**Report of the Portfolio Committee on Trade and Industry on the 7th International Meeting for Parliamentarians as part of the** **67th International Astronautical Congress held in Guadalajara, Mexico, dated 1 March 2017**

The Portfolio Committee on Trade and Industry and the Portfolio Committee on Science on and Technology having attended the 7th International Meeting for Parliamentarians on 25 September 2016, as part of the 67th International Astronautical Congress, held in Guadalajara, Mexico on 25-30 September 2016, reports as follows:

1. **Background**

In 2009, the Minister of Trade and Industry launched South Africa’s National Space Policy, which sets out various objectives to develop the national space arena to support sustainable development, industrial development, human capital development and international cooperation in space activities.

* 1. **Legislative mandate**

The primary South African legislative instrument governing the regulation of both governmental and non-governmental space-related activities is the Space Affairs Act (No. 84 of 1993). The Act establishes the South African Council for Space Affairs under the authority of the Minister of Trade and Industry to implement its regulatory, monitoring and registration functions. In addition, the South African National Space Agency (SANSA) has been established under the Department of Science and Technology (DST) to implement the National Space Strategy.

South Africa has been identified as an emerging space nation and has attracted much interest in the international space arena. Projects, such as SALT (Southern African Large Telescope), MeerKAT and SKA (Square Kilometre Array), have further enhanced South Africa’s reputation in the field of space science and technology. This confirms the need for South Africa’s participation in and exposure to international space matters and the uses thereof.

The International Astronautical Federation (IAF) has been hosting an annual International Astronautical Congress (IAC) and had introduced a meeting for parliamentarians in 2009. This decision was informed by the recognition of the need to regulate this industry and promote effective international co-ordination to ensure that space is not monopolised and that its exploration, technology and industries benefit humanity. Parliaments as the democratic representatives of the people and the legislative authorities were therefore essential while not sufficient institutions for active participation in the congresses.

The Congresses dealt with the potential of current and future space technologies in dealing with key topics of major and global interest. While the meeting for parliamentarians served as a platform for parliamentarians to be informed of the developments in space technologies and the relevance of these to their constituencies, as well as to share their countries’ experiences.

The theme and focus of the 7th Meeting of Parliamentarians was “Space and the Information Society: Connecting the World via Space – Policies, Technologies and Applications”, while the theme for the 67th IAC was “Making space accessible and affordable to all countries”.

* 1. **Delegation**

The delegation comprised of three members of Parliament, namely the Chairperson, Ms J Fubbs (African National Congress), and a member, Mr J Esterhuizen (Inkatha Freedom Party), of the Portfolio Committee on Trade and Industry and the whip of the Portfolio Committee on Science and Technology, Ms L Maseko (African National Congress). The members were supported by the Portfolio Committee on Trade and Industry’s Committee Secretary, Mr T Madima. Ms Fubbs chaired the delegation.

1. **The 7th International Meeting for Members of Parliaments**

The meeting was held at the Congreso del Estado Hotel in Guadalajara on 25 September 2016. The President of the IAF, Mr Kiyoshi Higuchi, welcomed the Members of Parliaments.

The International Meeting of Parliaments (MoP) is an annual event held in conjunction with the IAC, which serves as a forum of exchange amongst Parliamentarians and high-level experts from government, industry and academia. A selected number of Parliamentarians from around the world with an interest in space matters attended.

The purpose of such attendance was mainly to exchange ideas on current space issues and promote the use of space as a tool for decision makers and policy makers in developing, implementing and monitoring sectoral policies such as in agriculture, maritime, disaster and resource management, regional development, environment, climate change, security and migration. In the process of such an exchange, space remained an enabler in expanding the frontiers of knowledge, assisting in decisions taken by policy makers on sectoral policies, growth and job creation, and inspiring and motivating the next generations. Parliamentarians had the opportunity to meet high-level international space leaders through networking events.

1. **Official opening of the IAC**

The official opening featured the following:

* Inaugural speech by the President of Mexico, Mr Enrique Pene Nieto
* Welcome by the Local Organizing Chairperson, Mr Francisco Javier Mendieta Jimenez
* Welcome by the President of the IAF, Mr Kiyoshi Higuchi
* Welcome by the President-Elect of IAF, Mr Jean-Yves Le Gall
* Keynote address by the Executive Vice President of the Lockheed Martin Space Systems, Mr Richard Ambrose, on behalf of Official Industry Anchor Sponsor
* Presentation of the IAF World Space Award
* Cultural performances
1. **New dimensions of space: What is next?**

Mr Gerd Gruppe, moderated the three panellists: Mr Phillippe Moreels (Head of Strategy and Business Development, Astroscale, Singapore); Mr Bart Reijnen (Senior Vice President of Orbit Services of Germany Airbus Defence Services) and Mr Dick Rocket (Chief Executive Officer and Co-Founder of United States NewSpace Global). The following issues were highlighted by the panellists who engaged the delegates:

* Space is the source of innovation that drives the global economy and is an enabler of many industrial activities. Space covers a variety of activities from satellite communications, navigation receivers and general geospatial imaging to weather forecasting and national security, space products and services, which are crucial for modern societies. The engagements was quite robust as delegates, including students, observed the dynamic relationship between new technology, user demands and increased resources required.
* The space sector was in transition, and therefore the changing patterns and paradigms demonstrate new user demands, and an increasing number of countries and new private actors are beginning to enter the field. It is because of this diversity that the space sector needed to adapt.
* New stakeholders, such as those from countries which were not usually involved in the space terrain, would assess their ability to garner support in an effort to benefit from the existing structures and resources.
* Large industries on space would evolve in order to accommodate the role of small and medium enterprises.
* Technologies and new users were geared to drive the further evolution of the space sector.
* There was still a challenge on the impact on all parts of the space value chain.
1. **Presentation by Elon Musk on Humans colonizing Mars**

Mr Elon Musk, founder of SpaceX, presented a keynote address on “Making Humans a Multiplanetary Species”. He highlighted that SpaceX was developing a massive rocket and capsule to transport large numbers of people and cargo to Mars with the ultimate goal of colonizing the planet.

His objective was to discuss the long-term technical challenges that needed to be solved to support the creation of a permanent, self-sustaining human presence on Mars. The technical presentation focused on potential architectures for colonizing Mars on which industry, government and the scientific community could collaborate in the years ahead. He believed that his plans were plausible and workable and they wanted to launch the first crew as early as 2024. He believed that Mars’ colonists would not have to sign up for a one-way journey since reusing the spaceships would keep the transportation costs lower.

The biggest challenge, however, would be to fund the Mars effort, with development costs estimated at $10 billion. It was notably important to learn that the project was going to be a huge public-private partnership. The US government was reportedly stepping up efforts to venture beyond the moon.

The National Aeronautics and Space Administration *(*NASA) was said to be supporting SpaceX's first mission to Mars, which was targeted for launch in 2018. SpaceX wanted to send an unmanned capsule, called Red Dragon, to the surface of Mars to test descent, entry and landing systems. NASA would be providing deep-space and Mars communications relays for SpaceX and consulting services in exchange for flight data. NASA wanted to be able to land payloads weighing up to about 30 tons on Mars. So far, the heaviest vehicle to land on Mars was the one-ton Curiosity rover. Mr Musk announced that SpaceX has had a backlog of more than 70 missions for commercial and government customers, worth more than $10 billion.

Noticeable challenges ahead related to what some observers hinted on how SpaceX’s plan would fuel rockets with astronauts aboard as this might pose safety risks. NASA and other space agencies were cautious about such proposals despite their overall support of the initiative.

1. **Roundtable discussion: Heads of Agencies Plenary**

During this session, leaders of the major space agencies worldwide shared their ideas and visions on space matters. The theme of 2016 was “Space Exploration: the past, present and the future”.

The Heads of Agencies presented the main developments since the 2015 IAC in Jerusalem, Israel, where major decisions were taken. The major projects launched were highlighted and some future developments beyond 2016.

1. **The European Space Agency (ESA)**

During deliberations and interactions with the audience, ESA focused on the earth and its climatic conditions and how it impacts on space. It was noted that climatic changes have an impact on food, water, development and education, just to name a few.

1. **Italian Space Agency**

It was important to note the role of the space agencies in line with the Paris Agreement during the United Nations Climate Change Conference of the Parties (COP 21). The role of public-private partnerships was highlighted in view of decisions arising from policy makers worldwide and the importance of policy space which would allow a broad range of such partnerships. Monitoring from space using images assisted greatly in gathering more information. The Italian Space Agency collaborated with Argentina with regard to space matters.

1. **NASA**

According to NASA, a documenting database would be essential in an effort to deal with variables on the required segment for everyday life and in navigation.

1. **Japan Space Agency**

The Japan Space Agency announced its first satellite space agency that had been designed. There were 320 ground-breaking initiatives in this regard. According to the Minister of Environment, the collecting database would always remain a critical component in ensuring progress in space exploration.

1. **Indian Space Agency**

The Indian Space Agency concentrated on the activities that support climate change studies. Climate, weather and environment, including earth observation satellites were important and relevant themes**.**

1. **Canadian Space Agency**

The Canadian Space Agency focussed on the following:

* Environmental sustainability.
* Strong position and an urgent need to address issues of climate change.
* New collaboration on protected climate and change management.
* The impact of climate change on health.
1. **Russian Space Agency**

The agency had planned to enhance the capacity of the remote countries on their satellite systems and to ensure that this was achieved by 2025. Three groups identified by the agency are high orbit, middle orbit and oceanography satellites. The Russian Space Agency appreciated that COP 22 would take place in Morocco and that the agency would participate. Delegates actively participated during a question and comment session.

1. **Interactive sessions**

Months before the Congress a call for papers is published on the IAF website and more recently there has been a concerted attempt to attract papers from new players in the space industry and to encourage the youth to share their thinking. A few months before the Congress, individuals and institutions who have applied are shortlisted and approved by the IAF. To increase the number of papers that can be accepted, interactive presentations take place simultaneously in the designated hall followed by the awards ceremony and a cocktail reception.

1. **Interactive presentations and the award ceremony**

The award ceremony was held on 28 September 2016. The outgoing President of the IAC, Mr Kiguchi, delivered a keynote address and awarded the winners from the various categories on space with certificates. This was followed by an interactive session and a cocktail reception.

The presenters were from 78 countries and their work had been evaluated and assessed to have met international standards in quality and presentation. For the first time since the Parliament of South Africa has participated in the IAC, a member of the parliamentary staff, Mr T Madima presented an interactive paper on “Educational Outreach for the African Child on Space”. The confident manner of his delivery attracted a huge group of delegates who were captured by the topic.

The following representatives of the Department of Trade and Industry (DTI) and the DST were in attendance:

* 1. Ms Prudence Swarts: DTI.
	2. Ms Amukelani Letitia Rikhotso: DTI.
	3. Mr Modisakgotla Kaizer Moroka: DST.
	4. Ms Valanathan Munsami: DST.
	5. Ms Asanda Nombulelo Dawn Ntisana: SANSA.
	6. Ms Potlaki Maine: SANSA.
	7. Mr Msizi Luke Khathide: SANSA.
	8. Mr Raoul Christopher Hodges: SANSA.
	9. Mr Charl Christiaan Strydom: SANSA.
	10. Mr Jonathan Lun: Denel Spaceteq.
	11. Mr Jan Du Plessis: Denel Spaceteq consultant.
	12. Ms Leehandi De Witt: Newspace Systems.
	13. Mr Robert van Zyl: Cape Peninsula University of Technology (CPUT) French South African Institute of Technology (F'SATI).
	14. Mr Charl Jooste: CPUT F'SATI.
	15. Mr Philip Bellstedt: Space Commercial Services Aerospace Group (SCSH).
	16. Mr Sias Mostert: SCSH.
	17. Mr Bryan Christopher Dean: SCSH.
1. **Making the Moon Village and Mars journey accessible and affordable**

The panel reviewed the recent discoveries and key missions for the moon exploration. It discussed how exploration towards a Moon Village and the Mars journey could be performed through research (planetary and space science, human spaceflight, astrobiology, astrophysics, technologies, life support, operations, technical validation and development).

The ideal position was on how to make it affordable and sustainable, particularly considering the social, education, peaceful inspiration and economical value of the Moon Village and Mars journey for mankind. The interaction also focused on the possible vision and roadmap towards a sustainable global Moon Village and Mars journey that would be accessible and affordable for all. Some of the generic highlights from the space communities, professionals and industry as a whole, focused on the following:

* The objectives of embarking on the Moon Village and the journey to Mars.
* What drivers to consider: peaceful co-operation, exploration, technology, science, inspiration, jobs and workforce development, innovation and competition, legal aspects, commercial and socio-cultural benefits.
* The role of small countries and new partners in space exploration.
* Possible collaboration between all the space agencies and other stakeholders on future agreements on a large scale.
* Exploring possible strategic knowledge gaps in space exploration and other scientific challenges relating to space.
* The future role of robotic missions in exploring space as a whole.
* In relation to the journey to Mars, how to establish an infrastructure in lunar orbit or on the surface of the Moon.
* The feasibility study on the appropriate architecture, design, construction and maintenance of a set of permanent habitats and infrastructure for science, manufacturing/production, and other commercial or institutional activities on the moon and Mars.
* Current plans for the different space agencies and space actors in exploring the moon and Mars.

The delegation also observed that:

* There was a knowledge gap on the exploration of the moon and Mars.
* Funding for such projects remained a challenge to those interested in exploring.
* Private companies would play a major role in the Moon Village and its activities.
* The Moon Village was not a master plan, but it provided open access and culture to explore more and more.
* Research and development would essentially be emphasized in years to come in order for the Moon Village to survive.
1. **Rosetta Mission**

The Rosetta Mission was a NASA-funded project which was launched in 2006 and was terminated in September 2016. It involved studying comets within close proximity. It was through this mission that people of all ages benefited from the accumulation of space knowledge through Rosetta’s journey.

1. **Rossetta focuses space applications related to peoples’ daily lives**

Specifically, space can offer a unique experience to get young people interested in science. The Rosetta Mission to Comet Churyumov-Gerasimenko received enormous attention from the general public, particularly with the focus on space applications becoming tools of our daily lives, private initiatives becoming self-sustaining economic realities and scientific discoveries pushing the boundaries of knowledge further.

On 30 September 2016, Rosetta ended its mission with a controlled impact on Comet Churyumov-Gerasimenko. The mission targeted the Ma’at region hosting some active pits on the small comet lobe. The region had been chosen for its scientific potential and taking into account key constraints in executing the descent.

Delegates were invited to view the live transmission between 05:30 and 07:30 which featured an intervention by the Director General of the ESA, Johann-Diettrich Woemer, and other speakers who highlighted the significance of the termination of the Rosetta Mission.

1. **Some of the key challenges and questions were as follows:**
* **Reason for the decision to end the mission?**

The decision to end the mission on 30 September 2016 ultimately came as a result of the spacecraft’s ever-increasing distance from the Sun. Comet 67P/C-G, and therefore Rosetta, headed out towards the orbit of Jupiter, resulting in significantly reduced solar power with which to operate the craft and its instruments.

By early October 2016, the teams would have been faced with a month-long solar conjunction – when the Sun lies between the Earth and Rosetta and the comet. This would have resulted in significantly reduced communication capabilities (including downlinking science data) for about a month. Furthermore, the ageing spacecraft and payload that had endured the harsh environment of space for over 12 years meant that its journey, including at least two years being close to a dusty comet, implied that Rosetta was reaching the end of its natural life and hence 30 September 2016 was considered the optimum date to conclude the mission.

* **Issues around the hibernation of Rosetta addressed**

It is clear that the situation in June 2011, when Rosetta was put into a 31-month hibernation period for the most distant part of its journey was a case in point. However, during the termination in 2016, Rosetta was riding alongside the comet. Comet 67P/Churyumov-Gerasimenko’s maximum distance from the Sun was estimated to be over 850 million km**,** and that was preciselymore than Rosetta had ever journeyed before.

 The challenge would have been that of inadequate power at its most distant point to guarantee that its heaters would be able to keep it warm enough to survive. Instead of risking a much longer hibernation that was unlikely to be survivable, and after consultation with Rosetta’s science team in 2014, it was decided that Rosetta would follow its lander Philae down onto the comet.

* **Collection and retention of data on the day of the final descent**

All scientific data collected during the descent normally gets relayed back to Earth in quasi real-time, and would not accumulate on the on-board mass memory storage for subsequent downlink as is usually the case. Data transmission would end as soon as the spacecraft impacted the comet. It was expected that some of the data, particularly some of the images, would be made available to the public as soon as possible on the day, allowing for some nominal processing time.

* **The process of communication on the surface of the comet**

As soon as Rosetta hit the surface, its main systems would be turned off, including the altitude and control systems, as well as the main transmitter in order to meet regulations aimed at avoiding interference on the deep space network communications channels. The software that would enable the ‘passivation’ would be uploaded to the spacecraft a week before the planned end of mission, and it would be activated around the time of the collision course manoeuvre, approximately 10 hours before impact. No automated re-activation would be possible after the systems had shut down on impact.

* **Guarantee that Rosetta reached the surface**

When Rosetta woke up from hibernation on 20 January 2014, its renewed contact with Earth was signalled by the appearance of a spike in a spectrum analyser display at the European Space Operations Centre (ESOC) at the expected frequency. However, in the case of Rosetta reaching the surface of the comet on 30 September 2016 and the main transmitter being turned off, the spike disappeared from a similar display, confirming to mission controllers and the world that impact had occurred. For this reason, because Rosetta’s main systems, including the main transmitter, would be turned off at the moment of impact, it would have been highly improbable that it would bounce back into space.

1. **Youth Leaders of Space Centre**

A special plenary dedicated to young leaders in the space sector was held on Tuesday 27 September 2016. This plenary was dedicated to students and young professionals.

The participants took centre-stage during the Next Generation Plenary and discussed innovative solutions for making space accessible and affordable to all countries. They presented their own research and suggested bigger ideas for the space industry and space agencies.

The session panellists include Eleka Abello, Kyle Acierno, Yusuke Muraki, Merek Novák, and Sinead O’Sullivan. The panellists were selected through a global competitive process to identify the best worldwide candidates and showcase the diversity of successful efforts towards space accessibility and affordability through solutions with a new perspective. A team of IAF experts evaluated the proposals to score and select participants for the Plenary Event.

The plenary was moderated by Dr David Parker, former Chief Executive of the UK Space Agency, and now ESA’s Director of Human Spaceflight and Robotic Exploration.

1. **UNISPACE+50 and the Future of Space**

The UNISPACE concept was derived from the space age after the United Nations recognized the importance of greater international collaboration in outer space. This led to the potential need for research and technology for socioeconomic development. It was also understood that the United Nations had been organizing global conferences on the Exploration and Peaceful Uses of the Outer Space (UNISPACE).

A platform for international dialogue on key issues related to space exploration and the practical application of space technology, as well as facilitating the co-operation of the various regions, countries and institutions in outer space activities for peaceful purposes. In the main, UNISPACE conferences had delivered great economic, social and technological benefits to mankind. The Committee on Peaceful Uses of Outer Spaces (COPUOS) mandated UNISPACE+50 to conduct its business and hold a conference in 2018 to mark the 50th anniversary of the first conference in 1968.

It was envisaged that UNISPACE+50 would achieve the following:

* Providing a crucial opportunity for the global space community to take stock of what had been accomplished to date and what was expected in the near future.
* UNISPACE+50 would promote a “Space 2030” agenda that considers the development of stronger space governance and engages all key stakeholders in the space arena.

The four thematic pillars of UNISPACE+50 discussed were space economy, space society, space accessibility and space diplomacy. The highlights of the four key thematic pillars of UNISPACE+50 were as follows:

* *Space Economy:* Demonstrating the extensive relevance and connections that outer space activities have towards the growth and sustainable development of all nations.
* *Space society:* How nations and governments can carry out their core duties and functions while making the best use of space technologies and applications that benefit society.
* *Space accessibility:* The promotion of peaceful uses of space for humanity, including coordination, communication and capacity-building.
* *Space diplomacy:* Global governance of space as well as cooperation among nations in using space technologies and applications to address common challenges facing humanity and building constructive, knowledge-based partnerships.
1. **Exploration of Mars: Realizing Mars sample return through human robotic collaboration**

The Chief Scientist of NASA, Dr Ellen R Stofan, covered the following:

* The human species is not alone in the cosmos. There was likely to be other species elsewhere.
* To understand the above, it would be noteworthy to know the Earth’s history, which was said to be 4.5 billion years old.
* When explored, Mars was found to be rocky compared to the Earth and the moon.
* The advantage of Mars was that it had liquid, which is a necessary element for life.
* The critical issue was the process of returning samples from Mars to Earth. This would be done through the international planetary committee in collaboration with the US national academy surveys and other international collaborations.
* The cost of exploration and affordability of modern instrument would be a challenge going forward.
1. **Closing Ceremony**

The IAF President Elect, Mr Jean-Yves Le Gall, had developed an agenda for his term as IAF President which he intended to implement from September 2016 for a period of 3 years. His agenda was entitled the IAF Global Innovation Agenda 2016-2019.

One of the most important points of the agenda was focusing on diversity by fostering the principles of “3-G” Diversity within the Federation and the Space Sector: Geography, Generation and Gender.

1. **Attendance of the gala event**

The delegation attended a gala event on 30 September 2016. They were entertained by music and a by a group of Mexican cultural performers as they networked and interacted with one another, including individuals from different institutions and space industry fraternity.

**Lessons learnt and value added to the Portfolio Committees on Trade and Industry and on Science and Technology**

The following were some of the critical observations:

* Space is becoming a place of economic and strategic interest to an increasing number of nations, including South Africa. South Africa’s interest in the global space arena could be enhanced through space, scientific and technological development. This can generate useful, applicable and accessible information to prevent, monitor, evaluate and mitigate natural disasters.
* The 67th IAC’s huge exhibition space provided the South African delegation with an opportunity to have discussions with a number of companies in the space, aerospace and electro-technical sectors, which exhibited inherent cross-cutting areas.
* The South African delegation was also afforded an opportunity to interact with a number of stakeholders from the education sector, technology and innovation advancement institutions, and trade and industry development sectors. The delegation found it useful to meet and interact with several country delegates in the space arena, particularly in understanding the similarities with the South African space sector and their objectives on achieving future policy decisions.
* Some of the challenges also related to the issue of capacity-building in order to obviate the problems that derailed progress in the innovative and sustainable use and application of space globally.
* It was evident through the briefings, presentations and interactions that there was an endeavour of finding common ground on the issue of global space governance with the support of the Space Science and Academy. In this regard, the quest for global partnerships in space exploration and innovation would continue to be explored.
1. **Conclusions**

The 67th IAC has proven to be a milestone along humanity’s journey into space which now fully recognizes that the benefits to humanity should be the motivation for further technological developments and explorations into space.

* 1. UNISPACE+50 emphasizes the development of stronger space governance which is directly linked to the mandate of Trade and Industry under which falls the Space Affairs Act (No. 84 of 1993). The Committee should review the Space Affairs Act against the major technological developments of our age and the re-emphasis of space serving humanity.
	2. With respect to the Industrial Policy Action Plan and government’s priority of job creation and strategic skilling using manufacturing, which includes components, the role of space as an enabler of industrial activities complements the objectives of Trade and Industry to establish a special economic zone (SEZ) for aerospace engineering which includes components for satellite, and other vehicles in space.
	3. The four thematic pillars of UNISPACE+50 (namely Space Economy, Space Society, Space Accessibility and Space Diplomacy) should be included in the 2017 programme of the Portfolio Committee on Trade and Industry. However, because there is an urgent need to encourage more youth into this field, it would be imperative to work with the relevant portfolio committees in Parliament in this regard.
	4. Now that Parliament has broken the self-imposed barrier which held back Members of Parliament and staff members of Parliament from preparing papers and submitting them to the IAF for consideration for inclusion in the congresses. We wish to encourage MPs and staff members to start writing and be prepared to submit your abstracts early in 2017, namely after March but before mid-June, for the 2017 Congress.
	5. Finally, we should return to the practice of both the Portfolio Committees of Trade and Industry and of Science and Technology attending both the Parliamentary meeting, which always occurs on a Sunday, and the Congress, which opens on the Monday.
1. **Recommendations**

17.1 The Committee recommends that the House requests that the Minister of Trade and Industry should consider:

* In relation to Governance and cooperation*,* tabling a report on inter-ministerial deliberations impacting on space exploration, particularly manufacturing of products and tools that enhance capacity of the space industry.
* In terms of capacity building, involving youth in space exploration and education.
* South Africa’s involvement in the Mars exploration as far as its participation in the maiden voyage to Mars is concerned through partnership and international cooperation.

17.2 The Committee further recommends that the Presiding Officers and the House Chairperson should consider:

* Reviewing the size and composition of the delegation: The delegation to the Congress should be expanded to include other relevant Committees, such as the portfolio committee dealing with rural development, in addition to the Portfolio Committees on Science and Technology and on Trade and Industry.
1. **Acknowledgements**

The Committee would like to thank the respective individuals and entities for contributing to the success of the study tour. In particular, the political authorities who gave permission for the trip to take place, management of Committee Section and the Division Manager for Core Business for their cooperation.

The Committee also wishes to thank its support staff in particular the Committee Secretaries, Mr T Madima and Mr A Hermans, the Content Advisor, Ms M Sheldon, the Researcher, Ms Z Madalane, and the Committee Assistant, Mr D Woodington, for their professional support and conscientious commitment and dedication to their work. The Chairperson wishes to thank all Members of the Committee for their contribution and support, the delegates who were part of the study tour and those officials in Parliament and in Mexico, who rendered support.

Report to be considered.