

Developing A U.S. Controlled Global Heavylift Industry
By Capitalizing on the Russian and Ukrainian
Aerospace Industry Loss:

A Potential Strategy for America

Prepared for:
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January 21, 2003

Background:

Russia is a country populated by a people known for their strength of will and a historical resolve to remain a potent economic, political and military force. The Russians appear poised to become the dominant player in the emerging Heavy and Outsized Materials Market (HOM) despite profound geopolitical and economic problems in the aftermath of the breakup of the former Soviet Union.

The nucleus of this effort is the AN-124 military transport capable of airlifting 120 tons of cargo. This plane could form the basis for a brand new multi-billion dollar global industry second only to automotive and aerospace. These aircraft are in use around the world, including the United States, for moving entire oil rigs, aircraft sections, large D8-type dozers and assembly line sections. It is capable of carrying normal supply chain materials as well.

The EP3-E incident with China two years ago resulted in the captured aircraft -- much to the chagrin of U.S. officials -- being transported back to the country in an AN-124.

For the past five years, U.S. efforts to capitalize on the potential of HOM have been represented by the CAMAA (Commercial Application of Military Airlift Aircraft) program, a public/private effort between the United States Air Force and Boeing.

The CAMAA program sought to make up for potential military airlift shortfalls looming in the aftermath of congressionally mandated force and materiel reductions deemed necessary at the end of the Cold War. It allowed for Boeing to potentially build 10 additional C-17 Globemaster III transport aircraft over and above those 180 planes already approved by Congress for DoD.

The idea was to place a commercialized version of this airlifter, the BC-17X, in the hands of civilian operators through guarantees of business, acquisition finance and guaranteed buy-back in the event of bankruptcy. In return, the operators would make these aircraft -- components of the in-place Civil

Reserve Air Fleet (CRAF) -- available during times of national emergency or as required by the Air Force. Additionally, they were to help create the architecture for infrastructure of a new global “Heavylift” industry.

Potential New Industry:

This new industry would capitalize on emerging industry requirements for the rapid movement of heavy and outsize, or awkward, materials. Most importantly, the project concept sought to address an enduring and growing vulnerability by this country’s industrial base to interruption of largely ocean-borne import/export goods. There are also risks associated with shipping conglomerates at the core of these operations being foreign owned. Anyone questioning this contention need look no further than the Longshoremen strike of late 2002 which left dozens of ships sitting offshore, unloaded, and tons of foodstuffs rotting on the docks. It was estimated, according to media reports, that the cost per day to California’s \$300 billion shipping industry was in excess of \$2 billion. It also forced GM, Ford, Toyota and Hyundai, among others, to airlift supply chain materials to keep their plants from shutting down and continue the shipment of finished products to their dealers, in some instances.

A Wake-up Call?

Presumably, industry would be motivated to seriously rethink their supply chain strategies in the aftermath of the Longshoremen strike. The near economic disaster had to be brought to an end by the President invoking Taft-Hartley.

Until recently, GM and Ford viewed airlift as only an interim -- and high cost -- measure.

By crystallizing efforts of the past 16 months into a solid foundation, it may be possible to take advantage of an opportunity that rarely occurs in business life: The opportunity to establish a whole new industry that could work symbiotically with the world’s two largest industries, automotive and aerospace.

There must be observable and rapid development of this initiative, since industry may be facing the equivalent of another “Sputnik.” That is to say,

the Russians recognize the potential and are already ahead of the game in their quite active commercial use of the AN-124. In fact, one frustrated colleague in Houston, the U.S. home of Air Foyle Heavylift which operates several of these planes, said: "I'm tired of hearing the roar of AN-124's taking off with yet another oil rig within."

Boeing's Position:

The country is close to losing yet another kind of early "space race" to the Russians. The war on terrorism currently being prosecuted resulted in the Department of Defense designating all new C-17s for meeting military airlift requirements only. This means accomplishing the goals of CAMAA requires the building of additional aircraft beyond the 222+ planes the Air Force expects to put in its inventory between now and 2008.

Conversely, the new heavy lift industry may well require more than 100 BC-17Xs to satisfy the needs of global customers is a current study underway by the Air Force produces positive results. One would expect no less from an industry making the transition from truck, rail and ocean based transport of manufacturing materials to one that is continuously air augmented.

AIRBUS:

The threat of AIRBUS cannot be ignored in that it is aggressively stalking and removing long time commercial and military customers from Boeing. It is now poised to surpass Boeing in airplane deliveries in 2003 according to a noted study. And, it is expected that they will go after heavylift, as well. AIRBUS' achieving prominence in this area would go a long way in meeting European Union objectives to dominate the world's aerospace industry by 2020.

The United States cannot afford to lose this race, because it will mean new job losses as aircraft orders flow to Europe and Russia. In fact, a report released on November 18, 2002 by the 12-member Congressionally mandated *Commission on the Future of the U.S Aerospace Industry*, said that the industry is "...facing increasing European competition, an aging workforce and a lack of long-term investment that could threaten its global dominance." The report further stated, in essence, "*Congress and the White*

House should increase research and development funding, eliminating regulations that make it difficult for U.S. defense contractors to sell overseas and developing a national aerospace policy.”

This statement is important considering that special FAA certification and State Department issued global landing rights for BC-17X must be issued. Correspondence from the Air Force and State Department indicate that the processes required to bring this about are very much underway and progressing.

Russia's Quest:

Recent discussions with the Air Force personnel and the civilian contractor charged with the development of global heavylift infrastructure seem to confirm the reality of Russia's swift and decisive moves to gain dominance. Our own intelligence two months ago indicated that Antonov was getting back in the business of building airplanes after a period of dormancy imposed by Russia's post Cold War financial meltdown.

Aviastar-SP, Russia's largest aircraft plant in Ulyanovsk, The Ukraine, was in danger of shutting down permanently. Now, it has resumed, according to a BBC monitoring of the former Soviet Union report released November 2002. They are now building a new generation of TU-204 airliners, next generation AN-124-100s with GE engines and Western avionics, and the two previous generation aircraft. The latter planes being constructed from two "fuselage shells" that had been lying dormant.

We have been further advised by our Air Force colleagues that Russian President Putin is considering the possibility of making some or all of 28 AN-124s currently in military use, available for its bid to corner the heavylift industry.

Boeing meanwhile, is projecting a 2007 delivery date for the first BC-17X aircraft -- assuming that CAMAA is fully approved and funded for the current in-operation target of 2004.

The race will be lost by that time, to put it bluntly. And should this prove to be the case, the U.S. will have forfeited an extraordinary opportunity to

enhance its industrial base -- already reeling from continued market weakness -- and greatly expand its military airlift capacity through the building of new C-17s and the BC-17X commercial variant.

Impact of Recent Intellectual Losses in Russian/Ukrainian Aerospace Industry

Russia's and the Ukraine's plans to rejuvenate their aerospace industry were brought to a halt on December 23, 2002 in the aftermath of a fatal air crash involving an AN-140 turboprop on approach to an Iranian aircraft manufacturing facility airstrip in Isfahan, 265 miles south of Tehran. 46 people, all senior executives and engineers, died in the accident, including 7 designers for the AN-140 from the Kharkov State Aircraft Manufacturing Company (KSAMC) facility in Kharkiv (sic) Ukraine.

They were on their way to observe initial flight-testing of the IRAN-140, a derivative of the AN-140 and the first product of a Russian/Ukrainian/Iran joint venture to build a regional airliner. (See www.an140.com)

This venture, along with the November 15, 2002 restart of Aviastar SP, represented, again, a reemergence of the former Soviet Union's aerospace industry.

The impact of this loss of engineering and administrative brain trust was so profound that Ukraine's president declared a National Day of Mourning. One report described the crash as "wiping out the cream" of the Ukrainian aerospace industry.

All concerns that Russia's out-distancing of U.S. efforts to control the emerging global heavylift industry were set back, at least temporarily.

Customer Concerns:

There were immediate concerns voiced by those countries with commercial aircraft on order, inclusive of China (5 TU-204 airliners ordered) as to whether Antonov/Tupolev could fulfill contractual obligations. Indeed,

observers have estimated up to a 24-month delay in order fulfillment capability.

Antonov has refused comment relative to the impact of the disaster on its operations. Further, it has announced replacement of those senior officials lost with their deputies. This can be viewed as an attempt to maintain customer confidence.

An AIR (Aircraft Incident Report) from Iranian authorities is due out within days.

Within 48 hours of the disaster, Boeing announced the identity of a previously unnamed customer for a \$2 billion aircraft order consisting of 747 airliners and freighters as China.

Despite the magnitude of the Iran disaster, one major concern has not gone away. The fact that *AIRBUS is making immediate moves to fill the intellectual void at Antonov/Tupolev created by the crash.*

AIRBUS has made it clear that its intentions are to gain global aerospace industry dominance by 2020. With access to a modernized manufacturing facility as represented by Aviastar-SP at Ulyanovsk, they gain a powerful means to execute this strategy.

Immediate Action Required:

We are recommending that immediate steps be taken to render intellectual, technological and financial assistance to Antonov/Tupolev in the form of a joint venture between themselves and Boeing. We are certain that both Russian President Vladimir Putin and Ukraine's President Leonid Kuchma might support these objectives.

We would find it extraordinary if AIRBUS is not considering exactly the same thing, and it would be foolhardy to underestimate their determination to accomplish this with the full assistance of the E.U.

It is our understanding that U.S. Air Force representatives will be visiting Antonov's Kiev headquarters and their Aviastar-SP facility, Ulyanovsk, in the near future. We suggest that the delegation now include Dr. David

Swain, Chief Technology Officer for Boeing. Dr. Swain reports to Chairman Phil Condit, and would be in a position to accelerate the joint venture approval and implementation process.

We are also recommending a visit of the Kharkiv, Ukraine facility, home to the AN-140 Turboprop. Should the proposed JV go forward, an alternative to the EADS/AIRBUS A400M could be rapidly conceptualized and prototyped.

This venture could expand Boeing's manufacturing capacity, thus increasing its revenues. Ultimately, it could serve to blunt the aggressive market share acquisition efforts of AIRBUS, and help Boeing and the U.S. aerospace industry maintain leadership.

Lockheed-Martin, Israeli Government:

The potential of such a venture is not lost on the other big player in the U.S. aerospace industry, Lockheed-Martin, and nor is it lost on one of the industry's customers, the Israeli Government.

Lockheed-Martin is prepared to assist in AN-124-100 order fulfillment, by converting a section of the space shuttle booster manufacturing facility in Huntsville, Alabama, to complete fuselage shells shipped from Ulyanovsk. Construction of the aircraft would go largely unnoticed by the casual observer owing to the comparable size of the shuttle boosters and AN-124 fuselage shells. The proposal also makes sense from the standpoint that next generation AN-124s will have GE engines and Western avionics.

The Israeli contribution would be in the avionics installation area, most likely shared with Lockheed-Martin.

Benefits of Implementation:

The benefits of this proposed joint venture between Antonov/Tupolev, Boeing, Lockheed-Martin and Israeli aerospace can be short, mid- and long-term from an economic, industrial and national security standpoint.

- Russia/The Ukraine gets immediate assistance in the restoration of executive and engineering brain trust lost in the Iran air crash, thus keeping its current aircraft manufacturing operations viable,
- The immeasurable strategic value of even closer ties with Russia, the Ukraine and Iran (the latter currently on the State Department's list of nations to whom Boeing cannot sell),
- A true enhancement of the Israeli aerospace manufacturing base,
- A potentially strong augmenting of Boeing, Lockheed-Martin production capabilities through the addition of the Aviastar-SP (Ulyanovsk) and AN-140 (Kharkiv) manufacturing facilities,
- Place Boeing in a much better position to wrest back business lost to AIRBUS from the Chinese, and a large share of the projected (Boeing data) \$120 billion in aircraft sales to China over the next 20 years.

Risks of Failure to Take Advantage of this Opportunity:

Failure to act decisively, and quickly, in this matter will result in AIRBUS exploiting the current situation. It could well lead to an interim solution for AIRBUS' A400M Airlifter -- available after 2009 -- projected availability difficulties. Despite initially strong support and orders for this transporter (capacity and performance configured to exist somewhere between the C-130 Hercules and C-17) NATO allies are now vacillating from their original positions. NATO member nations, inclusive of Germany, have all but settled on the C-17 to handle airlift requirements over the next decade via a novel lease arrangement. However, this could all change if AIRBUS succeeds in its presumed overtures to Antonov/Tupolev. They would instantly have access to a very airlifter, the AN-124 capable even though the C-17 operational characteristics have acknowledged superiorities. By bringing their intellectual, technological and financial resources to bear, AIRBUS could accelerate AN-124 production, and immediately lobby NATO with a more affordable solution to the C-17. This has already been demonstrated in the November industry presentations to NATO officials in Germany by the U.K. based AN-124 representative organization, Air Foyle Heavylift.

The political clout lacked by Air Foyle is forcefully addressed with the buy-in of AIRBUS. The move also places them in an excellent position to further exploit Russia's heavylift head start. This would represent an

untenable turn of events. Thus, it is imperative for all parties to immediately develop actionable plans. Successfully implemented, the proposed joint venture may help meet the goal of maintaining U.S. aerospace, and emerging global heavylift, dominance.