



The Space Congress® Proceedings

1997 (34th) Our Space Future - Uniting For
Success

Apr 30th, 1:00 PM

Paper Session II-C - Commercial Partnering at CCAS: A Proactive Approach to the Commercial Launch Market

Barry Chefer
45th Space Wing/XP

Al Thomas
Spaceport Florida Authority, Technical Director

Mike Powers
McDonnell Douglas Aerospace

Charles Oberwetter
Computer Sciences Raytheon Program Management

Bruce Bjornstad
Johnson Controls Program Management

Follow this and additional works at: <https://commons.erau.edu/space-congress-proceedings>

Scholarly Commons Citation

Chefer, Barry; Thomas, Al; Powers, Mike; Oberwetter, Charles; and Bjornstad, Bruce, "Paper Session II-C - Commercial Partnering at CCAS: A Proactive Approach to the Commercial Launch Market" (1997). *The Space Congress® Proceedings*. 22.

<https://commons.erau.edu/space-congress-proceedings/proceedings-1997-34th/april-30-1997/22>

This Event is brought to you for free and open access by the Conferences at Scholarly Commons. It has been accepted for inclusion in The Space Congress® Proceedings by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

**Commercial Partnering at CCAS:
A Proactive Approach to the
Commercial Space Launch Market**

Barry Chefer 45th Space Wing/XP
Al Thomas, Spaceport Florida Authority, Technical Director
Mike Powers, McDonnell Douglas Aerospace
Charles Oberwetter, Computer Sciences Raytheon
Program Management
Bruce Bjornstad, Johnson Controls Program Management

The reality of increased access to space for the commercial launch industry is that existing sites must foster an environment which is capable of compromise, responsive to the customers needs, and allows the customer to maximize their launch capabilities.

In recent years the space industry has seen a dramatic shift in the launch customer. Prior to 1995 the majority of space launches were funded through the government with some commercial customers, since then this trend has reversed and the primary launch customer has become the commercial launch programs. All indications and future projections demonstrate that this trend will continue and will most likely accelerate. This activity has made the commercial space launch industry a highly competitive multi-billion dollar industry. Much has been done, and written concerning launch vehicle design, production, and processing and the steps that have been taken to reduce the launch customers costs and increase their commercial market share. However, very little has been documented as to the process renovations which the launch sites are going to have to undergo due to competition between the various foreign and domestic launch sites which are just beginning to develop. With new spaceports springing up all across North America (e.g. California, Florida, Virginia and Alaska) and overseas (e.g. Russia, Canada, China, Ukraine) all of which are looking to capitalize on this new and growing market, the efficient processing of requirements, the use of new and evolving technologies, responsive customer interface and reduction of launch support costs have become pressing issues.

The by-product of this increased competition is that the launch site operators are beginning to understand that dramatic change can and must be made in support areas in order to reduce launch site costs and increase efficiencies. Here at Cape Canaveral this has led to site personnel focusing their attention on understanding the customer and their requirements, developing effective interface processes, and driving down launch costs through the development of specialized organizations, commercial launch initiatives and the conducting of informational workshops.

The space industry at Cape Canaveral offers a wealth of over forty years experience in the safe operation of launch missions. This experience coupled with the massive infrastructure and the drive of all parties to foster a commercial space program which is second to none, are the catalysts which have created the global partnerships and activity we have seen thus far.

This refocusing of attention on commercial activities has led to the establishment of several specialized organizations, such as, the Florida Space Business Roundtable.

This group, which is made up of local business people, NASA, the 45th Space Wing, and various launch contractors. The purpose of this business roundtable is to encourage an expanding space industry in which Florida leads the nation and the nation leads the world in space. This group strives to perform its mission through the following areas;

- Emphasize the importance of commercial space to Florida;
- Emphasize the importance of Florida for the access to space;
- Establish a forum for Florida Space industry to identify and resolve

conflicts;

- Develop and publicize the industry viewpoint;
- Complement and coordinate with other space groups;
- Sponsor space and promote programs;

Another specialized organization which was formed to develop a partnership with the 45th Space Wing and commercial customers is The Commercial Space Advocacy Committee (CSAC). This organization is made up of the 45th Space Wing, commercial customers, range contractors and Spaceport Florida. The organization meets quarterly to assess the progress being made both within the Wing and by other commercial launch endeavors. While the Commercial Space Advocacy Committee functions as the main oversight organization for the 45th Space Wing and the commercial customers, the real functions are carried out within the specialized subcommittee teams. These teams are tasked with focusing on understanding the customers requirements and working to resolve conflict which may exist. The seven subcommittees are called the Customer Relations Enhancement Activity (CREATE) teams and consist of members of the 45th Space Wing, launch customers and range contractors. These committees support specialized areas, such as, Space Education, Environmental Affairs, Range Infrastructure, Contracting Services, Financial Affairs, Safety Enhancements and Range Enhancements. The following is a brief explanation of each team:

Space Education/Training - This group is tasked with identifying educational requirements and facilitating opportunities for academic support by the 45th Space Wing and its contractors. They also promote and facilitate increased Air Force and industry support to academic space programs. Membership on this committee includes; the 5th Space Launch Squadron from the 45th Space Wing, Boeing, Brevard Community College, Florida Institute of Technology, The Florida Space Business Roundtable, Rollins College, University of Central Florida and The Spaceport Florida Authority. Through this partnership the group has accomplished such endeavors as achieving facility access for academic programs at Cape Canaveral Air Station. Examples of this facility utilization, include Hangar AM which is to be used by the Boeing organization to process their Inertial Upper Stage(IUS). A special agreement with Boeing will allow a portion of this processing facility to be used for academic payload support. This team has also reached agreement on the establishment of a training and educational administration area on Cape Canaveral within the yet to be constructed Spaceport Florida Customer Service Center.

From an classroom perspective, we have also seen the development of a masters program designed to meet the needs of the 45th Space Wing, several practice based engineering courses have also been designed for hands on IUS, small payloads and launch vehicle activities. Training programs have also been developed to provide Air Force Contractors and the civilian community college based technician level training and Air Force Launch Safety training.

Evidence of the support that the 45th space wing and Educational Community are working together can be seen from the college courses being taught by Brevard Community College on Cape Canaveral and the Kennedy Space Center after hours. These courses provide specialized high tech and academic training to technicians and employees at the Space Center as well as other people seeking a space related career

Environmental Affairs - This CREATE team again is made up of several 45th Space Wing organizations, Lockheed Martin, Johnson Control, McDonnell Douglas and Spaceport Florida. The primary goal of this team is to improve environmental customer satisfaction and service through communication and education. Due to the issues which this group is addressing is the development of an Environmental Customers handbook which will help Cape Canaveral Customers understand their roles and responsibilities as they pertain to environmental issues. They have also seen a need and are in the process of developing a 45th Space wing process for insuring payload compliance to the National Environmental Policy Act.

Contract Service - This CREATE team is a multi-organizational group which was formed to address the needs of the commercial contractor with respect to existing 45th Space Wing Range Contractors. This group is addressing such issues as developing the process for a quick reaction capability of the Space Wing and its Range Contractors in an effort to meet the much reduced turn around times and less normal definitive requirements which will accompany these new commercial launch programs. This group realizes that each new launch customer has their own requirements for processing their launch vehicle and thus they are striving to create a launch site environment which will be the customers first choice.

Financial Affairs - This group is developing the fixed price launch capability which will allow the Wing to provide a guaranteed price to commercial customers, allowing them to minimize their launch costs risks when launching at Cape Canaveral. This team is also striving to understand the differences between those requirements which are necessary for the launch customer to meet their mission requirements and those requirements which are driven, usually by safety, in order to comply with Air Force directives. The purpose for this understanding is to ensure all parties are aware of these requirements and why they are necessary. In some cases, based on this understanding, certain would be requirements may be eliminated, thus serving to reduce costs to the applicable customers.

Safety Enhancements - This group is striving to involve all applicable parties in order to develop a safety policy specifically for the commercial launch customers. This policy when finalized will provide safety direction for these customers at both Cape Canaveral and at Vandenberg in California. The overall goal of this policy will be to provide standard instructions for commercial launch customers when launching at either Air Force base and to provide a policy which addresses the unique requirements of the commercial customers yet still ensure that the air Force can meet its primary goal of ensuring the safety of the general public within the local launch areas.

Range Enhancements - This group provides a forum for commercial , military and civil customers to have insight and input into the operational enhancements and overall philosophies of Cape Canaveral Operations.

This team has provide insight to all members as to the new instrumentation capabilities which are being developed for the Space Wing under its Range Standardization II contract which is currently being implemented. It has allowed the commercial customer to have an input into this contract and also have a better understanding of where the Space Wing is going and how long it will take to get there.

As we can see through the membership and design of these specialized organizations great efforts are being undertaken by local businessmen, the 45th Space Wing and the Commercial Customers to understand each others requirements and to form a united partnership with all parties, based on understanding, and where applicable, compromise, for the overall enhancement of Cape Canaveral. But even with the establishment of these teams to address commercial launch users requirements, if not for the initiatives which have been undertaken at Launch Complex 46 the true commercial potential of Cape Canaveral would not be attainable. Prior to this effort the Cape had no capability to launch small commercial vehicles and it is this area which is expected to see major growth in the coming years. It was through the partnering efforts of Spaceport Florida , the Navy and the Air Force that agreements were put in place which would allow Spaceport Florida to use a Navy Launch site for small commercial launches. With these agreements in place Spaceport Florida than turned to the Small Launch Vehicle Contractors, such as Lockheed Martin Launch Vehicle (LMLV), Orbital Sciences (OSC) and Alliant Tech and entered into a partnership with these organizations to provide funding, support the conceptualization and development of a launch site capable of launching anyone of several types of launch vehicle. The result of these efforts is a launch site that is designed to support any small vehicle configuration with a minimum amount of modification. A reduced site processing cost provides a savings in comparison to the cost that would be incurred by a dedicated launch site for each vehicle. With this Complex 46 site in place Spaceport Florida again turned to the 45th Space Wing in an effort to develop launch site capabilities at Cape Canaveral for International Launch programs. While this concept is still in its infancy , in the not to distant future it might be possible to see Russian or Israeli launch vehicles being launched from Cape Canaveral.

Finally, having formed working groups to resolve commercial customers issues and develop the operating concepts necessary to support these organizations and then having developed a small launch vehicle capability at Cape Canaveral a final partnership was formed to market this capability. This group consisted of the 45th Space Wing, Spaceport Florida, local universities and the Florida Business Roundtable, they developed a workshop to inform local area businesses and various launch customers of the capabilities of the cape and provide a forum for addressing many of the other issues which would be of interest to commercial customers, such as insurance issues, Site availability and general information on the advantages of Cape Canaveral.

In conclusion, major steps are being taken to support the commercial launch environment at Cape Canaveral through increased partnering relationships between the 45th Space Wing, Spaceport Florida and the various commercial launch customers. It is the current belief that by working with the customer and ensuring their satisfaction that the overall goal of being the launch site of choice among the commercial launch customers will be achieved.

Mobile Access Structure Launch Complex 46