Vodafone's Response to TRAI Consultation Paper No. 17/2017 on 'Making ICT accessible for Persons with Disabilities'

Vodafone welcomes TRAI's consultation on making ICT accessible for persons with disabilities. A wide consultation on this topic is essential to define the best regulatory approach and to make sure that the technological improvements in communications services are also fully enjoyed by this category of users.

Key points:

1. In terms of the 3 hallmarks of universal access and universal service recognized by ITU, viz. availability, accessibility and affordability, Indian telecom operators' services are widely available, affordable and accessible for addressing the needs of all citizens including PwDs (persons with disabilities). However, **accessibility aspect for PwDs is also largely dependent on a) the devices being used by the end users for availing telecom services b) software/applications to render accessibility to services.**

2. The needs of disabled users, the issues that they face and also the solutions to those problems have radically changed over the past few years. In particular, **attention has moved from actual telecom services and network infrastructure to terminal equipment and software/applications** as new communications and content access technologies, such as mobile and the internet, have been embraced by disabled users, which provide many solutions to meet the needs of the disabled users. **Today, technological developments are empowering PwDs to use such tools for educational, communication, therapeutic and behavioural monitoring requirements**.

3. **Internet broadband, mobile telephony and new smartphones applications have improved the quality of life of disabled users**. Technological developments in all of the above segments has resulted in providing new practical, effective and low cost solutions to traditional communications problems of disabled users. **Some of the greatest innovations have not come from specially designed services and products for the disabled, but from mass market/universally designed services and products that also have the potential for innovative use by disabled users**. For eg. use of SMS, Email, IM (instant messaging)/communications apps by deaf people to easily communicate with the rest of the world with a mainstream, easy to use service; use of mobile smartphones by blind persons with applications/settings that allow them to easily use communication services.

4. With these changing dynamics and tools, any regulatory measures oriented to mandatory provision of services by telecom operators should be carefully defined and evaluated considering all kinds of developments in overall telecom space.

Issue-wise response:

Q1. Which are the disabilities, with specific accessibility requirement, other than those mentioned in para 2.3 of the Consultation Paper that require consideration for preparing a framework?

A1. Under the RPWD Act, 2016, there are 21 disabilities notified which can broadly be categorized under the 4 categories recognized by ITU viz. audio/hearing impairment, visual impairment, dexterity based disabilities and cognitive disabilities and the 5th category of speech impairment as mentioned above.

We would like to submit a view in respect to statement in para 2.3, that '*persons who are visually challenged or have low vision are …unable to use touch screen keyboards, or access contact lists to call numbers stored in the address book, send and receive messages*'. **Today, basic mobile phones and smartphones enable many accessibility features** – for eg. Voice activated dialing, caller ID with speech, one touch speed dial, voice command, adjustable font, use of smartphone touchscreen to access contact lists to call numbers as well as send and receive messages etc. Today, many OS (operating systems) of smartphones already have in-built accessibility features (under 'settings') for various categories of PwD users such as vision, hearing, dexterity and interaction. For example,

With respect to vision, the accessibility features provide for:

- Pre-loaded or built-in text-to-speech software, which converts text-based information displayed on the smartphone screen to auditory information, and enables visually impaired customers to listen to their SMSs, contact names, battery life, signal strength, and much more.
- The text-to-speech applications :
  - Apple – VoiceOver
  - Android – TalkBack

With respect to hearing, the accessibility features provide for:

- Flash notification (whereby the camera light is flashed when the user receives notifications, incoming calls or when alarms sound.
- Sub-titles are made available with flexibility of font, size, background, alignment etc.
- Mono audio (for listening with one ear where hearing impairment is partial)

With respect to dexterity, the accessibility features provide for:

- Assistant menu (which enables functions to provide device accessibility for users with reduced dexterity)
- Easy screen turn on
- Tap and hold delay

- Interaction control (to customize touch interaction areas, hardkey functions and the keyboard)

There are more settings that provide accessibility – for example:

- Text to speech (using in-built text to speech engines) with customizable speech rates and pitch
- Direct access (viz. adding shortcuts to specific settings and functions)
- Answer or decline or end calls with voice commands

In addition, the accessibility settings can be imported/exported to or from other devices.

The industry is well cognizant of the needs and is constantly endeavoring to address the requirements for all kinds of disabilities.

Q2. Apart from the challenges enumerated in para 2.3 of the Consultation Paper, what other challenges do PwDs face while accessing telecommunication and broadcasting services?

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Q3: In your opinion, what are the reasons for the desired benefits of ICT (telecom and broadcasting) not reaching the PwDs despite several policy measures and scheme being implemented?

A2&3. The Authority has mentioned in para 2.15 that while many policy measures and Government schemes have been rolled out, not much has happened on ground – we believe that a proper monitoring and review of measures as well as policies is required alongwith new strategies to accelerate the percolation of benefits to PwDs.

Additionally, the Government needs to expedite a conducive policy decision on IoT/M2M, as noted that there are many areas of innovations and opportunities in IoT/M2M that can be leveraged to enhance the day-to-day life of PwDs.

Further, accessibility requirements of PwDs have been only recently updated into the National Building Code of India, which now needs to be implemented on ground, so that all public buildings availed by TSPs for setting up touchpoints/stores for the provision of communication services to consumers, meet the needs of PwDs.

Q4: What additional or corrective measures can be taken by the Government to enable better access to telecommunication and broadcasting services and devices to PwDs? Please give a rationale for your response.

A4. As submitted above, IoT/M2M needs to be given immediate policy focus as it can create many innovative solutions for addressing the needs of various categories of PwDs.

Q5: Apart from the measures suggested by ITU, what additional measures can be taken by the TSPs and equipment vendors/suppliers and other stakeholders to address the challenges faced by PwDs while accessing telecom and broadcasting services?

A5. We are already offering multiple customer touchpoint modes for easy accessibility for all users such as website, app, USSD, web/live chat, IVR etc,

We believe that there is a need to enhance and create consumer awareness on the innovations and solutions that are already in the market.

Q6. What are the areas where collaboration between various stakeholders would be useful and how?

A6. There can be collaboration between telecom operators and other stakeholders in the areas of awareness and training for PwD users, to encourage such users to avail communication services and improve their quality of life.

IoT/M2M can be a significant area of collaboration in bridging the current gaps between the public services rendered by Government to PwDs and making such public services more accessible e.g. In areas of transport, navigation etc.

Q7. Should the Government/TRAI direct the telecom and broadcasting service providers to provide information pertaining to billing, usage, pricing and contracts in the form accessible to PwDs? Please provide a rationale for your response.

A7. It may first please be noted that w.r.t i**nformation pertaining to billing, usage, pricing and contracts,** the Authority's present rules/guidelines already require TSPs to have this information (in updated and consistent form) **available on website, app, call centre, SMS/USSD alerts, apart from physical forms.**

We are committed to ensure that our website is accessible to all users irrespective of device in use, technology or ability. We are putting in our best efforts to ensure that all information on our website is accessible to people with disabilities. For example, a user with visual disability can access/navigate our website using assistive technologies, such as screen readers and screen magnifiers. Our website and self-service app are both designed to adhere to WCAG 2.0 guidelines – in some segments of our website and app, we are level AA compliant as well (and not just level A compliant) and we are making ongoing continuous efforts to improve the app and website experience for all our customers and most especially for PwDs.

W.r.t e-bills too, we are making ongoing continuous efforts to make the e-bills accessible for the visually impaired users.

Other initiatives taken by us include:

1. In 2016, Vodafone launched **special caller tunes for the speech and hearing impaired** subscribers which can be availed lifelong for free. The special caller tunes will ask the callers to send a message via SMS or Whatsapp, to facilitate speech and hearing impaired users to receive and send information without any hassle. The awareness for this initiative was raised through digital platforms. These special caller tunes are still available to users.

2. In 2017, Vodafone launched **Eva facial mouse app that enables persons** with amputations, cerebral palsy, spinal cord injury, muscular dystrophy, multiple sclerosis, amyotrophic lateral sclerosis (ALS) or other disabilities **to control his/her smartphone with his/her face by means of tracking the user's face captured through the frontal camera**. Based on the movement of the face, the app allows the user to control a pointer on the screen (i.e., like a mouse), which provides direct access to most elements of the user interface. The app is freely available on Android and ioS stores. Many more such apps for different categories of PwDs are available at www.socialapphub.com (there are a total of 66 apps available for various categories of PwDs).

3. In Vodafone stores, we provide **low seating arrangements to meet the needs of the PwDs** and also to the extent possible, we provide ramps and railings for the entrance to stores – however, such ramps and railings deployment in many locations is largely dependent on the public building owner from whom we lease space for establishment of our stores. We expect that this would get addressed in future as accessibility requirements of PwDs have been recently updated into the National Building Code.

4. We offer **career opportunities for those with disabilities in a diverse, inclusive and empowering environment**. Diversity and inclusion are fundamental to our company values and our business of connecting people. In the past, we had partnered with the National Association of Blind (NAB) to help provide employment/ earning opportunity to the visually impaired by inducting NAB members in outbound tele-calling wherein NAB members were trained by Vodafone on voice recognition system, to connect with potential post-paid customers. We are an equal opportunities employer.

We submit that the TRAI should recommend the policy objective and allow the telecom operators/industry to work out their respective policies and processes that address the over-arching policy objective of making communication services/information accessible to PwDs. This would help in creating innovative yet effective approaches for achieving the policy objective.

Q8: Should the Government/TRAI mandate that the devices used for watching television provided through cable, satellite/DTH, fibre, etc. should be made accessible to PwDs?

A8. No comment

Q9. Should international accessibility standards be adopted for telecommunication and broadcasting services and devices in India? Please suggest steps required to ensure their adoption by the service providers/device manufacturers.

A9. The Authority may please indicate which international accessibility standards are being referred to for adoption for telecommunication services in India, to enable us to respond to this question in detail. As mentioned in our response to Q7, we are already adhering to WCAG 2.0 guidelines and are continuously making ongoing efforts to improve the experience for our customers.

Q10. What additional measures can be taken or technologies can be deployed by service providers or equipment manufactures to assist PwDs?

A10. MEITY has already mandated Government websites to ensure adherence to level A of WCAG 2.0 guidelines. However, this activity is work in progress. Telecom operators can also voluntarily/through self-regulation work towards making their websites WCAG 2.0 compliant.

The DoT has already mandated mobile handset equipment manufacturers to implement panic button on all mobile phones in 2016 which was implemented from March 2017, and GPS capability on smartphones which has been implemented from January 2018. W.r.t emergency services, single emergency number 112 has been opened for voice and industry is presently in discussions with DoT w.r.t feasibility of opening the same for SMS on similar basis.

Q11 Should device manufacturers be mandated to allow in their device's operating system those applications which are meant to assist PwDs? Please justify your response.

A11. Presently, many mobile device manufacturers have implemented solutions in their devices' settings to facilitate the accessibility needs of PwDs, since they adopt universal design principles, while designing their devices, which shows that the device/terminals market is already evolved to address the inclusivity needs of PwDs. The concept of "Universal Design" means the idea of designing and composing an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of age, size, ability or disability.

Q12. What measures can be taken in India so that emergency services are made more accessible for PwDs? Should the implementation of these measures by TSPs be made mandatory by the Government?

A12. The DoT has already mandated mobile handset equipment manufacturers to implement panic button on all mobile phones in 2016 which was implemented from March 2017, and GPS capability on smartphones which has been implemented from January 2018. W.r.t emergency services, single emergency number 112 has been opened for voice and DoT as well as telecom operators are evaluating whether it can be opened for SMS on similar basis. Other modes mentioned by the Authority such as video call etc. will need to be evaluated for feasibility.

Q13. Should the device/handset manufacturer be mandated to manufacture at least one model of handsets for PwDs which is having accessibility features and which are compatible with assistive technology features such as hearing and visual aids including emergency buttons?

A13. In our view, universal design principles should be adopted instead of developing a model specifically for PwDs. In the Rights to Persons with Disabilities Act, 2016 also, the Act defines :

"universal design" means the design of products, environments, programmes and services to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design and shall apply to assistive devices including advanced technologies for particular group of persons with disabilities."

If specific models are designed for PwDs, there may be potential issues of interoperability with softwares/applications that are constantly being developed or issues of upgradation of such models. Hence, all devices should preferably conform to universal design principles.

Q14. How should companies be encouraged to utilise their CSR funds for development of applications, devices and services for the PwDs? What kind of devices and applications can be envisaged/designed to make achieve ICT accessibility for PwDs?

A14. As a conscientious corporate citizen, Vodafone recognizes its role and responsibility to address some of India's most pressing challenges which include accessibility, amongst the list of challenges. We are committed to enable people and technology to drive innovation, disseminate knowledge, and create shared value to improve lives. With our nation-wide network and operations, we are committed to provide innovative, affordable and customer friendly services that enable people to connect and communicate with each other in a seamless manner. We aim to lead the path not only through our products and services but via sustainability and CSR initiatives.

Our CSR programmes/projects are aligned with national development priorities and the needs of communities including empowering the differently abled. We are already utilizing our CSR funds for development of applications for the PwDs, with the help of relevant stakeholders. The Social App Hub is part of Vodafone Foundation's 'Connecting4Good' program that fosters the use of mobile technology for Social Good. It is India's first crowdsourcing platform aimed at curating, strengthening & promoting social sector related mobile solutions from critical sectors

such as disability, education and safety. The platform also offers a plethora of knowledge through its case studies; articles & interviews to foster technology enabled social innovation in the development sector. The Social Apps Hub features apps developed for PwDs. It does so by bringing together various stakeholders including app developers and Non-Governmental Organizations (NGOs), government initiatives and social enterprises which use the mobile platform and technology to drive awareness building, inclusion and empowerment within communities and across sectors. As mentioned in our response to Q7, there are many apps available on Social Apps hub for various categories of PwDs. We require the Government's support to create awareness campaigns to encourage PwDs to use such apps/solutions as part of the Government's 'Inclusive (Swavlamban) India', 'Accessible India' and 'Digital India' initiatives.

Q15. Should any other funding mechanism for the development of applications, devices and services meant for the PwDs be considered? Please give a rationale for your response.

A15. Can be considered.

Under the RPWD, Rules 2017, the National Fund (in which monies from the Trust Fund are also incorporated) can be utilized by the Government for the development of applications, devices and services.

Q16. How can effective campaigns be designed to create awareness about use of ICT accessibility tools? Can such campaigns be funded by CSR funds? If not, what other mechanisms can be used to fund such campaigns?

A16. The Government's 'Inclusive (Swavlamban) India', 'Accessible India' , 'Digital India' and 'Make in India' campaigns should be designed in collaboration with the private sector verticals (eg. Telecom/ICT) to create a sustained and impactful communication and awareness of tools/services available to PwDs.

Q17. Should the Government incentivise the manufacturing and development of ICT tools and devices viz. tools for mobile accessibility, TV accessibility or for web accessibility for PwDs? Please give a rationale for your answer.

A17. Yes, the Government can incentivize the manufacturing and development of ICT tools and devices for mobile accessibility, TV accessibility and for web accessibility. There are many individuals who are working to create products/applications that serve to meet the needs of PwDs and may not have the resources to pursue with the design of such products/applications or to create awareness of such products/applications. The Government can utilize the National Fund to incentivize creation and awareness of such products/applications.

Q18. Please give inputs/suggestions/comments on any other issues which you feel are relevant to the subject matter.

A18. No comments

New Delhi,
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