identify problems when they occur. Better forecasting of mission-day supply will lead to better force management, allowing Air Mobility Command (AMC) to shift taskings from overstressed units to those under less stress. The mission-day metric will also help mobility forces to schedule periodic training and upgrade events while minimizing stress to aircrews. Finally, the mission-day metric can help AMC identify times when it may need to increase or decrease the use of guard and reserve units and commercial cargo carriers.
This research brief describes work done for RAND Project AIR FORCE and documented in Measuring the Tempo of the Mobility Air Forces by Tim Bonds, Dan Norton, Peter Hirneise, Pete Ellis, and Paul S. Killingsworth, TR-150-AF, 2004, 43 pages, ISBN: 0-8330-3657-2. Copies of this research brief and the complete report on which it is based are available from RAND Distribution Services (phone: 310-451-7002; toll free: 877-584-8642; or email: order@rand.org) or online at www.rand.org/publications/TR/TR150/. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.
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