



SOUNDWORLD

*solutions*<sup>TM</sup>

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FTC Workshop, "Now Hear This"

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Sound World Solutions



We are a social enterprise company created to make quality hearing affordable and accessible to the one billion people around the world in need of such help.

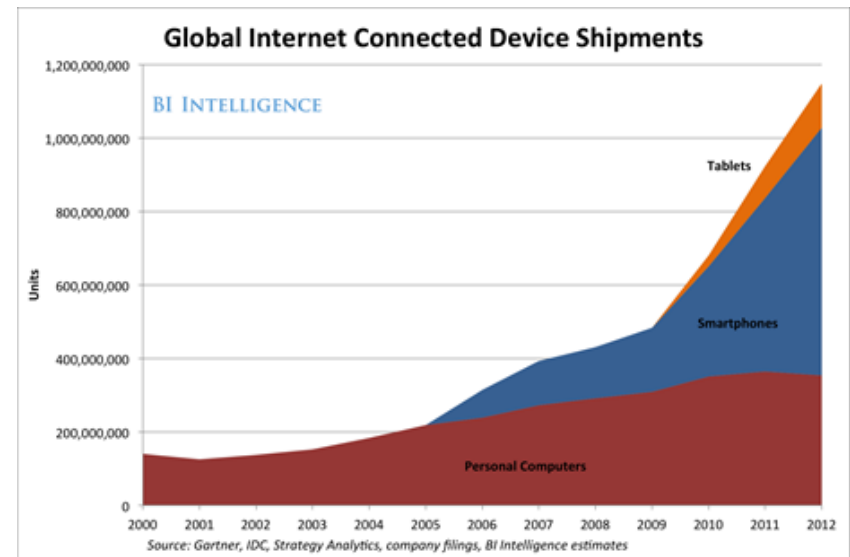


- There is a huge unmet global need for amplification. Amplification penetration is low in the developed countries and near non-existent in the rest of the world.
- The quality of Hearing Aid technology is very good and it is serving well those who have access to it and can afford it.
- The existing “medicalized” channel of distribution is accessible but not affordable by the hearing impaired in the Developed countries and is not scalable for the rest of the world.

## The Opportunity

Technology trends have set the stage for a new approach:

- Bluetooth and wireless connectivity penetration
- Adoption of smartphones and tablets
- Activity and interest in the area of consumer health and wellness, which bridges the gap between consumer products and medical devices.
- Market segmentation provides for multiple solutions for managing health care, allowing users to play a bigger role. Single solution models are obsolete and the available technology renders them indefensible.



Technology used in Hearing Aids and high end Personal Sound Amplifiers is identical.

Digital Signal Processing with:

*Multi-Channel Compression*

*Noise Reduction,*

*Feedback Cancellation*

*Directionality*

Wireless connectivity with the smartphone/computer that allows for:

*Self Testing and Adjustments,*

*Audio streaming*

In our case, the technology in our Hearing Aids and Personal Sound Amplifiers is the same.

Technology has evolved to the point where self-fitting by consumers is now possible with both :

physical adjustments

*adjustable receiver assemblies*

*choice of eartips*

and electro-acoustic adjustments

*screening and programming by apps by the consumer available and easy to use.*

Self-fitting has been shown in studies to be equivalent to hearing aids fitted by professionals. <sup>1 2 3</sup>

1. Self-fit Hearing Aids: Status Quo and Future Predictions – Keidser, Convery, 2016
2. The Effects of Service Delivery Model and Purchase Price on Hearing Aid Outcomes in Older Adults – Humes, Rogers, et. al, 2017
3. Evidence on Self-Fitting Hearing Aids – Wong, 2011

How do you take advantage of those trends?

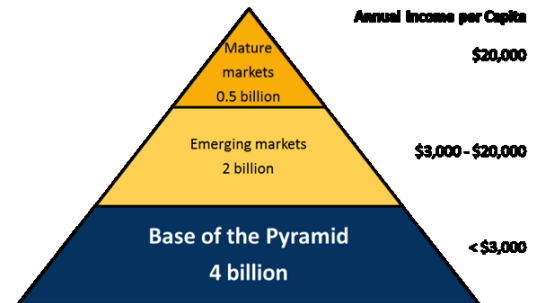
***Design a System, not just a hearing aid.***



- Hardware designed around Bluetooth chipset (open platform, not proprietary) with powerful digital signal processing results in better performance, lower cost, faster speed through market forces (1 billion+ devices) not because of internal research & development.
- Use of smartphones and tablets drives connectivity, and paired with the availability of the internet and video, allows companies to add apps ***that put control in the hands of the user or a trained health assistant***, fundamentally shifting the product value equation.

## Applying Lessons Learned from Emerging Markets

- In order to create opportunities to scale, maximize impact (distribution reach), rather than focusing solely on profit.
- It's not just about reducing hardware costs, it's about changing the entire business model and overall system costs in order to reduce price.
- Find a path to the consumer that permits scalability.
- Business models need to be built to address the income realities of the entire market – from the bottom of the pyramid up.





Our solutions are the result of innovation on three primary fronts:

1. Infrastructure – a system approach means all that is needed is the device and our app on a smartphone. No longer a need for building out quiet rooms, expensive computer systems, and all of the associated equipment.
2. Technology – rethinking the approach resulted in the use of off-the-shelf hardware solutions that are widely available, affordable, and open platform rather than proprietary.
3. Organization – with the end result in mind, create an organization that is lean in personnel, location, supply chain, and overall philosophy.