

Military Cargo Needs, Market, and Metrics

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Military Considerations

- ◆ Military cargo aircraft fly around 300 hr/yr, commercial aircraft fly 10x that
- ◆ Cost-effectiveness principles: military value can come from fuel savings, range increases, increased safety
- ◆ Fuel savings increased by an additional factor for missions where refueling support is reduced
- ◆ Longer range could mean enhanced capability
- ◆ Form flying applicable to long range cargo aircraft, bombers, refuelers, and UAVs
- ◆ A large amount of money is spent on training flights to keep human pilots current

Current Aircraft

	C-17	C-5	C-141	C-130J-30
Costs per flying hour (FY97 \$)	4,992	6,324	3,103	1,343
Fuel Costs per hour	2,394	2,724	1,745	601
Dims HxWxL	12.3x18x88	13.5 x 19x143	9x10.25x93.3	9x9.9x55
Number	113 + 15/yr	104	88	>425 all variants

(Source:www.fas.org)

Market

- ◆ U.S. Transportation Command, Air Mobility Command
– Joint service command
- ◆ 1/3 Military Cargo transported by Civil Reserve
- ◆ Virtually 100% of troops transported by airlines
- ◆ USTRANSCOM controls military airlift, sealift, and civil reserve fleets
- ◆ New U.S. strategy demands high mobility and fast response in smaller units
- ◆ There is a need for more airlift forces

U.S. Army Deployment Goals

- ◆ Mobility goals to anywhere in world:
 - 96 hrs, combat capable brigade
 - 120 hrs, division
 - 30 days, 5 divisions
- ◆ SBCT: Stryker Brigade Combat Team
 - 300 Stryker vehicles (10 types), 900 soft skinned support vehicles
- ◆ Current capability requires 80 C-17s to deploy an SBCT 2,500 miles in 96 hours
- ◆ Division deployment goal (3+ SBCTs) requires 330 C-17s – impossible
- ◆ Army uses 30-40% of U.S. airlift capability at the start of a conflict

Stryker Metrics



- ◆ Future Army systems being designed to fit in C-130J
- ◆ **W < 20 tons**
- ◆ **41ft x 10ft x 9ft**
- ◆ Capacity bigger than C-130 would be better



Questions?

(Source: <http://www.af.mil/photos/>)

References

◆ www.af.mil

◆ United States Transportation Command Annual Command Report, 2002.

◆ The U.S. Army and the New National Security Strategy. Lynn Davis and Jeremy Shapiro, editors. Rand Corp. 2003.

◆ www.fas.org