BUILDING INNOVATION SKILLS FOR YOUTH –

.. INTEL EXPERIENCES

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INNOVATION IN WORLD & SKILLS CRISIS

- Changing Work and Workforce
- Jobless Growth
- Skills for the future

25-35% of inequality can be explained by differences in human capital & skill endowments

EXPERIENCE #1 : INNOVATION HUBS FOR YOUTH IN ASIA

- Skills to Action: Ideation on SDG + Design Thinking + Tech Creation + Rapid Prototyping + Take to World
- In School tinker labs, Vocation schools, Higher ed labs and Community innovation spaces.
- Complete Programmatic Solution

PPP Impact example :

Intel 10 Tinker Labs in India (1000 Innovators per year – 100 creations to community).

Scaling to 1500 Labs by Government (NITI Aayog) to train 1m youth as 5 year model.

SINGAPORE EXAMPLE

20 Schools. 1200 Youth & 300 Inventions.
Top 14 Tech Creations in National Showcase.

Projects in National Showcase

SDG 3 : Promote Good Health & Well being for all ages

Mecatron Wheelchair

A self-guided motorized wheelchair, powered by Intel NUC, empowering elderly users to navigate autonomously, ability to detect and avoid obstacles to ensure user's safety and trigger alerts to caregiver to provide additional assistance.

Theme : Assistive Technology

Viband

A wearable device that identify sounds and translate the sound heard into text on LED screen and vibrate to notify the hearing impaired on their surrounding sounds

Theme : Assistive Technology

Projects – *contd..*

SDG 3 : Promote Good Health & Well being for all ages

Cardiac Arrest Band (CAB)

A wearable device for the elderly to monitor and detect abnormal heart activity and trigger alerts by sending data of any heart abnormalities to his/her caregivers' phone via Bluetooth.

Theme : Assistive Technology

Epileptic Seizures Detection Device

A wearable device for epilepsy patients to detect abnormal heart rate activity to preempt patient/caretakers on potential seizure attack.

Theme : Assistive Technology

Fall Detector Watch

The only All-Girls team at showcase

A wearable device that detects the fall of an elderly and alerts the care giver when the elderly is unsupervised

Theme : Assistive Technology

National Showcase – *contd..*

SDG 3 : Promote Good Health & Well being for all ages

iGou (aka a guide dog)

A robotic guide dog with adjustable stick for the visually impaired, pre-programmed to detect obstacles and manoeuvre around it and alert the users to stop when it sense a hole in front

Theme : Assistive Technology

Robotic Prosthetic Arm

A prosthetic hand prototype with motion sensing by a glove . Users will wear a glove and moving fingers will move the servos to act like muscles using flex systems. Future plans to explore using EMG Sensing.

Theme : Assistive Technology

iClock

An assistive device to remind dementia patients a step by step guide to conduct their daily living tasks through an alarm & inbuilt checklist. Device also woks with a synchronized medicine dispenser to remind user to take timely medication

Theme : Assistive Technology

National Showcase – *contd..*

Elderly Walker

SDG 11 : Sustainable Cities and communities

An improvised walker for elderly using motion & sound sensors that detect and trigger alert to user/caregiver on a potential fall, assisting the elderly to seek help

Theme : Assistive Technology

Paper Recycling Machine

SDG12 : Responsible Consumption and production

An inexpensive paper recycling machine that can reproduce sheets of clean paper

Theme : Environment

National Showcase – *contd..*

SDG 4 : Ensure an inclusive & equitable Quality Education

Mecatron Autonomous Robot

A fully autonomous base Robot with path planning, vision detection capabilities using Intel NUC.

Theme : Autonomous learning vehicle

Knowledge Vending Machine

This contraption is designed to make learning fun & entertaining. It accept aluminum cans with attached questions & fun facts info. When users walks near the machine, a "can" of fun facts info will drop and student can read and learn from the text on each can.

Theme : Edutainment

National Showcase – *contd..*

SDG 9 : Industry, Innovation, Infrastructure

Safe Bandsaw

A bandsaw with an added feature that shutdown the machine when the fingers or unintended objects is close to the cutting blade, intended to prevent injuries & to create an inclusive makerspace to enable PWDs to experience making

Theme : Assistive Technology

BAS – Bus Announcement System

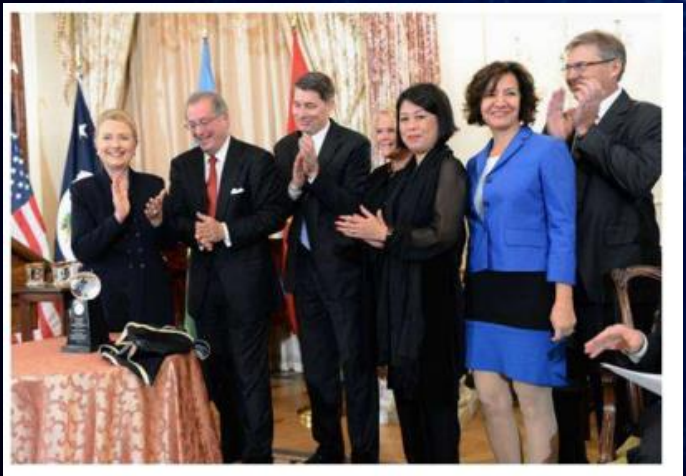
The Bus announcement system designed to be implemented at bus stops, using RFID technology to detect bus number and to alert the visually impaired

Theme : Assistive Technology

EXPERIENCE #2 : VIETNAM HIGHER ED

Intel and USAID driven alliance - HEEAP

cadence · DANAHER · PEARSON · USAID · SIEMENS · NATIONAL INSTRUMENTS · SHTP · intel



U.S Secretary of State's Award 2012

8 years of H Ed reform

40m $ + by alliance partners.

8 institutions.

2000 + faculties.

SYNTHESIS OF JOURNEY SO FAR..

Enabling conditions :

Leadership Awareness,
Toolkit,

Impact curation,

Value chain

Replicability :

Scale (PPP beyond pilot,
Impact platforms for impact),

Sustenance (local ownership & tech ecosystem stake)

Critical Arrangements :

Building communities,

Ops excellence,

local implementation agencies

Lessons learnt :

Open innovation

Local ambassadors

Let's change the conversation from

"Learn to Work"

To

"Work to Learn"!