UK Space Conference 2011
'The New Space Economy'
Monday 4th & Tuesday 5th July 2011

Monday 4th July 2011

Time	Location	Session		
09:00	Rootes Building	**Registration**	Exhibition and Networking	SpaceTech Conference – Science Block
10:20	Arts Centre Lecture Theatre	**Welcome** Conference Chair		
10:30	Arts Centre Lecture Theatre	**Space Policy** Moderator: Dr Phillip Lee MP, Executive Vice Chair Education, Skills & Inspiration, Parliamentary Space Committee Rt Hon David Willetts MP, Minister of State for Universities and Science Jean-Jacques Dordain, Director General, European Space Agency Marco Malacarne, Acting Director for Space Security and GMES, European Commission Andy Green, CEO, Logica		
12:00	**Lunch**			
13:30	Lecture Theatre Studio Conference Room Cinema	**Parallel Sessions** • Science & Exploration • CubeSat • Consumer Applications • New Horizons		
15:00	**Coffee break**			
15:30	Lecture Theatre Studio Conference Room Cinema	**Parallel Sessions continued** • Science & Exploration • CubeSat • Consumer Applications • New Horizons		
16:40	Arts Centre Lecture Theatre	**UK Space Agency update** Moderator: John Higgins CBE, Director General, Intellect David Williams, Chief Executive, UK Space Agency Emma Lord, Director of Policy and Operations, UK Space Agency Dr David Parker, Director of Technology and Scientific Programmes, UK Space Agency Ann Sta, Director of Growth, Applications and EU Programmes, UK Space Agency		
17:40	**Event Close**			

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Parallel Session – 'Science and Exploration'

Monday 4th July 2011

Time	Location	Session	
13:30	Arts Centre Lecture Theatre	**Science is Mandatory and Exploration is Optional: The Implications** Sue Horne, Space Exploration Programme Manager, UK Space Agency	Exhibition and Networking
13:50		**Space Science and Exploration – A UK Industrial Perspective** Dr Rob Scott, QinetiQ and Chair of the UKspace Space Science and Exploration Committee	
14:10		**Exploring and Exploiting Asteroids with Laser Ablation Paper** Alison Gibbings, University of Strathclyde	
14:20		**Panel Session**	
15:00	**Coffee Break**		
15:30	Arts Centre Lecture Theatre	**Space Nuclear Power** Tom Rice, Business Development Manager, National Nuclear Laboratories	
15:50		**Astronomy and Physics from space: Future possibilities** Professor Mike Cruise, Professor of Astrophysics and Space Research, University of Birmingham	
16:10		**Future Solar System Missions** David Southwood, Imperial College	
16:30	**Close of Parallel Sessions**		
16:40	**UK Space Agency Update**		

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Parallel Session – 'CubeSat'

Monday 4th July 2011

Time	Location	Session	
13:30	Arts Centre Studio	**UKube Programme and UKube-1 Mission** Chris Castelli, Head of the Space Science Group, UK Space Agency Dr Ronan Wall, Astrium Ltd and Programme Manager, UKube-1	Exhibition and Networking
13:40		**Platform - Clyde Space** Steve Greenland, UKube-1 Technical Lead, Clyde Space Ltd James Bowman, Aerospace and Defence Business Development, Steepest Ascent Ltd	
14:05		**TOPCAT - Ionospheric Science with GPS** Talini Pinto Jayawardena, Research Student, University of Bath	
14:15		**C3D - The Compact CMOS Camera Demonstrator** Prof Andrew Holland, Director of the CEI, Open University	
14:25		**My Pocket Qub – student spacecraft on a board** Michael Johnson, Director of Space Projects, UKSEDS	
14:35		**Janus - Generating random numbers from the cosmos** Adam Taylor, Principal Engineer, Astrium Ltd	
14:45		**FUNcube on UKube-1- Space to the classroom** Graham Shirville, AMSAT UK and Technical Manager, FUNcube	
14:55 – 15:30	Break		
15:30	Arts Centre Studio	**What do you want in a national nanosat programme?** Chris Castelli, Head of the Space Science Group, UK Space Agency Dr Ronan Wall, Astrium Ltd and Programme Manager, UKube-1 Dr Chris Bridges, Research Fellow, Surrey Space Centre	
15:50		**National Nanosat Programme - Brainstorming activity**	
16:20		**Summary of ideas**	
16:30	**Close of Parallel Session**		

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16:40	**UK Space Agency Update**	

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Parallel Session – 'Consumer Applications'

Monday 4th July 2011

Time	Location	Session	
13:30	Arts Centre Conference Room	**Introduction from Chair**	Exhibition and Networking
13:40		**A consumer perspective of satellite deliver broadband in Scotland** Dr David Robson, Director, Fell Systems Ltd	
14:00		**Satellite-based location services applied to Motor Insurance** Andrea Natali, Head of Sales UK, Octo Telematics	
14:20		**Benefits of satellite technology to Digital Cinema** Mike Walsh, Technology Specialist - Product & Technology Group, Arqiva	
14:40		**Satellite delivered Broadband services on trains** Philip Haines, 21 Net	
15:00 – 15:30	**Coffee Break**		
15:30	Arts Centre Conference Room	**Introduction from Chair**	
15:35		**ESA funding for Applications** Alan Brunstrom, Applications Ambassador, European Space Agency	
15:40		**EU Framework funding – Space and Galileo** Robert Lowson, UK National Contact Point for FP7 Space, Technology Strategy Board	
15:45		**National Funding – direct vs. indirect sector funding** Tim Just, Lead Technologist for Space and Satellite Navigation, Technology Strategy Board	
15:50		**A View from Industry**	
16:00		**Panel Discussion**	
16:30	**Close of Parallel Sessions**		
16:40	**UK Space Agency Update**		

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PARALLEL SESSION – 'NEW HORIZONS'

MONDAY 4TH JULY 2011

TIME	LOCATION	SESSION	
13:30	Arts Centre Cinema	**INTRODUCTION FROM CHAIR** Sir Keith O'Nions, Rector of Imperial College and Chair of National Space Technology Strategy Group	EXHIBITION AND NETWORKING
		SWIFT BROADBAND FOR SATELLITES - AN INNOVATION IN SERVICE, TECHNOLOGY AND FUNDING Rob Goldsmith, Business Development Director, COM DEV Europe Ltd Eyal Trachtman, Head of New Programmes, Inmarsat	
		UK COLLABORATION TO DEVELOP THE NEXT GENERATION OF SATCOMS TECHNOLOGY Peter Aspden, UK Marketing Manager, Telecommunications Satellites, EADS Astrium	
		MATHEMATICAL INNOVATION IN SPACE - LEVERAGING DEFENCE RESEARCH Dr Hannu Rajaniemi, Technical Director, Think Tank Maths Ltd	
		ADVANCED SPACE CONCEPTS Colin McInnes, Director, Advanced Space Concepts Laboratory, University of Strathclyde	
		POCKET SPACECRAFT - THE START OF PERSONAL SPACE AGE? Michael Johnson, CEO, JA	
15:00 – 15:30	**COFFEE BREAK**		
15:30	Arts Centre Cinema	**A NEW COMMERCIAL PERSPECTIVE** Miranda Mills, Sales and Marketing Director and UK National Director for Earth Observation, Navigation and Science, Astrium Ltd	
		OPENING SPACE TO EMERGING COUNTRIES : PROSPECTS AND CHALLENGES Adrien Doucet, Research Student, Cranfield University	
		OPEN INNOVATION Barbara Ghinelli, Executive Chair, International Space Innovation Centre Mark Hampson, Non Executive Director, International Space Innovation Centre	
		THE POTENTIAL FOR A SPACE TECHNOLOGY AND INNOVATION CENTRE Michael Lawrence, Head of Special Projects, Technology Strategy Board	
		PANEL SESSION Sir Keith O'Nions, Chair of National Space Technology Strategy Group Michael Lawrence, Head of Special Projects, Technology Strategy Board Barbara Ghinelli, Executive Chair, International Space Innovation Centre Miranda Mills, Sales and Marketing Director and UK National Director for	

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		Earth Observation, Navigation and Science, Astrium Ltd Mark Hampson, Non Executive Director, International Space Innovation Centre Steve Stavrinidis, Head of Mechanical Engineering Department, European Space Agency	
16:30	**CLOSE OF PARALLEL SESSIONS**		

TUESDAY 5TH JULY 2011

TIME	LOCATION	SESSION		
08:00	Rootes Building	**REGISTRATION**	**EXHIBITION AND NETWORKING**	**ESERO CONFERENCE – LIBRARY & SCIENCE BLOCK**
09:00	Arts Centre Lecture Theatre	Welcome from Conference Chair		
09:10	Arts Centre Lecture Theatre	**INNOVATION – SCIENCE, BUSINESS, TECHNOLOGY** Moderator: Jonathan Amos, Science correspondent, BBC Iain Gray, Chief Executive, Technology Strategy Board Prof Sir Martin Sweeting OBE, Executive Chairman, Surrey Satellite Technology Ltd Prof Mark McCaughrean, Head, Research & Scientific Support Department, European Space Agency Alan Bond, Managing Director, Reaction Engines Ltd Zahaan Bharmal, Head of Marketing Operations -Europe, Middle East and Africa, Google		
10:30- 11:00	**COFFEE BREAK**			
11:00	Lecture Theatre Conference Room Studio Social Sciences 0.13 Ensemble Cinema	**PARALLEL SESSIONS** • Space Business • Environment • Security • Students • History • Access to Space		
12:30 – 13:50	**LUNCH**			
13:50	Lecture Theatre Conference Room Studio Social Sciences 0.13 Ensemble Cinema	**PARALLEL SESSIONS CONTINUED** • Space Business • Environment • Security • Students • History • Access to Space		
15:00	Arts Centre Lecture Theatre	**VISION FOR THE FUTURE (ECONOMIC GROWTH)** Moderator: Richard Hollingham, Science Journalist, BBC Colin Paynter, CEO, Astrium Ltd		

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		Perry Melton, COO, Inmarsat Craig Clark, CEO, Clyde Space George Whitesides, CEO and President, Virgin Galactic, LLC Prof John Zarnecki, Professor of Space Science, The Open University Prof Sir Adrian Smith, Director General Knowledge and Innovation, Department of Business Innovation and Skills		
16:30	**EVENT CLOSE**			

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PARALLEL SESSION – 'THE BUSINESS OF SPACE'

TUESDAY 5TH JULY 2011

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Time	Location	Session	
11:00	Arts Centre Lecture Theatre	**Introduction from Chairman** Richard Brook, Consultant, Surrey Satellite Technology Ltd	Exhibition and Networking
11:05		**Metrics and Markets: The backdrop to the business of space** Mike Dillon, Managing Director, Newlands Ventures Ltd • Market perspectives • Economic metrics • Objectives and aspirations	
11:20		**Business models and delivery: Developing growth businesses** **Upstream:** Matt Perkins, Managing Director, Surrey Satellite Technology Ltd • Primary areas of business, innovative business models and routes to growth • Importance of technology and innovation • Business development partnerships • Case study: Galileo **Downstream:** Pat McDougal, VP of Strategy and Business Development, Inmarsat • Opportunities for service providers • Financing growth, including risk, ROI and innovative business models • Importance of supply chain and end user partnerships • Regulatory issues for UK (pros/cons and competitive position)	
12:00		**Finance for Growth** **Government perspectives: Economic Impact** Vicky Pryce, Managing Director, FTI Consulting (previously DG Economics and Chief Economic Advisor to BIS) • Perspective on Government's view about wealth creation in general and space in particular • How government measures contribution to the economy • Criteria for public sector investment and changing relationships with business **City perspectives: Return on Investment** Sean Watherston, Head of Investor Relations and Corporate Finance, Avanti Communications Group plc • City views on potential of space and the important metrics for investment • The importance of institutional support • Issues that industry needs to consider in obtaining finance for new ventures	
12:30 – 13:50	**Lunch**		

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13:50	Arts Centre Lecture Theatre	**SUMMARY OF MORNING SESSION** Richard Brook, Consultant, Surrey Satellite Technology Ltd	

13:55	Arts Centre Lecture Theatre	**NEW DIMENSIONS – RADICAL DEVELOPMENTS AND THEIR IMPACT ON FUTURE BUSINESS** • Private enterprise access to space and its consequences - George Whitesides, CEO and President, Virgin Galactic, LLC • Breaking into new markets - Professor Mark Maslin, Executive Director, Carbon Auditors Ltd • STRaND-1 the World's first SmartPhone Nanosatellite - Dr Chris Bridges, Research Fellow, Surrey Space Centre	EXHIBITION AND NETWORKING
14:10		**PANEL DISCUSSION – INVESTING IN SPACE** The risks and rewards of investing in space; the changing economics of space, overcoming barriers to investment; industry as a business instigator, developer and investor; government as user, customer, partner. Richard Peckham, Business Development Director UK, Astrium Ltd Matt Perkins, Managing Director, Surrey Satellite Technology Ltd Pat McDougal, VP of Strategy and Business Development, Inmarsat Stuart Martin, Logica Vicky Pryce, Managing Director, FTI Consulting Sean Watherston, Head of Investor Relations and Corporate Finance, Avanti Communications Group plc George Whitesides, CEO and President, Virgin Galactic, LLC Magali Vaissiere, European Space Agency UKSA (David Williams - invited) Mike Dillon, Managing Director, Newlands Ventures Ltd Richard Brook, Consultant, Surrey Satellite Technology Ltd **QUESTIONS FOR THE PANEL** • What will the competitive landscape look like in 3-5 years? • What does upstream need from government? How it can contribute to a successful UK Space Agency? • Downstream opportunities, challenges and relationships with the UK Space Agency	
14:50	**CLOSE OF PARALLEL SESSIONS**		
15:00	**VISION FOR THE FUTURE (ECONOMIC GROWTH)**		

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TUESDAY 5TH JULY 2011

TIME	LOCATION	SESSION	
Chair: Dr Samantha Lavender, RSPSoc / ARGANS Ltd and Co-Chair: Derek Greer, VEGA Space Ltd			
11:00	Arts Centre Conference Room	**KEYNOTE – THE LINK BETWEEN SPACE AND THE ENVIRONMENT** Dr Stephen Briggs, Head of Programme Planning and Coordination Service, Directorate of Earth Observation Programmes, European Space Agency	EXHIBITION AND NETWORKING
11:10		**EO SERVICES FOR GOVERNMENT - LEVERING EFFICIENT PUBLIC SECTOR PROCUREMENT TO STIMULATE UK GROWTH IN AN EXPANDING INTERNATIONAL MARKET SPACE** Ruth Boumphrey, Head of Earth Observation, UK Space Agency	
11:30		**THE EO HUB - A NATIONAL FACILITY FOR OPERATIONAL PROGRAMMES** Ian Raper, Earth Observation Hub Manager, International Space Innovation Centre	
11:40		**CEMS - A PROPOSED FACILITY FOR CLIMATE AND ENVIRONMENTAL MONITORING FROM SPACE** Andrew Stroomer, UK Managing Director, Astrium GEO-Information Services	
12:00		**PROTECTING OUR ENVIRONMENT THROUGH RAIN FOREST MONITORING - AN INDONESIAN PERSPECTIVE** Ian Encke, Business Development, Astrium Satellites	
12:20		**FUTURE, ADVANCED EO SYSTEMS AND TECHNOLOGIES** Dr Malcolm Macdonald, Associate Director, Advanced Space Concepts Laboratory, University of Strathclyde	

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12:30-13:50	**LUNCH**		**EXHIBITION AND NETWORKING**
Chair Derek Greer, VEGA Space Ltd, and Co-Chair: Dr Samantha Lavender, RSPSoc / ARGANS Ltd			
13:50	Arts Centre Conference Room	**OPERATIONAL EO MISSIONS IN SUPPORT OF ENVIRONMENTAL SCIENCE** Prof Heiko Balzer, Head of Department of Geography, University of Leicester	
14:10		**MEASURING OCEANIC CARBON FROM SPACE** Dr Bob Brewin, Research Scientist, Plymouth Marine Laboratory	
14:20		**ACHIEVING A ZERO CARBON WORLD THROUGH CANOPY - A NEW SYSTEM FOR MONITORING GLOBAL LAND CARBON** Prof. Mark Maslin, Head of the Department of Geography / Co-Director of the UCL Environment Institute / Executive Director of Carbon Auditors Ltd, University College London	
14:40		**LINKING NCEO WITH BUSINESS** Andy Shaw, Director - Knowledge Exchange, National Centre for Earth Observation	
14:50	**CLOSE OF PARALLEL SESSION**		
15:00	**VISION FOR THE FUTURE (ECONOMIC GROWTH)**		

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TUESDAY 5TH JULY 2011

TIME	LOCATION	SESSION	
CHAIR: NICK SHAVE, LOGICA & UKSPACE SECURITY & DEFENCE CHAIR			EXHIBITION AND NETWORKING
11:00	Arts Centre Studio	**OUR DEPENDENCE ON SPACE** Chris Saunders, Senior Systems Engineer, QinetiQ	
11:20		**THE UK MOD AS A USER OF SPACE** Wg Cdr Gerry Doyle, SO1 Air 2, Development Concepts and Doctrine Centre, Shirvenham	
11:40		**CURRENT SPACE SECURITY SERVICE EXAMPLE: THE HITS PROGRAMME FOR THE CABINET OFFICE** Rick Greenwood, Technical Director, Paradigm Services	
12:00		**FUTURE SPACE SECURITY SERVICE EXAMPLE: THE GALILEO PUBLIC REGULATED SERVICE (PRS) AS A SERVICE ENABLER** Gordon Black, Space Security Manager, Logica	
12:20		**SUMMARY AND QUESTIONS**	
12:30 – 13:50	**LUNCH**		
13:50	Arts Centre Studio	**THE UK NATIONAL SPACE SECURITY POLICY (NSSP) UPDATE** Wg Cdr Mark Presley, National Space Security Policy Lead , Cabinet Office, National Security Secretariat	
14:10		**EUROPEAN SPACE AGENCY SPACE SECURITY PROGRAMMES** Ann Sta, Director Growth, Applications and EU Programmes, UK Space Agency	
14:30		**THE HARWELL SECURITY & RESILIENCE UNIT** John Davey, Facility Manager ISIC SRU, Logica	
14:50		**SUMMARY AND QUESTIONS**	
	CLOSE OF PARALLEL SESSIONS		
15:00	**VISION FOR THE FUTURE (ECONOMIC GROWTH)**		

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PARALLEL SESSION – 'STUDENT'

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TUESDAY 5TH JULY 2011

TIME	LOCATION	SESSION	
11:00	Social Sciences 0.13	**INTRODUCTION FROM CHAIRMAN** Graeme Taylor, Chair, UKSEDS	EXHIBITION AND NETWORKING
11:10		**LAUNCHING THE NEXT GENERATION: INSPIRING WORDS** David Southwood, Imperial College	
11:30		**UKSEDS PROJECT:** **MYPOCKETQUB AND OPEN SPACE 365 LAUNCH AND POLECATS** Nancy Hine, Student, Open University/UKSEDS/myPocketQub442 PoleCATS UKSEDS	
12:00		**EUROPEAN STUDENT MOON ORBITER (ESMO)** Ben Schwarz, University of Southampton Adam White, University of Southampton Dr William E Crofts, University of Warwick	
12:30 – 13:50	**LUNCH**		
13:50	Social Sciences 0.13	**STUDENT PRESENTATION** Toivo Hartikainen, Student, Cranfield University Radim Badsi, Student, Cranfield University Baptiste Soyer, Student, Cranfield University	
14:05		**STUDENT PRESNTATION** Craig Pitcher, Student, University of Southampton	
14:25		**OPEN DISCUSSION FORUM** Nick Fishwick, Spacecraft Thermal Engineer, EADS Astrium Ed Trollope, Systems Engineer, VEGA Space GmbH Matthew Angling, Qinetiq and Senior Research Fellow, the Poynting Institute, University of Birmingham	
14:50	**CLOSE OF PARALLEL SESSIONS**		
15:00	**VISION FOR THE FUTURE (ECONOMIC GROWTH)**		

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PARALLEL SESSION – 'HISTORY'

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Tuesday 5th July 2011

Time	Location	Session	
11:00	Arts Centre Ensemble Room	**Introduction from Chairman** Dr John Becklake, Historian, BIS History Committee	Exhibition and Networking
11:05		**Overview of Operation Backfire** Dr John Becklake, Historian, BIS History Committee	
11:15		**The Von Braun I knew** Reg Turnill	
11:35		**Black Arrow – Programme and Politics** Doug Millard, Senior Curator, ICT & Space Technology, Science Museum	
11:55		**Black Arrow Propulsion** John Scott	
12:15		**Discussion Period**	
12:30 – 13:50	**Lunch**		
13:50	Arts Centre Ensemble Room	**Introduction from Chairman** Doug Millard, Senior Curator, ICT & Space Technology, Science Museum	
13:55		**The UK X-Satellites** Dr Gordon Keyte et al	
14:15		**LONG LIVE PROSPERO** Dale Potts, Roger Duthie, Zoe Versey, Phil Guttridge, Barry Hancock, Alan Smith	
14:35		**Arthur Valentine Cleaver – A biography** Dr John Becklake, Historian, BIS History Committee	
14:50	**Close of Parallel Sessions**		
15:00	**Vision for the Future (Economic Growth)**		

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PARALLEL SESSION – 'ACCESS TO SPACE'

TUESDAY 5TH JULY 2011

TIME	LOCATION	SESSION	
HUMAN SPACEFLIGHT AND MICROGRAVITY RESEARCH			EXHIBITION AND NETWORKING
11:00	Arts Centre Cinema	**UNIVERSITY COLLEGE LONDON CENTRE FOR SPACE MEDICINE** Prof Alan Smith, Centre for Space Medicine, University College London	
11:18		**AEROSPACE & EXTREME ENVIRONMENT ADAPTATION GROUP** Dr David Green, Kings College, London	
11:36		**MICROBIOLOGY IN SPACE** Charles Cockell, Open University	
11:54		**INTERNATIONAL SPACE EXPLORATION COORDINATION GROUP** Jeremy Curtis, Head of Education, UK Space Agency	
12:12		**THE SCIENTIFIC CASE FOR RENEWED HUMAN EXPLORATION OF THE MOON** Ian Crawford, Department of Earth and Planetary Sciences, BirkBeck College	
12:30 – 13:50	**LUNCH**		
SPACE INFRASTRUCTURE			
13:50	Arts Centre Cinema	**TESTING AIRBREATHING ROCKETS** James Macfarlane, Managing Director, Airborne Engineering Limited	
14:05		**THE ASCENDER SPACEPLANE AS A PLATFORM FOR SUBORBITAL SCIENCE EXPERIMENTS** Dave Ashford, Director, Bristol Spaceplanes	
14:20		**NEXT GENERATION LAUNCHERS, AN IMPORTANT STEPPING STONE FOR THE NEW SPACE ECONOMY** Ulrich Walach	
14:35		**THE ROLE OF GREEN PROPELLANTS FOR FUTURE SPACECRAFT** Prof Antony Musker, Managing Director, DELTACAT Limited/University of Southampton	
14:50	**CLOSE OF PARALLEL SESSIONS**		
15:00	**VISION FOR THE FUTURE (ECONOMIC GROWTH)**		

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