SG ENABLE

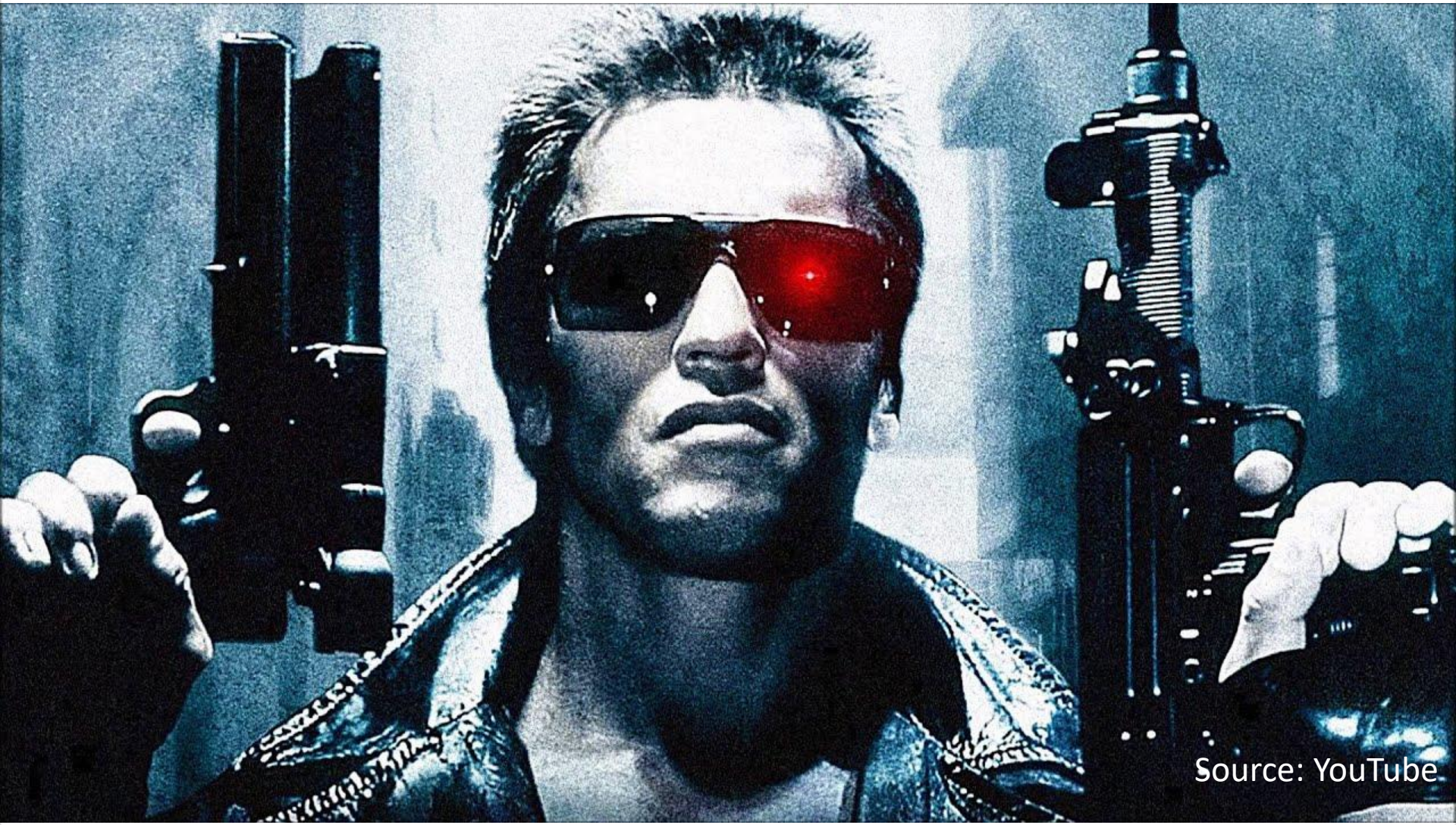
Inclusive society, Enabled lives.

Enabling Persons with Disabilities Through Assistive Technologies

14th Singapore Public Health and Occupational Medicine Conference

16th Oct 2019

I'll Be Back



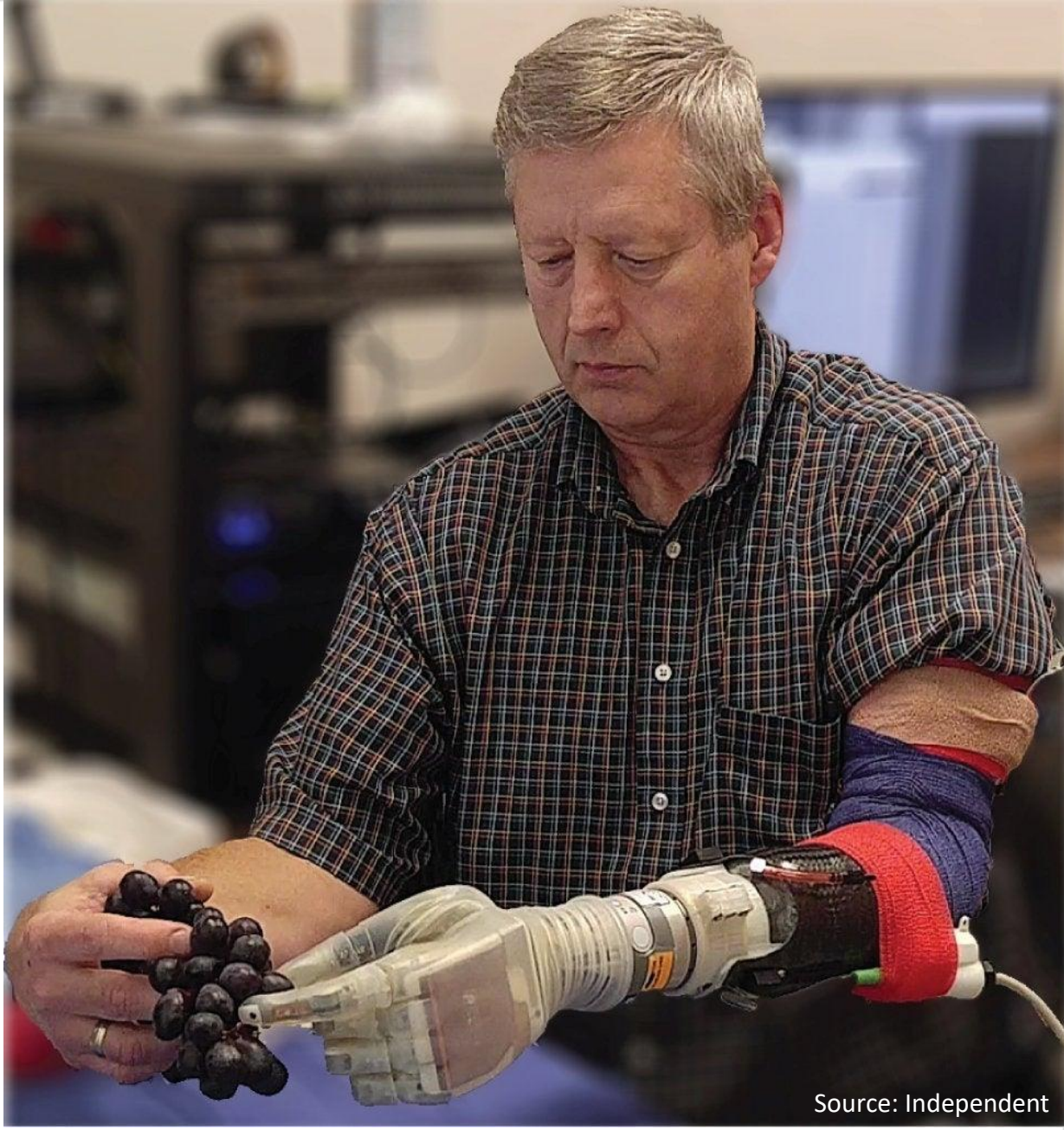
I think, therefore I am

Operating a robotic suit with the mind

Source: CNN

Use the Force

Enabling amputee to touch and feel again



Source: Independent

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When man meets machine

Source: John Hopkins Applied Physics Laboratory

Edges of Tomorrow

ReWalk

Ekso

ExoAtlet

Free Bionics

What is Assistive Technology?

- United States Assistive Technology Act (1998)
  - Any “product, device, or equipment, whether acquired commercially, modified or customized, that is used to maintain, increase, or improve the functional capabilities of individuals with disabilities.”

- WHO Global Cooperation on Assistive Technology (GATE)
  - A subset of health technology, refers to assistive products and related systems and services developed for people to maintain or improve functioning and thereby promote well-being. It enables people with difficulties in functioning to live healthy, productive, independent and dignified lives, participating in education, the labour market and social life.

Assistive Technology….. Then and Now

THEN…

NOW…

FUTURE?

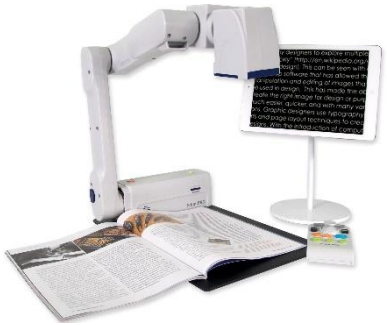
AT is an enabler. We are all using it, not just Persons with Disabilities

Specialised Assistive Technology for Visually Impaired

Low Vision | **Blindness**

High contrast, large font keyboard

Refreshable Braille display and keyboard



Magnifiers

Optical Character Recognition (OCR) scanner

Screen readers

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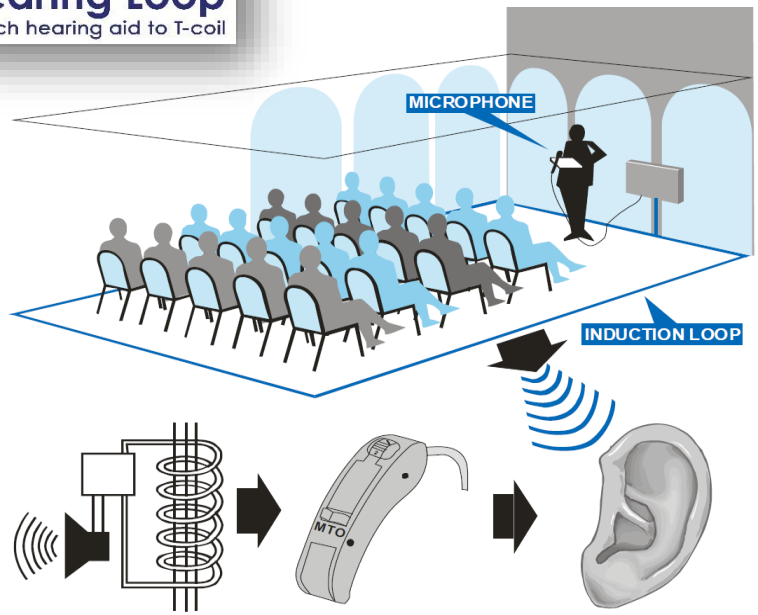
Specialised Assistive Technology for Hearing Impaired

Induction loop



Wireless microphone and receiver

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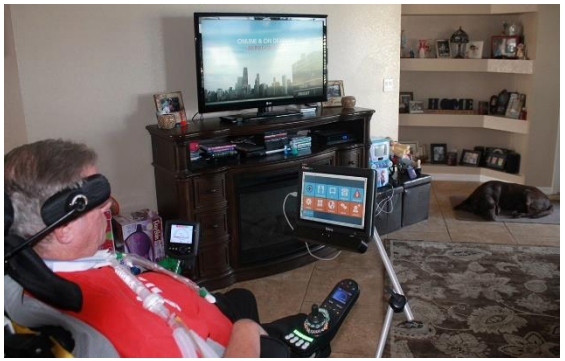
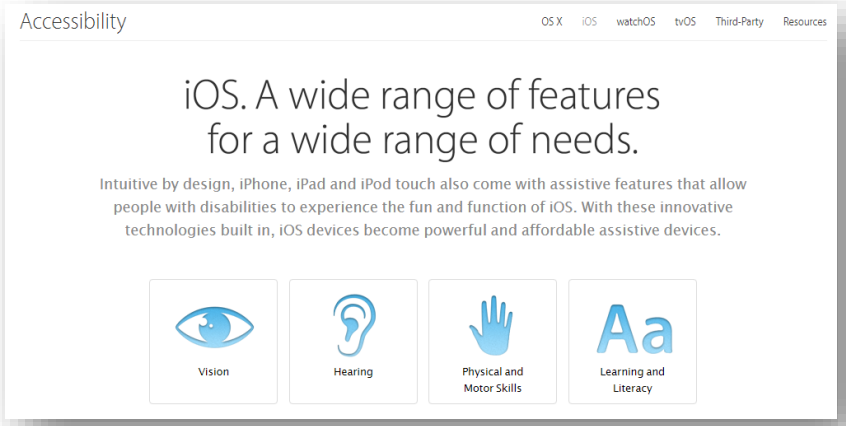
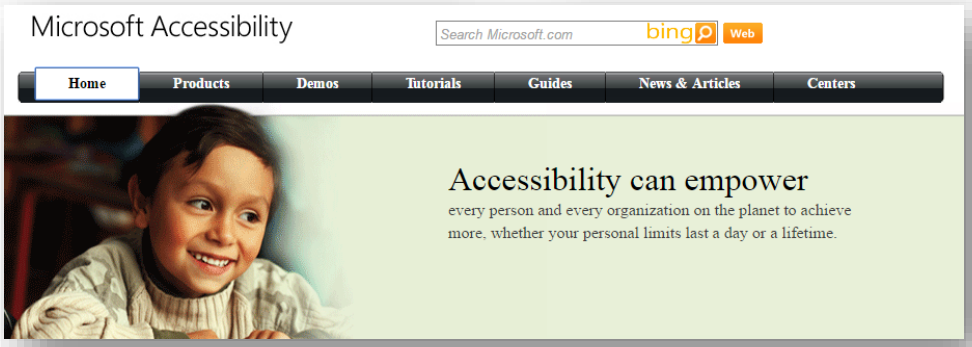
Boundaries Are Blurring

- Mainstream technologies is adopting Universal Design to make them accessible to all
- Assistive technologies is leveraging on mainstream technology platform for lower cost and better distribution
- Combination of assistive technologies and mainstream technologies allow persons with disabilities to work, live and play just like any other persons without disabilities



What Lies Beneath….. Is Accessibility





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Christopher Hills – The Power of One Switch

Source: https://www.youtube.com/watch?v=JtVzcZyv748

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Nothing Is Impossible

Christopher Hills is a master video producer and editor from Sunshine Coast, Queensland, Australia.

Hills lives with cerebral palsy and quadriplegia, and relies on technology and software he can control with a button located at the back of his wheelchair headrest.

Tapping the button with his head allows Hills to toggle through screens, surf the web, and edit video content.

Having qualified as an Apple Certified Professional in editing software Final Cut Pro X and completed Video Production with RMIT University, Hills has started his own business, Switched-On Video Editing.

"I have created a series of YouTube videos about the intersection between Technology and disability," he said.

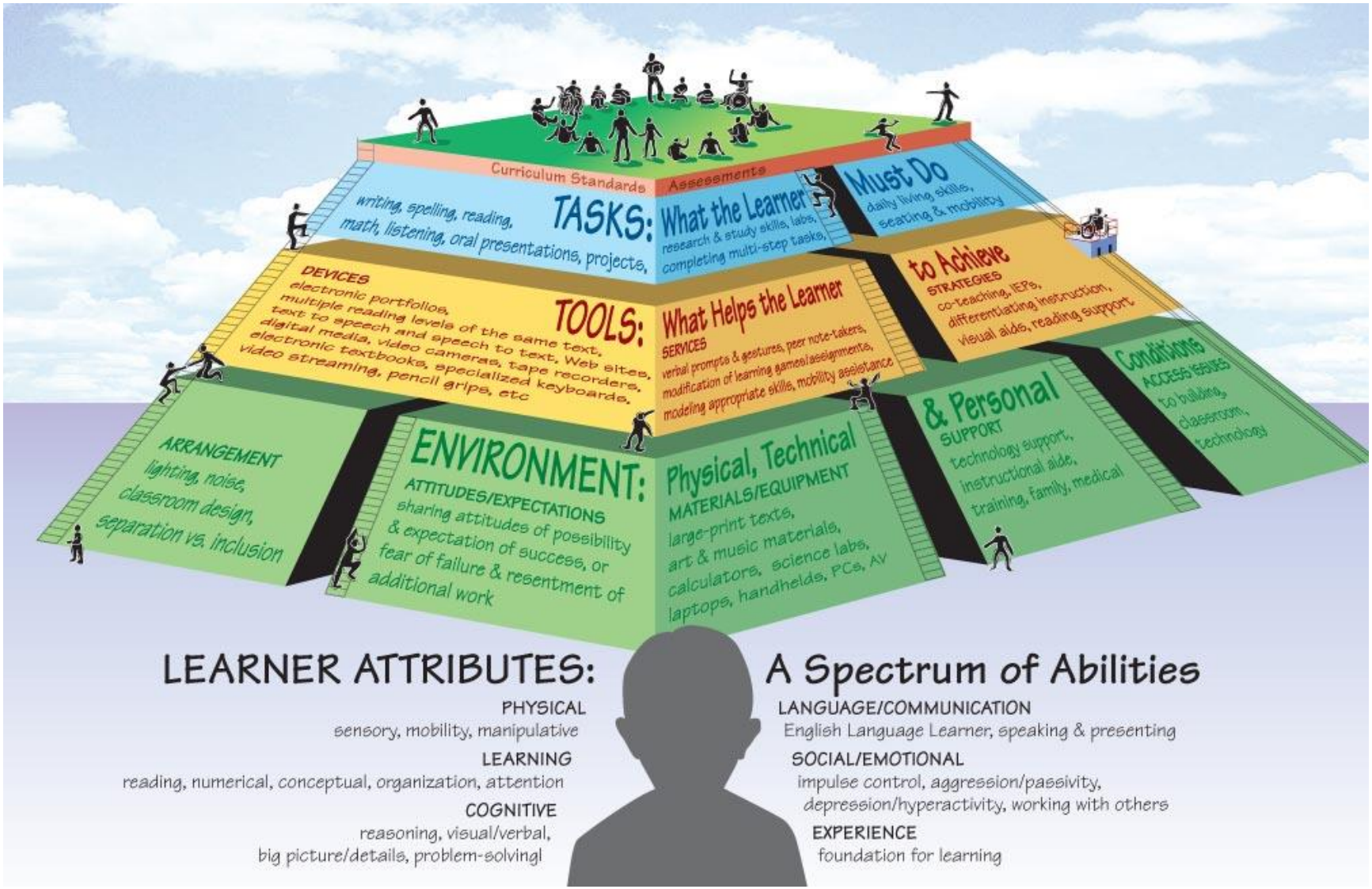
Source: http://www.theablemovement.com.au/about-us/team/

How to select AT?

SETT

Self. Environment. Task. Technology.

Multiple considerations



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Have scooter, will travel

Mr Poon

- Stroke survivor
- Not able to ambulate independently in the community before getting his scooter
- Able to travel independently using the scooter and managed to secure a job as a kitchen staff (support) in a Thai restaurant to do food preparation

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Getting back to work with some AT help

Ms Ziana, has visual impairment

- Glaucoma and tunnel vision
- Found an admin job which requires her to do reading and report analysis;
- Went through AT assessment – Open Book + Pearl Camera or JAWS was recommended to assist her in performing the tasks

Mr Norman, has physical disability

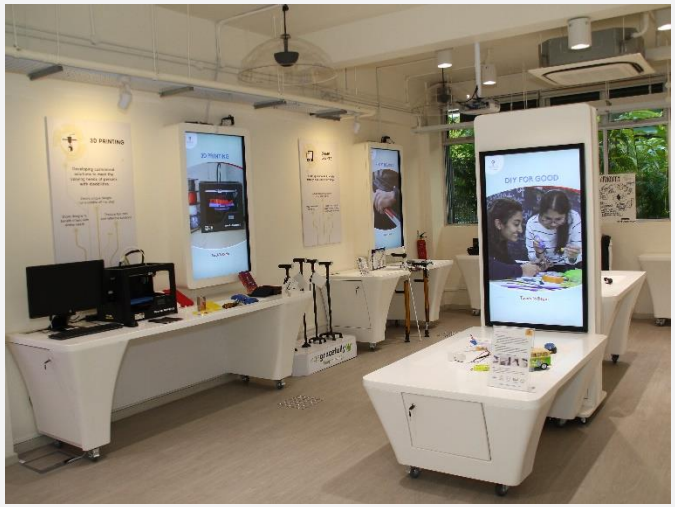
- Amputee with prosthetic legs
- Found an operation assistant job where the working environment is not wheelchair friendly
- Used wheelchair to move around in the community and prosthetic leg to transport himself to office

Mr Ng, has physical disability

- Amputee with prosthetic leg;
- Found a sales job and bought a modified car with left foot pedal for accelerator to move around

TECH ABLE

ENABLING THROUGH ASSISTIVE TECHNOLOGY



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Welcome to Tech Able

AT resource centre that promotes awareness and adoption of AT

Singtel
Enabling Innovation Centre

ST Engineering
Enabling Technology Centre

TECH ABLE
ENABLING THROUGH ASSISTIVE TECHNOLOGY

Provides information and resources on assistive and infocomm technologies (IT)

Promotes the adoption of AT/IT among persons with disabilities and employers

Leverages technology for more training and employment opportunities for persons with disabilities

Located at the Enabling Village, Tech Able is an integrated assistive technology space that is jointly managed by SG Enable and SPD.

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spd
Serving people with disabilities since 1964

Tech Able Web App

Visitors to Tech Able are encouraged to use the web application to find out more information as they self-explore Tech Able

Scan the code above to access the web app, or go to https://techable.sgenable.sg

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“For people without disabilities, technology makes things easier.

For people with disabilities, technology makes things possible.”

Mary Pat Radabaugh, Director
IBM National Support Center for Persons with Disabilities
1988

Contact me

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For Information Deck on Tech Able and Assistive Technology

www.slideshare.com/techable

For Tutorials or Videos on Assistive Technology

http://bit.ly/2iJSNCF

For Latest News and Activities

www.facebook.com/TechAbleSG

https://techable.sgenable.sg