EDUCATION AT THE CORE OF IMPACTING CHANGE

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Technology transforms everything...





BY 2020



THE COMING Flod of data

1. http://www.cisco.com/c/en/us/solutions/service-provider/vni-network-traffic-forecast/infographic.html

2.<u>http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.html</u> 3.https://datafloq.com/read/self-driving-cars-create-2-petabytes-data-annually/172

4.<u>http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.html</u> 5.http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/<u>Cloud_Index_White_Paper.html</u>

The New Face of Competition...



industry will be replaced with new generation of firms in 2018

3.4% higher GDP in 2020 in developing economies, as a result of +10 uplift in digital density

USE OF TECH ACCELERATES PROFITS WITHOUT ADDITIONAL RESOURCES

Industry Average **Digitalized Firm**

+26%

+12%



+9%





Source: Accenture

Innovation drives sustainable advantage

GERMANY - INDUSTRY 4.0

Smart factories use embedded production technologies to dynamically optimize production processes

6400 M investment -July 2015

For the second state of the second sta

SILICON VALLEY GROWTH IN OUTPUT 1993 - 2013



HEADWINDS TO CHANGE

NOTE IS

THE FUTURE IS WHAT YOU



Our generation had to "find" a job. But, more than ever, today our kids will have to "invent" a job.

Every child needs to be "innovation ready" – knowing how to add value to whatever they do.

Thomas L. Friedman

Global Skills Gap

Demand is outpacing skilled graduates worldwide.



of today's jobs require technology skills Within the next decade, demand for these skills will jump to

1. *Technology skills training critical to employ low-income youth*, September 2014 https://www.devex.com/news/technology-skills-training-critical-to-employ-low-income-youth-84377

Skills Building for the Innovation Ready Generation...



Coding, Robotics and Physical Computing

- Address a wide range of ages, capabilities and interests
- Cross disciplines
- Provide an opportunity for properly designed rich interaction and engagement
- Provide an opportunity to introduce different facets of technology

SUPPORTING DEVELOPMENT OF REQUIRED SKILLS

Activating the Innovation Generation...

EDUCATION \rightarrow ENTREPRENEURSHIP \rightarrow EMPLOYABILITY

Increase Country Competitiveness

Enhanced teaching & learning for <u>all</u>

Build Required Competencies

New job skills & re-skilling

Boost Economic Development

Grow ICT industry base, jobs & revenue

Enhance Citizenship & Social Cohesion

Narrow divide, include rural, sustain locally

Intel Committed to Making Students Future Ready

Intel[®] Education 2 in 1 Transform learning and teaching. Enable student success in school and beyond

learning and teaching

Share classwork and interact with

fellow students and teachers

............

Enjoy the flexibility

and mobility

deal for use on a field trip

r to collect data for a science project

of a tablet

Worry less,

learn more

Set more protection from

drops and spills with the rugged



of a laptop

Connect any hardware

or peripheral easily

Attach a printer, camera, projector to

the USB port for instant acces

COMPUTERS

GENUINO 101 BOARDS powered by Intel® Curie

CREATE A MAKERSPACE

3-D PRINTER AND LASER CUTTER

PROGRAMMING, DESIGN, AND PRODUCTION SOFTWARE

SIMPLE TECH SUCH AS CIRCUIT PENS, CONDUCTIVE THREAD, AND MODULES

BASIC MATERIALS SUCH AS PAPER, PENS, AND KNITTING NEEDLES

EMPOWER STUDENTS TO BECOME INNOVATORS AND PROVIDE THE OPPORTUNITY TO BE ENTREPRENEURS

Worldwide Trends in Bringing Coding/ Programming and Maker Spaces to Education



The **US** Department of Education is launching a "make over" challenge to create more makerspaces in schools **UK** government investing **£500,000** to train teachers in software

to In Australia, computer coding and digital literacy to be taught in every primary and secondary school In PRC, Ministry of Education, sponsors a China-US Young Maker Competition. In 2015, organizers saw large growth in participants.



HAPPENING TODAY....

15 EU COUNTRES integrated coding into their school curriculum; 9 at primary, 12 at upper secondary level.

MILLON BOARDS to be donated to **11-year-olds in UK** by BBC, along with coding-based programs and activities

INNOVATION ENVIRONMENT TODAY IN AFRICA

IMPROVE SKILLS AT K12 IN ORDER TO IMPROVE FUNNEL GOING INTO HUBS

80 TECH HUBS Across Africa

LOCAL SUCCESSFUL Startups

Intel[®] Education: An Experienced Collaborator

- Research-based: Our approach is based on scientific research, vetted by educational professionals and evaluated in real-life settings for over 15 years
- Committed: More than USD 1 billion invested over more than a decade
- Extensive: Programs in more than 100 countries, over 15 million teachers trained
- Collaborative: Bringing together governments, NGOs and technology companies worldwide
- Effective: Global perspective & experience, industry-leading technologies and solutions



Rapidly developing technologies require nations to be competitive at digital transformation.

We need our youth to have the skills & tools to prepare as future innovators.

Education needs to embrace and adapt to technological trends by integrating coding, programming and maker movement into the curriculum and classroom.

http://www.intel.com/education



Education