

PM WORLD TODAY – VIEWPOINT – SEPTEMBER 2009

Virtual Teamwork

The F-35 Joint Strike Fighter: the most ambitious program in the aerospace military industry

By **Antonello Bove**

From Washington, DC

The skill to take control of a project frequently depends on how quickly, and in a good way, you can create a team of bright folks and groups, anywhere they might be placed. This requires experience and competence of *virtual management*, a new curriculum to manage projects and programs with the capability to manage multinational groups whose associates have different culture approaches.

On a large scale, a great and current example is the remarkable international team that is working in the most ambitious program in the aerospace military industry. The program's name is F35-JSF and it stands for *Joint Strike Fighter*. This complex program has been developed with eight international partners – the **USA (leader), the United Kingdom, Italy, Netherlands, Turkey, Canada, Denmark, Norway and Australia**.

The *Joint Strike Fighter* has nothing in common with existing aircraft. It's a program related to the most technologically advanced aircraft in the world. It flies a thousand miles an hour in a transparent bubble; each component is a leap into the future and all information is projected into the helmet screen.

The controls are a little joystick and a large touch screen display, with an interface of data equal to one gigabyte per second like a giant I-phone. By touching it, you can expand the radar or increase the power of the engine.

It can take off in a few hundred meters and land like a helicopter. No runways needed, just a short piece of road in any corner of the world.

The costs are enormous: the development has already swallowed up 55 billion dollars and Washington plans to spend billions of additional dollars. This aircraft will replace a wide range of aging fighter and strike aircrafts in the different military corps. It's an ambitious program, confirming that international research partnerships in science and the technologies needed to address challenges can be surmounted by multilateral collaborations. It will improve and create new standards in technology and project management that can easily be applied to different industries.

The program's objective is to develop and deploy a technically superior and affordable fleet of aircraft that support the war fighter in performing a wide range of missions in a variety of theaters with a strong improvement in effectiveness and efficiency. The program has been divided *into three phases*:

In 1996, the first phase, the Concept Demonstration Phase, began with the identification of 3 different configurations: the first model for a conventional take off and landing as used by the US Air Force; the second model, a carrier based variant for the Navy, and the third one for a short take off and vertical landing for the Marine Corps. This first phase, completed by Boeing and Lockheed Martin, reached a very significant milestone.

In 2001, Lockheed Martin was chosen for the execution of the second phase. Lockheed Martin led the international team that was composed of the above 8 countries. The project scope included building 22 aircraft. In 2006, and then 2008, the first two completed models successfully completed their first experimental flights. The third model is scheduled for its maiden flight in mid 2009.

The third phase is related to the final production.

The same international team will be the main *stakeholders* to purchase the completed aircrafts (3 different configurations) and will allow other nations of interest to purchase as well.

From the project management point of view, the program uses a "best-value" approach with *international and virtual teamwork*, the central key of the program, choosing the best subcontractors and suppliers ensuring the highest quality and economies of scale that keep the JSF affordable and technologies advanced. The international team employs the Integrated Management Framework (IMF) collaborative product computing software that enables JSF suppliers, partners and customers to review the status of every JSF system - worldwide - via the Internet. Working interdependently across space, time and organizational boundaries remains the main challenge of the program. Leaders must constantly communicate with team members about expectations and norms for sharing information. This is not easy in an environment where the scope is related to strategic defense policies with major implications in term of politics, technology secrets and culture differentiations.

This is an excellent case of international and virtual teamwork at the government and private level in a delicate environment that puts a big quality on the skills of *virtual management* with the ability to run a team whose members are in multiple countries with different organizations and policies. It is an extraordinary challenge where every team must develop and agree on rules of engagement for decision making.

About the Author

**Antonello Bove***Author**International Correspondent - Italy*

Antonello Bove is a Consultant for the Inter-American Investment Corporation (IIC), the private investment arm of the Inter-American Development Bank. Based in Washington, DC and Rome, Italy, Mr. Bove is also an International Correspondent for PMForum and PM World Today. At IIC, he is leader of a program designed to strengthen European ties with Latin America and the Caribbean; he spends his time equally between Italy, Latin America and the USA. Antonello was previously CEO of Robur Corporation, a manufacturer and marketer of gas absorption air-conditioning technology based in Indiana. He was also previously a Partner at Proginvest in Rome, Italy, and a business development & government affairs manager at Iniziativa SpA (Milan-Rome, Italy), today Ernst & Young. He is a visiting professor at ABITA - Project Management University of Florence, Italy. Antonello is the author of the project management book, *La metodologia dei 12 Step* www.lametodologiadei12step.com, published in Italy by Hoepli in 2008. Antonello has a degree in Economics and Business Administration from the University of Rome "La Sapienza" (1987) and is a graduate of the Executive Program on General Management from the University of Michigan (2002). A member of the "Italian Association of Journalists" since 1987, he is also a member of the Project Management Institute (PMI®) and the American Management Association (AMA). Additional information about Antonello can be found at <http://www.pmforum.org/pm%20forum%20team/index.htm>. Antonello can be contacted at: antonellobove@aol.com.