Draft WSIS+10 Vision for WSIS Beyond 2015

C2. Information and communication infrastructure

Recognizing the central role of broadband infrastructure for the substantial development of inclusive Information Society as well as the efforts dedicated towards implementation of WSIS Outcomes, in particular related to Action Line C2, since 2003 significant progress has been achieved and several emerging trends and challenges have been identified.

Following provides guidance and priorities for implementation of WSIS Action Line C2 beyond 2015.

a) **ICT/broadband infrastructure development including mobile**
   1. Enhance **availability of access anytime/anywhere** which requires improved ICT infrastructure with emphasis on fast and affordable broadband access.
   2. Focus on ICT infrastructure **coverage, quality and affordability as issues that** still need to be addressed.
   3. Foster development of **broadband infrastructure, including the creation of national fiber optic infrastructure,** through appropriate legislation, national plans, programs and provide access to information on the infrastructure through dedicated web portals.
   4. **Explore wireless broadband technology** opportunity as last mile solution.
   5. Foster the digital switchover from **analogue to digital terrestrial broadcasting** that is essential to benefit consumers by having more choices and quality in television services, and also to free up radio spectrum, while considering the special needs of the developing countries..
   6. Develop a **convergence strategy between broadcasting, mobile and fixed services** by fostering new technological approaches.
   7. Promote **spectrum** management mechanisms that would foster technological innovation including systems such as those used for providing mobile broadband services.

This document builds upon the input/ background documents and the contributions received during the WSIS+10 High-Level Event Open Consultation Process. It has been developed for the purposes of the First Physical meeting of the Open Consultation Process.

8. Promote the rational, equitable, efficient and economical utilization of **radio spectrum and satellite orbit resources**.

b) Broadband backbone

9. **Develop secure, inexpensive and broad backbone** to meet the uprising demand of broadband services, especially for developing countries.
10. Considering data traffic explosion, development of **new technologies and standards** to lower the cost of broadband backbone infrastructure is necessary.
11. Develop **new business models and financing arrangements for funding broadband backbone development**, which is vital for enhancing the investment opportunities in this field, especially in the developing countries and rural areas.
12. Direct efforts towards the regional dimension to profit from economies of scale in terms of interconnectivity, bandwidth sharing, regional backbone, and regional manufacturing capabilities.
13. Recognizing that the deployment of Internet Exchange Points (IXPs) has improved the overall Internet experience in many countries and role of IXPs in contributing towards **faster and cheaper Internet** access in developing countries, continue fostering the creation of **regional and national Internet Exchange** points to enhance the Internet traffic management and help to bring down International interconnection costs – also providing a platform for more local content to be made available..

c) New Technologies

14. Construct reliable information and communication infrastructure based on **next generation networks.**
15. Promote the enhancement **of multiservice access platform**
16. Accelerate deployment **of IPv6, to reinforce** an impact on the technical development of the Internet as well as on the pace of innovation and economic growth associated to this technology.
17. Recognize the **importance of cloud computing** in the international ICT arena by exerting the needed efforts in this field and the related areas of data centers, integrated solutions and new Internet technologies.
18. As data centres change from **hardware-defined to software-defined**, software-based solutions running on standardized hardware could be implemented to telecommunication networks to reduce expenses and increase scalability.

d) Rural and remote areas / Universal service and affordability

19. Enhance and secure **high-speed broadband environment** based on characteristics of communities even in unprofitable areas like isolated islands..
20. Emphasize on **robust and secure broadband roll-out** which enables both economic and social wellbeing, especially developing and landlocked countries

21. To maintain the economic viability of broadband networks and to extend their reach into unserved and underserved areas, **lower the cost of network infrastructure** through technology, standards, networks/infrastructure sharing as well as partnerships, and new business models.
22. Provide **regulatory incentives** to develop telecommunications in marginalized areas, including packaging urban projects with rural/remote area projects, in an effort to achieve universal service.
23. To provide new opportunities for business entities to enter the rural/remote areas market, **foster development of new services, business models and regulations**, which needs close participation of policy-makers and regulators.
24. Promote **innovative approaches towards Universal Access and Service**.
25. Continue increasing and improving **access to broadband Internet services through advanced mobile technologies** and other wireless access technologies by making these services widely available in urban and rural areas at reasonable costs to cater for all demographic levels and communities.
26. Recognizing that **Broadband services have both social and economic benefits** for the global community, which are vital for realizing economic and social sustainable development goals post 2015, **decrease access gap** by developing broadband and mobile technologies as the backbone of Information Society.
27. Facilitate the **affordable wireless Internet access to the citizens**.
28. Ensure a **geographically consistent development of broadband** electronic communication networks throughout the national territory and to promote the use of electronic communication services.
29. Increase studies and research on **economic, energy efficient and clean equipment suitable for rural and remote areas** ICT infrastructure development.

e) Competition, financing, and new business models
30. Explore **new models of financing the development and deployment** of ICT Infrastructure. To **attract private investment**, promote policies to ensure network openness and ubiquitous connectivity through network sharing and competition.
31. To introduce new licensing schemes and regulatory frameworks to cater for new technologies, **continue setting up independent, proficient, transparent and effective telecom regulatory commissions/authorities** in developing countries.
32. Create the conditions for the **development of fair and effective competition** by encouraging agreements between regulators and operators.
33. **Instigate additional competition** in the telecom sub-sectors, taking into account its significant impact on increasing availability and affordability of various services in both rural and urban areas.
34. Promote **competition policies**, such as securing fair competition condition among entities, that enable for all users to use inexpensive and high-speed broadband environment

35. Create an **enabling environment that attracts investment, promotes innovation and fosters entrepreneurship** to advance and continue the affordability of the Internet, taking into account that an essential factor in this enabling environment is the deployment of broadband infrastructure.
36. Accept that market solutions not always result in the rollout of sufficient infrastructure, and in some economies, **government intervention of some form may be required** for some portions of the infrastructure.

f) Minorities, disadvantaged and disabled people
37. Promote the development of and access to the ICT services that considers the **inclusion of people with disabilities, gender minorities, and specific groups with higher level of vulnerability**, while fostering the provision of specialized training as an important component in this regard.
38. Enable appropriate ICT infrastructure access for **analphabets**
39. Expand ICT usage in rural areas develop **affordable and easy-to-use devices and build capacities for e- literacy.**
40. Promote the development of **safe community spaces**, such as public schools and libraries, where those unable to afford personal Internet-connected devices can still experience the benefits of the information society.
41. Reassess infrastructure investment and policies that takes the needs of poor and marginalized as a starting point.
42. Promote **affordable and inexpensive ICT equipment** and their terminals and handsets.

g) Planning, actions, and background data
43. Promote development and implementation of **broadband plans and actions** for **digital inclusion**.
44. Ensure the planning of ICT networks by using a database referring to a common Geographic Information Systems (GIS).
45. The **importance of background data** for planning a reliable and efficient broadband backbone network without duplication is increasing. The **knowledge of the current situation of regional and cross-border broadband network** is an essential data for identifying the missing linkage for connecting the unconnected.

h) International standards: development, conformity and interoperability
46. **Interoperability of ICT devices**, systems and services should be facilitated through implementation of international standards.
47. Harmonized **Conformance and Interoperability** programs will facilitate free circulation of equipment, enabling cost benefits.
48. **Global implementation of international standards** should be facilitated to reduce trade barrier and promote competition in ICT industry.

49. Encourage developing countries to develop their national standards development and enforcement capability, and facilitate developing countries **participate in international standardization process**, to ensure that they experience the economic benefits of associated technological development and to better reflect their requirements and interests.
50. Interconnection of telecommunication services should be improved at national and international level.
51. Provide high-speed satisfactory **quality of services**.

i) Emergency telecommunication and smart development
52. By promoting ICT for disaster relief, **emergency telecommunication services** should be secured.
53. **Promote smart development approaches**, based on partnerships which focus on human, technical, and governance infrastructure development to deploy Internet around the world.