



Organised by



INTERNATIONAL SPACE COMMERCE 2013 SUMMIT

29-30 October 2013 | London, UK

Radisson Blu Edwardian Bloomsbury Street Hotel

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Connecting public and private bodies to
discuss the way forward for commercial
activity in space

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Featured Speakers



SPACEX



1 ABOUT THE SUMMIT

Media Partners

The **International Space Commerce 2013 Summit** is designed as a senior-level meeting that will help map the way forward for commercial companies operating in the space sector. It will be a 'must attend' forum for those working with or using space technology, satellites, space based infrastructure and services, as well as those actively seeking to understand more about the practicalities of human spaceflight, with discussions on materials for commercial spaceflights, to risk and control management for the crew, flights, passengers and much more.

Taking place on **29-30th October**, in the **Radisson Blu Edwardian Bloomsbury Street Hotel**, the **ISC 2013 Summit** addresses a number of key issues that affect both public and private organisations operating in the industry, including the laws and regulations governing commercial activity in space and the opportunities for business to get involved for short-term ROI from space satellites and technology, as well as long-term ROI from venturing into the world of human spaceflight.

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ТВ промышленный ВЕСТНИК
журнал

ADVANCE

astronaut.com
Where Science Fiction Meets Reality

The Summit will address four areas that space commerce revolves around. The agenda is structured into 4 sections over the two days.

SECTION 01

LEGALITIES, POLICIES AND FINANCE

The opening section of the programme will focus specifically on the challenges surrounding legalities, policies and investment when operating in the commercial space sector. Presentations will cover:

- Regulations governing businesses who utilise space based facilities and technologies
- Regulations for space tourism and the importance of the sustainable use of space
- Economic benefits of an active space sector in a nation
- Investment opportunities and 'take-away' points from our investors who are actively investing in space projects

SECTION 02

SATELLITES AND INFRASTRUCTURE

This section of the agenda looks into real-time prospects of using space satellites, and will analyse the competitive environment of the commercial satellite market. Presentations will cover:

- What the opportunities are for commercial communication satellites in the next 10-15 year period
- What further applications are required for satellite development
- Real examples of companies using space satellites and infrastructure for observation navigation and communication functions across the governmental, communications, scientific, security and defence sectors
- The most commercial uses of satellites including the increase of opportunities and ROI for companies working with space infrastructure
- Successful integration of space technology with existing business models

SECTION 03

SPACE TECHNOLOGY AND APPLICATIONS

The technology that is helping to facilitate commerce in space is developing substantially. This part of the agenda will bring to light some of the leading technical capabilities that allow you and your business to maximise the use of space satellites and services. Our speaking faculty will be discussing:

- Capacities and payloads
- The latest software systems and applications that enable effective data acquisition, processing, Distributing and transmitting back to Earth
- Applications, high-resolution radar, optical imagery and monitoring functions
- How to develop your business strategy to include space-related technology that will contribute to optimising results and ROI

SECTION 04

HUMAN SPACEFLIGHT AND INFRASTRUCTURE

The final section of the agenda will look at one of the fast emerging markets globally today: human spaceflight. Presentations in this section will cover:

- Current projects and the amenities they need to develop these further
- The infrastructure required to support a growing market
- Safety measures to ensure minimal risk
- The challenges of insuring a high-net industry and the direction of market growth
- An overview of the support networks for companies operating in the sector and discussing benefits of space tourism to current space markets

12 SPEAKERS

OUR SENIOR-LEVEL SPEAKING FACULTY INCLUDES

-  **Daniel Rasky**, Director and Co-founder, **Space Portal at NASA, Ames Research Center**
-  **Tang Yan**, Deputy Director General of the Earth Observation System and Data Center (EOSDC), **China National Space Administration (CNSA)**
-  **Alan Brunstrom**, Head of Applications Business Office, **European Space Agency (ESA)**
-  **Catherine Mealing-Jones**, Director Growth, Applications and EU Programmes, **UK Space Agency**
-  **Andrew Nelson**, COO, **XCOR Aerospace**
-  **Rick Tumlinson**, Chairman of the Board, **Deep Space Industries**
-  **Matt Perkins**, CEO, **Surrey Satellite Technology Ltd**
-  **Patrick Wood**, Chief Operating Officer, **Astrium Satellites**
-  **Gerd Gruppe**, Member of the Board, **Space Administration, German Aerospace Centre (DLR)**
-  **Nazzareno Mandolesi**, President e-GEOS and Member of the Board, **Italian Space Agency (ASI)**
-  **Bas Lansdorp**, Founder & CEO, **Mars One**
-  **Karin Nilsson**, CEO, **Spaceport Sweden**
-  **Barry Matsumori**, Senior Vice President - Commercial Sales & Business Development, **SpaceX**
-  **Per Wimmer**, CEO, **Wimmer Space**
-  **Jose Mariano Lopez-Urdiales**, CEO, **zero2infinity**
-  **Tim Just**, Head of Space, **Technology Strategy Board**
-  **Dan Lewis**, Chief Executive, **Economic Policy Centre**
-  **Sa'id Mostesher**, Director, **London Institute of Space Policy and Law**
-  **Jan Kolar**, Director, **Czech Space Office**
-  **Chad Anderson**, Managing Director of European Operations, **Space Angels Network**
-  **Marek Banaszekiewicz**, Director General, **CBK PAN**
-  **John Thornton**, President, **Astrobotic**
-  **Carlo Viberti**, Founder and President, **COSMO Spaceland**
-  **Tommaso Sgobba**, President, **International Association for the Advancement of Space Safety**
-  **Tim Craine**, Former Head of Space Commerce, **Isle of Man Government**
-  **Michael Lopez-Algeria**, President, **Commercial Spaceflight Federation**
-  **Tanja Masson-Zwaan**, President, **International Institute of Space Law (IISL)**, Deputy Director, **International Institute of Air and Space Law, Leiden Law School**
-  **Stella Tkatchova**, Author, **Space-Based Technologies and Commercialized Development**
-  **Tony Azzarelli**, Head of Space and Science Services, **Spectrum Policy Group, Ofcom**
-  **AJ Piplica**, Chief Operating Officer, **Generation Orbit Launch Services, Inc.**
-  **Karen Monaghan**, Director of Communications, **ILS**
-  **Stephen McKeever**, Secretary of Science and Technology, **State of Oklahoma**, Vice President for Research and Technology Transfer, **Oklahoma State University**
-  **Marco Ramadoro**, CEO, **SATEC**
-  **David Wade**, Space Underwriter, **Atrium Space Insurance Consortium**
-  **Luca Rossetini**, CEO, **D-Orbit**
-  **Martin Agnew**, EDRS Service Design Authority & Head of Service Creation, **Astrium Services**
-  **Joerg Kreisel**, CEO, **JKIC**





3 WHY ATTEND

The **ISC 2013 Summit** aims to bring together Governmental bodies, space agencies, commercial companies and suppliers to discuss pertinent topics and issues which require attention. The European market can provide many technological advances, materials and utilities to boost the space industry, and the Summit aims to showcase these to demonstrate how specific products can be incorporated into your business model.

The Summit will offer a platform for intimate debate and collaboration amongst senior-level executives operating in the industry. If your role is in business development, regulatory decision-making, finance, operations, product development or research, then the ISC 2013 Summit can provide you with the contacts and information that you need to develop your business or organisation in the space industry.

Spacecraft
Complexity

Laws,
Regulations and
Policies

International
Collaboration

Industry Growth

Space
Infrastructure

Insurance
Solutions

Human
Spaceflight

Space Property

Satellite
Technology

Mining

Finance
Models

WHO SHOULD ATTEND?



C-Level Executives

Chief Executive Officer
Chief Financial Officer
Chief Information Officer
Chief Operating Officer
Chief Science Officer
Chief Technology Officer
Executive Board Members
Chairman
President
Vice President



Directors

Commercial Director
Director of Business Development
Director of Human Spaceflight Operations
Director of Policy and Operations
Director of Science and Exploration
Director of Transportation



Heads

Head of Communication Systems
Head of Engineering
Head of Technology



Aerospace and Space Engineering
Satellite Engineering
Senior Space Agency Representatives
Space Lawyers
Consultants



4 YOUR EXPERIENCE

IRN hosts a number of senior-level Summits within **Commodity Trading, Oil & Gas, Infrastructure & Construction and Sports**. As a leading business intelligence group, IRN's portfolios have established an excellent reputation internationally. IRN is pleased to bring you this equally strong forum with the **International Space Commerce 2013 Summit** to establish the way forward for private sector involvement in the international space industry.

Whilst the market is growing and many countries are becoming involved, there are many uncertainties arising in relation to space policy and regulation. The **ISC 2013 Summit** will bring together the key regulators and organisations that influence policy decisions worldwide. It is an unparalleled platform to hear from these bodies about current projects and growth areas.

The **ISC 2013 Summit** will give you the opportunity to collaborate with companies at the forefront of the space industry over numerous networking breaks, a Drinks Reception and a Gala Dinner on the first evening. Our 5* setting provides the perfect platform for networking and you will be able to walk away with knowledge, ideas and connections to drive growth for your company in the space sector.

What participants have to say about our other Summits ...

“It was a high quality audience, which as a speaker makes all the difference. The questions showed real engagement.
Jonathan Hill, FSA

“Thank you for organising a true summit: an event of universally insightful presentations that inspired great debate among an audience which included numerous experts, too. It was great to catch up with so many existing clients and make new contacts in such a stimulating environment.
Robert Finney, Dewey & LeBoeuf

“I really enjoyed the content of the conference and the speeches given by extremely qualified and professional speakers
Gianpietro Bertuglia, Shell

... it's an IRN Summit.





DAY ONE TUESDAY 29TH OCTOBER 2013

08:00	Registration and coffee
08:30	Opening and Welcome from Pooja Samani, Director, IRN
08:35	Welcome remarks from Chairman: Rick Tumlinson, Chairman of the board, Deep Space Industries
SECTION 01	LEGALITIES, POLICIES AND FINANCE The opening section of the programme will focus specifically on the challenges surrounding legalities, policies and investment when operating in the commercial space sector. It will begin by taking a look at various organisational structures across Europe that have been successful in establishing a notable space industry in their country. It will also outline regulations which companies need to comply with when using space from a commercial angle and will also touch on regulations for space tourism and the importance of the sustainable use of space. The section will close by highlighting the economic benefits of an active space sector in a nation and will conclude giving an overview of investment opportunities and 'take-away' points from our investors who are actively investing in space projects.
INVESTIGATING SUCCESSFUL ORGANISATIONAL STRUCTURES	
08:40	CASE STUDY 1: Getting Involved- The emergence of a national space agency <ul style="list-style-type: none"> • Meeting the criteria that is required to in order to participate in space exploration and development • Supporting companies and organisations in technology transfer activities • Exploring viable markets, competitive advantages and sustainable returns on capital specific to a nation • Understanding the role of international collaboration Jan Kolar, Director, Czech Space Office
09:05	CASE STUDY 2: Promoting collaboration between public and private bodies <ul style="list-style-type: none"> • Business & industry trends • The Isle of Man's contribution to both the UK economy & UK space industry • How did the public private sector collaboration start? • What are the Isle of Man's benefits? Tim Craine, Former Head of Space Commerce, The Isle of Man Government
09:30	PRESENTATION: An update from the German Aerospace Centre (DLR): Strategies, initiatives and developments <ul style="list-style-type: none"> • Commercialisation of space transport • Commercial satellite systems and satellite data • Technology transfer: How to exploit 'space know how' on earth Gerd Gruppe, Member of the Board, Space Administration, German Aerospace Centre (DLR)
09:50	CASE STUDY 3: Changing structures - PAS's experience moving from a research to industry approach <ul style="list-style-type: none"> • Considerations when aligning structural values with those of the European Space Agency • Advice for supporting companies and organisations making this transition • Identifying the opportunities for development in alternate markets such as manufacturing and export Marek Banaszekiewicz, Director General, CBK PAN
THE LEGAL ISSUES SURROUNDING COMMERCIAL ACTIVITY IN SPACE	
10:15	PRESENTATION: Managing conflict- The laws and regulations of commercial participation in space <ul style="list-style-type: none"> • Understanding the existing regulations and how to comply • Translating policy into regulations and legal instruments • Exploring issues surrounding security and access in the commercial use of space • Looking at future legal frameworks Sa'id Mosteshar, Director, London Institute of Space Policy and Law
10:40	PRESENTATION: Regulation of small satellites under international and national space law <ul style="list-style-type: none"> • Benefits and concerns of small satellites • International space law applicable to small satellites • Tendencies in national regulation of small satellites, with a focus on Europe • Considerations in the UN and ITU • Prospects for adequate regulation of small satellites Tanja Masson-Zwaan, President, International Institute of Space Law (IISL), Deputy Director, International Institute of Air and Space Law, Leiden Law School
11:10	Morning break (30 minutes)
11:40	PRESENTATION: International and national regulations <ul style="list-style-type: none"> • International Regulations (ITU and regional bodies: EU/CEPT, CITEL, APT, ATU, RCC) • National Regulations (UK, US and others) • Case Studies on successful and unsuccessful cases Tony Azzarelli, Head of Space and Science Services, Spectrum Policy Group, Ofcom



DAY ONE TUESDAY 29TH OCTOBER 2013

(CONTINUED)

12:05	<p>PANEL DISCUSSION: How can space insurance drive benefit in the next 10 years?</p> <p>This session will address what might happen with space insurance in the future; with sound knowledge of how it works now and ways it has been used conventionally – how will future use and application change in line with industry development and increased commercial activity?</p> <p>Marco Ramadoro, CEO, SATEC David Wade, Space Underwriter, Atrium Space Insurance Consortium Luca Rossetini, CEO, D-Orbit Barry Matsumori, Senior Vice President - Commercial Sales & Business Development, SpaceX</p>
SPACE ECONOMY, INVESTMENT AND FINANCING	
12:20	<p>PRESENTATION: Exploring the economic benefits of space travel and development to society</p> <p><i>One of the biggest debates centres around the vast amount of money spent on space research and exploration in relation to the returns and economic benefits that it will provide for Earth. In some cases, in order to secure Governmental support, commercial companies must demonstrate their contribution to economic growth. This session aims to address the key questions to justify spend by both public and private organisations including:</i></p> <ul style="list-style-type: none"> • How can space exploration and commercial development contribute to economic growth? • What are the sources of economic return and who will this return benefit? • What is the long term economic value of space exploration and is spend justified in relation to economic growth? • What areas of expertise are required to utilise space to its full potential? <p>Dan Lewis, Chief Executive, Economic Policy Centre</p>
12:40	<p>PRESENTATION: How Europe can create the best regulatory and socio-economic conditions to spur the growth of European commercial space industries</p> <p>Andrew Nelson, COO, XCOR Aerospace</p>
13:05	<p>PRESENTATION: Creating a European space investment network</p> <ul style="list-style-type: none"> • An overview of the opportunities for angel investment in different regions • Understanding who the angel investors are and what they look for when investing in the space sector • Foreseeing investment potential in the commercial space sector in the next 1, 3 and 5 year periods • Identifying the milestones which determine success and the importance of exit <p>Chad Anderson, Managing Director of European Operations, Space Angels Network</p>
13:25	<p>PANEL DISCUSSION: Investment in space from an investor's perspective</p> <p>Per Wimmer, CEO, Wimmer Space Joerg Kreisel, CEO, JKIC Moderator: Chad Anderson, Managing Director of European Operations, Space Angels Network</p>
13:50	Lunch break (60 minutes)
SECTION 02	<p>SATELLITES AND INFRASTRUCTURE</p> <p>This section of the agenda looks into real-time prospects of using space satellites, and will analyse the competitive environment of the commercial satellite market. Presentations will cover what the opportunities are for commercial communication satellites in the next 10-15 year period, what further applications are required for satellite development and case studies of companies using space satellites and infrastructure for observation, navigation and communication functions across a range of business. Speakers will identify the most commercial uses of satellites, highlight examples of successful integration with existing business models, and provide insights into the increase of opportunities and ROI for companies working with space infrastructure.</p>
	<p>15:00 PRESENTATION: Space applications; a driver for growth</p> <ul style="list-style-type: none"> • Exploring UK's excellent expertise in the upstream and downstream space market • Government investment: assessing how this has produced a favourable economic environment for growth of the space market • Applications development and commercialisation – identifying how they will deliver this growth • Understanding the important of space infrastructure for the delivery of the downstream market and driving investment for space infrastructure <div>CASE STUDY presented by DMCii</div> <p>Dr Matt Perkins, FEng, CEO, Surrey Satellite Technology Limited</p>
	<p>15:20 PRESENTATION: Supporting the development of space-based applications</p> <ul style="list-style-type: none"> • ESA's applications development programmes • Bringing space down to earth by delivering practical solutions in a wide range of markets <div>CASE STUDY of an ESA co-funded project that addresses a commercial market through an innovative use of space-based systems</div> <p>Alan Brunstrom, Head of Applications Business Office, European Space Agency (ESA)</p>



DAY ONE TUESDAY 29TH OCTOBER 2013

(CONTINUED)

15:40	<p>PRESENTATION: Novel public-private partnership funding models in developing space infrastructure to facilitate new space-based applications and services</p> <div> <p>CASE STUDY EXAMPLES</p> <ul style="list-style-type: none"> • The Hylas satellite; intrinsic to launching Avanti Communications Plc as a new broadband service provider and satellite operator • The AlphaSat satellite; the largest and most complex civil communications satellite ever launched for UK mobile communications operator Inmarsat </div> <p>Patrick Wood, Chief Operating Officer, Astrium Satellites</p>
16:00	<p>PRESENTATION: The rise of small satellites over the past 10 years, and a look at what the present and future hold in terms of their applications</p> <ul style="list-style-type: none"> • Current means of access to space for small satellites, and the importance of low cost, dedicated launch vehicles to provide primary payload manifesting to satellites under 100 kg • Economics of the small satellite market, major drivers, how we see market dynamics changing based on the introduction of affordable, dedicated launch for small satellites, and how this fits into the greater picture of the commercial space-based economic ecosystem <p>AJ Piplica, Chief Operating Officer, Generation Orbit Launch Services Inc.</p>
16:20	<p>PRESENTATION: Using satellites to facilitate security</p> <ul style="list-style-type: none"> • Developing telecommunications infrastructure, time-delay deploying real-time systems to install good connections and systems whilst reducing costs • Using broadband to fuel surveillance systems • Security and reliability of data transfer • Enabling CCTV in any location to protect critical infrastructure
16:40	Afternoon Break (30 minutes)
17:10	<p>PRESENTATION: The future of commercial space transportation</p> <p><i>With the increased rapid growth of the space sector in the past decade, SpaceX will give an insight into the future direction of commercial space transportation in relation to the following:</i></p> <ul style="list-style-type: none"> • Design and development of commercial crew vehicles • Testing of vehicles to ensure that they are fit for launch • Preparation for full-scale flight-like pad abort and in-flight abort • Recycling materials for multi-purpose use to reduce costs and maximise efficiency in transportation of passengers and utilities <p>Barry Matsumori, Senior Vice President - Commercial Sales & Business Development, SpaceX</p>
17:30	Closing Comments from Chairman
17:40	Drinks Reception
18:45	Gala Dinner





DAY TWO WEDNESDAY 30TH OCTOBER 2013

08:30	Registration and coffee
08:50	Opening and Welcome from Chairman
SECTION 03	SPACE TECHNOLOGY AND APPLICATIONS <p>The technology that is helping to facilitate commerce in space is developing substantially. Users of space technology include the governmental, security, commercial, defence and scientific sectors. This part of the agenda will bring to light some of the leading technical capabilities that allow you and your business to maximise the use of space satellites and services. Our speaking faculty will be discussing capacities and payloads, the latest software systems and applications that enable effective data acquisition, processing, distributing and transmitting back to Earth. Globally recognised companies will address applications, high-resolution radar, optical imagery and monitoring functions so you can gauge how to develop your business strategy to include space-related technology that will contribute to optimising results and ROI.</p>
09:00	PRESENTATION: Commercialisation of space technologies and the evolution of commercial space markets <ul style="list-style-type: none"> • Lessons Learnt from the commercialisation of space technologies • Market evolution and space applications • Developing common projects for traditional space industries and NewSpace companies to collaborate • Measuring the direct and indirect economic benefits of space technology to the wider economy • Analysing commercial space technology market evolution impact across different geographies to determine the effect of growth in one location Stella Tkatchova, Author, Space-Based Technologies and Commercialized Development
09:30	PRESENTATION: An update from Italian Space Agency: Space commerce: ASI's view <ul style="list-style-type: none"> • The future of nano, micro, small and nano satellites • Civil applications of high resolution space radar and optical imagery • Examples of ASI's participation in relation to private commercial companies Nazzareno Mandolesi, Director, Italian Space Agency
10:00	PRESENTATION: ILS Proton: Enabling Innovative Technology for Global Satellite Operators <ul style="list-style-type: none"> • Compatibility with all major spacecraft platforms and mission optimization • Dedicated or dual capability • Accommodating demand for heavier, larger volume satellites, lighter stackable satellites and electric propulsion Karen Monaghan, Director of Communications, ILS
10:30	Morning break (30 minutes)
11:00	CASE STUDY: The role of TSB in supporting UK companies <i>This session will take a look at the UK market in particular and showcase examples of the role of the Technology Strategy Board in supporting UK companies who are looking to branch out into the space sector. It will highlight areas of growth defining up and coming technologies and the considerations before entering a rapidly growing industry.</i> Tim Just, Head of Space, Technology Strategy Board
11:30	PRESENTATION: The European Data Relay Satellite (EDRS) as an enabler to new applications development and business opportunities <ul style="list-style-type: none"> • How real-time data relay from space will revolutionize Earth Observation and create new markets and applications • Laser communication in space, first commercial application of a cutting edge technology • A successful Public Private Partnership, opportunities for international cooperation Martin Agnew, EDRS Service Design Authority & Head of Service Creation, Astrium Services
12.00	CASE STUDY: Mars One - Establishing the foundation of a permanent settlement on Mars <ul style="list-style-type: none"> • Mars One's vision for human settlement on Mars • An update of the status of the project, progress and applicants • Using existing technologies to create the settlement and increase cost-effectiveness • Commercialising the endeavour by involving the whole world as a live, televised audience Bas Lansdorp, Founder & CEO, Mars One
12:30	Lunch Break (60 minutes)
SECTION 04	HUMAN SPACEFLIGHT AND INFRASTRUCTURE <p>Discussions will focus on the practicalities of the industry, examining sub-orbital flights, health and safety measures for space tourists to mitigate risks, and examine current projects to determine what amenities are needed develop further and to facilitate space flights for tourists sooner. Presentations will address the infrastructure required to support this growing market, safety measures to minimise and mitigate risks, with debate around the challenges of insuring a high-net industry and the direction of market growth. Space flights have been a centre talking point for those interested and active in the industry; we'll be talking about everything from re-useable material to build vehicles, to testing, quality control, and launch pads to keep you informed of how the reality of launching tourists into space is developing.</p>
13:30	Introduction to the space tourism industry <i>This session will give an introduction into the space tourism industry highlighting trends, growth, market direction and capabilities needed to drive the industry forward. It will discuss the following questions:</i> <ul style="list-style-type: none"> • What does a millionaire space tourist have to do with the future of the nation, the human race and the life of Earth? • Why is this possibly the most important human activity of all and why is it happening now? • Why is it worth fighting for? Rick Tumlinson, Chairman of the board, Deep Space Industries



DAY TWO WEDNESDAY 30TH OCTOBER 2013 (CONTINUED)

14:00	<p>PRESENTATION: Introducing safety measures for sub-orbital spaceflight and preparing tourists for space travel</p> <ul style="list-style-type: none"> • Safe certification of sub-orbital spaceflights • Developing a training programme to ensure tourists are fit and equipped for space travel • Introducing a viable testing procedure for engines and equipment • The role that commercial industry can play to space debris <p>Tommaso Sgobba, President, International Association for the Advancement of Space Safety</p>
14:30	<p>CASE STUDY: Combining research and commercialisation in the space sector</p> <ul style="list-style-type: none"> • Opening space to everyone • Experiencing parabolic and sub-orbital spaceflight in the microgravity centre • Providing the opportunity for commercialisation for students and scientists • Exploring space tourism from a scientific perspective <p>Carlo Viberti, Founder and President, COSMO Spaceland</p>
15:00	Afternoon Break (30 minutes)
15:30	<p>OPEN-FLOOR DISCUSSION ON SPACEPORTS: Understanding the role of the private sector in funding, constructing and developing a nation's spaceport</p> <p>Insights from: Karin Nilsdotter, CEO, Spaceport Sweden</p> <ul style="list-style-type: none"> • The need for a regulatory framework to implement a feasible cost programme prior to developing space infrastructure • Investigating the upstream and downstream factors and how the costs of implementing these can be reduced • Reinforcing the high cost of infrastructure through commercialisation of the spaceport and allowing access to the wider public to increase spend and revenue <p>Insights from: Stephen McKeever, Secretary of Science and Technology, State of Oklahoma, Vice President for Research and Technology Transfer, Oklahoma State University</p> <ul style="list-style-type: none"> • Background - Status of Spaceports in the US; Federal Aviation Administration Office of Commercial Space Transportation (AST); licensing • Oklahoma's spaceflight corridor and range development • CONOPS – Support satellite deployment, space tourism, research and development flight test, re-entry landing site, atmospheric research, UAS operations • Launch concepts and point-to-point <p>Open floor discussion with Karin Nilsdotter and Stephen McKeever</p> <ul style="list-style-type: none"> • Operational support for Spaceports: operating regulations and licensing requirements • Human factors – space flight participants and pilots - current recommendations • Spaceport CONOPS (concepts of operations) – including space tourism, satellite deployment, research and development, flight testing, education. • Launch vehicle concepts – vertical applications, horizontal takeoff - landing, air launch - horizontal landing • Point to point space sub orbital space flight concepts – primary example /passenger service and freight
16:00	<p>PRESENTATION: Support for space tourism companies</p> <p><i>This session will take a look at support for companies looking to operate in the commercial spaceflight industry. The Commercial Spaceflight Federation is a private industry group formed to promote the development of commercial human spaceflight, pursue higher levels of safety and share best practices and expertise throughout the industry. It will refer to the following:</i></p> <ul style="list-style-type: none"> • Regulations • Spaceport Infrastructure • Suborbital science <p>Michael Lopez-Algeria, President, Commercial Spaceflight Federation</p>
16:30	<p>CASE STUDY: Astrobotic: creating an affordable delivery service to the Moon</p> <ul style="list-style-type: none"> • Exploring the cost of space access to enable vast new industries • The role of new industry in developing resources and infrastructure • Using water as the first resource to support life, store power and fuel rockets • Taking rovers, lander and other payload to the Moon in 2015's mission <p>John Thornton, President, Astrobotic</p>
17:00	Closing Comments from the Chairman
17:10	Closing Comments from Pooja Samani, Director, International Research Networks
17:15	End of International Space Commerce 2013 Summit

