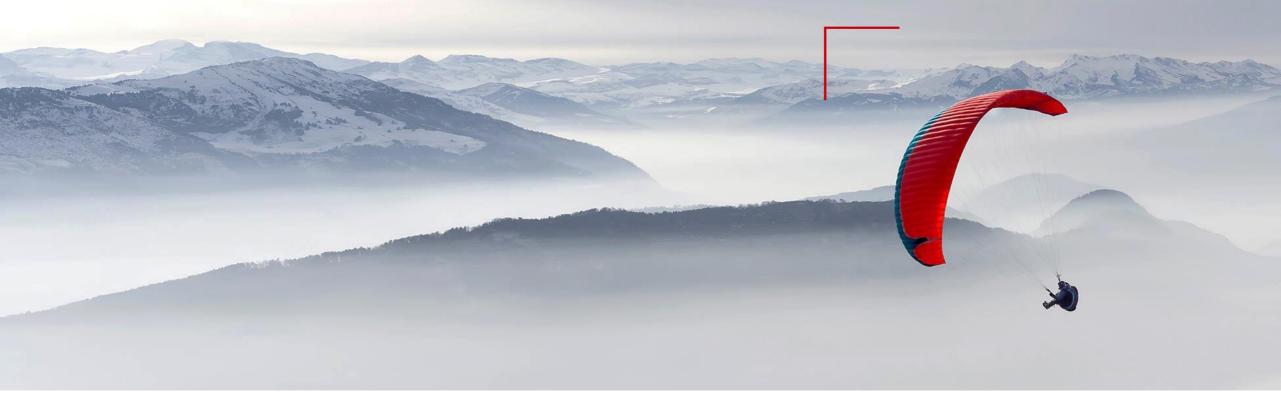
# Developing ICT Talent to Accelerate Digital Transformation





# The 4th industrial revolution is accelerating our pace towards an intelligent world

The 4th industrial revolution



Digitalization across industries

US \$11.5 trillion globally, equivalent to 15.5 percent of global GDP (2016)

Transportation Finance Professional services

2.9 trillion Social services6.4 trillion Manufacturing1.1 trillion Other

Digital opportunities in 2025

Sources: Huawei GIV 2025, Digital Spillover

Intelligent world



All things intelligent

Big data and AI power new applications



All things sensing

Sensing the physical world and mapping it with digital signals

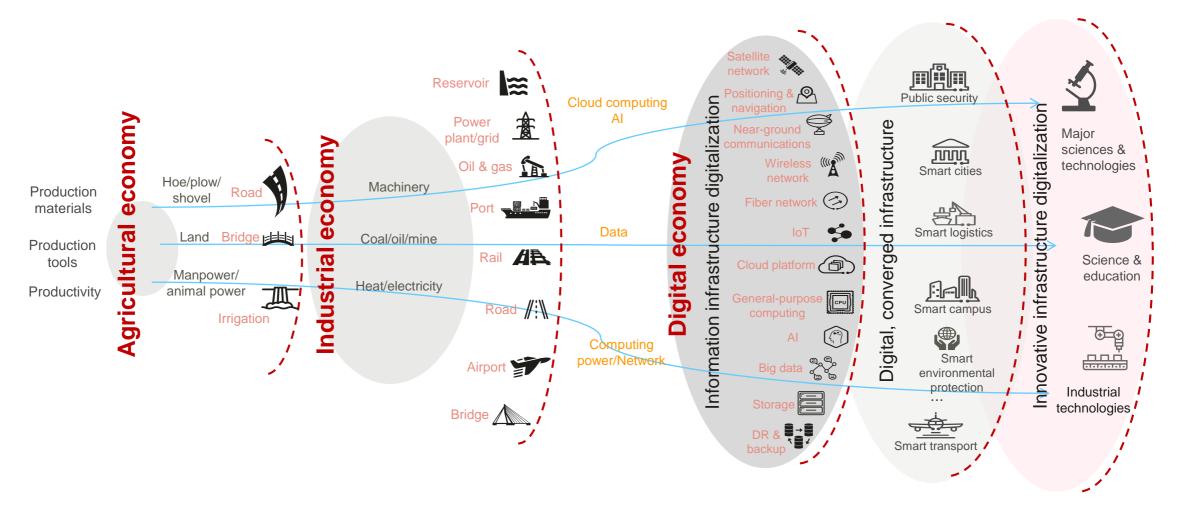


All things connected

Data goes online to power machine intelligence



# Core factors of production such as data and computing power are triggering industry transformations and driving new economic models





## 170+ countries have digital strategies

#### UK

- Digital: Digital Strategy, Digital Charter
- 5G: Next Generation Mobile Technologies: A 5G Strategy for the UK
- AI: Industrial Strategy AI Sector Deal

#### **France**

- · Digital: Digital France
- 5G: 5G An ambitious roadmap for France
- · Al: National Strategy on Al

#### South Korea

- Digital: Manufacturing Industry Innovation 3.0
- 5G: Mobile communications development strategy to launch 5G commercial services in 2020
- AI: AI R&D strategy

#### Japan

- Digital: White Paper on Manufacturing Industries
- 5G: Commercial launch of 5G in 2020
- Al: Al Technology Strategy

Thailand: Thailand 4.0

Malaysia: Shared Prosperity Vision 2030 Indonesia: Digital Indonesia, National Al

Strategy

**Philippines:** Philippine Digital Transformation Strategy 2022 **Singapore:** Smart Nation 2025

#### Germany

- Digital: Industry 4.0, Digital Strategy 2025
- 5G: 5G Strategy for Germany
- Al: Key Points for a Federal Government
  Strategy on Artificial Intelligence, Al made in
  Germany



#### Russia

- Digital: Digital Economy Strategy
- Al: National Strategy for the Development of Artificial Intelligence for the period until 2030

#### China

- Digital: Digital China, Broadband China, Internet+, New Infrastructure
- **5G:** 5G has been listed as a strategic emerging industry in the 13th Five-Year Plan
- Al: Next-Generation Artificial Intelligence
  Development Plan



- · Digital: Digital Canada 150
- Al: Pan-Canadian Artificial Intelligence Strategy



170+ countries with digital strategies

**50+** countries have AI strategies

GDP 1% ↑ as ICT investment 20% ↑



- Digital: Strategy for American Leadership in Advanced Manufacturing, Industrial Internet
- 5G: National Security Strategy; 5G deployed nationwide
- Al: Al Initiative; House Select Committee on Artificial Intelligence appointed



#### Saudi Arabia

- Digital: Saudi Vision 2030
- AI: National Data and AI Strategy

#### UAE

- Digital: The UAE Centennial 2071
- AI: National Artificial Intelligence Strategy 2031

#### India

- Digital: Made in India, Digital
- Al: National Strategy for Artificial Intelligence

#### Brazil

- Digital: The Brazilian Digital Transformation Strategy
- Al: National Al Strategy



## Future will see gap in ICT talent

## Urgent demand for ICT talent

Talent gap

## Quantity

A World Bank study estimated that there will be a **10-million** ICT talent gap in the next decade.



#### Structure

There is a lack of high-end innovative talent, applied talent, and professional talent.



#### **Emerging fields**

70% of the ICT talent gap will be in emerging fields such as cloud, big data, IoT, and AI.

## Higher ICT talent requirements



model

Competence

#### Integral skills

Business and technical talent need to collaborate. Skills development is comprehensive, focused on both industry know-how as well as business analysis and decision-making.



### **Project experience**

Personnel need to possess extensive project experience and the ability to cope with complex technical situations.



#### **Professional background**

Staff receives systematic career coaching and obtain valuable authoritative certificates.

Continuous network evolution

Technological innovation and upgrade

Increasingly diverse applications



## Supporting the sustainability of the digital economy

Challenges inproving creating (innovation) of digital technologies

Talent: Lack of highly productive local talents with advanced digital skills due to insufficient push in technology upgrading, education reform or incentives to retain talents

Funding: Not attractive to venture capitalists due to small potential markets or poor business environment; or lack of government funding

Regulation: Monopoly/oligopoly still exists due to insufficient market competition

Innovation environment: Lack of an atmosphere/culture/collaboration mechanism conducive to entrepreneurship, such as an innovation hub that fosters technological entrepreneurship

Full findings of the study to be released on September 29, 30

Bridging the digital gender gap

Promote the recruitment of women in jobs related to the digital economy and in higher productivity occupations. Policies and programs for training and accreditation and digital inclusion for women and young people need to be promoted.

**Bridging economic gaps** 

It is also essential to promote the development of basic digital skills, not only during basic education, but also as a central part of lifelong learning strategies (UNESCO, 2021).

(Economic Study of Latin America and the Caribbean Labor dynamics and employment policies for a sustainable and inclusive recovery beyond the crisis of COVID-19, ECLAC, 2021)

## The Digital Agenda for Latin America and the Caribbean (eLAC2020)

## 7 Areas

1. Digital infrastructure, 2. Digital transformation and digital economy, 3. Regional digital market, 4. Digital government, **5. Inclusive Digital Culture and digital skills**, 6. Emerging technologies for sustainable development, 7. Governance for the information society,

# Objectives in area 5:

Inclusive
Digital
Culture
and digital
skills

Objective 15: To promote the development and incorporation of digital and computational thinking skills in teaching-learning processes, by updating curriculum content, according to the capabilities that will require activities of the future.

Goal 16: Strengthen advanced digital, technical and professional skills, as well as provide incentives for companies and governments to continuously train their workers and improve productivity and efficiency.

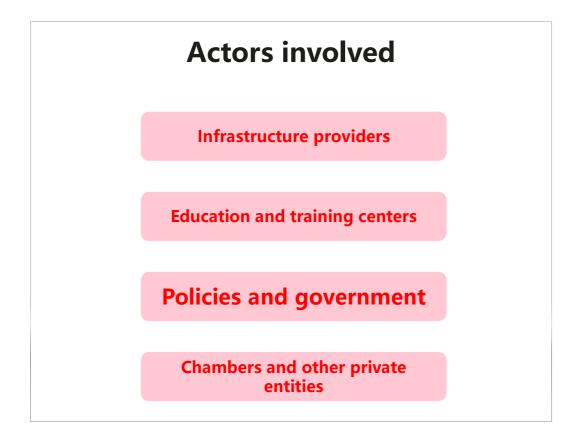
Objective 17: Promote the production, supply and use of digital content, goods and services as a necessary condition for the inclusion of disabled and elderly people in the information society, especially for work, education, access to justice, public services and smart cities.

Objective 18: Massify access to digital services and the production and supply of content, leaving no one behind.

Goal 19: Promote a digital culture that encourages inhabitants to develop digital skills and competencies for the innovative, safe and responsible use of ICT for peaceful online coexistence.



## Integrated approach that encompasses different aspects and actors





ECLAC (2018)





# Talent Ecosystem

Education

Industry

Public



## Building a talent ecosystem and improving digital skills for the society sustainable development

## **Education Public Industry** Cultivate digital talent Promote digital literacy Align industry and academia Enhance talents sustainable competitiveness Facilitate the industry digital transformation Committed to a fair and high quality education Huawei ICT academies: 1500+ Clients: 680+ ▶ HALPs: 100+ • Huawei ICT academy instructors: 3000+ Huawei training instructors: 800+ • Huawei certified systems Instructors: 1000+ Job fairs: 100+ Training centers: 45+ MOOCs: 240+ • The 5th Huawei ICT Competition: 82 countries, Talent development projects: 170+ Certified partners: 130,000+ 2000+ universities, 150,000+ students Developed courses: 2000+ Certified publics: 50,000+ Certified students: 110,000+ Certified customers: 20,000+

Huawei Talent Online Platform + Huawei Certification/Courses/Textbooks + Huawei ICT Competition/Job Fair





## 3. Talent Ecosystem

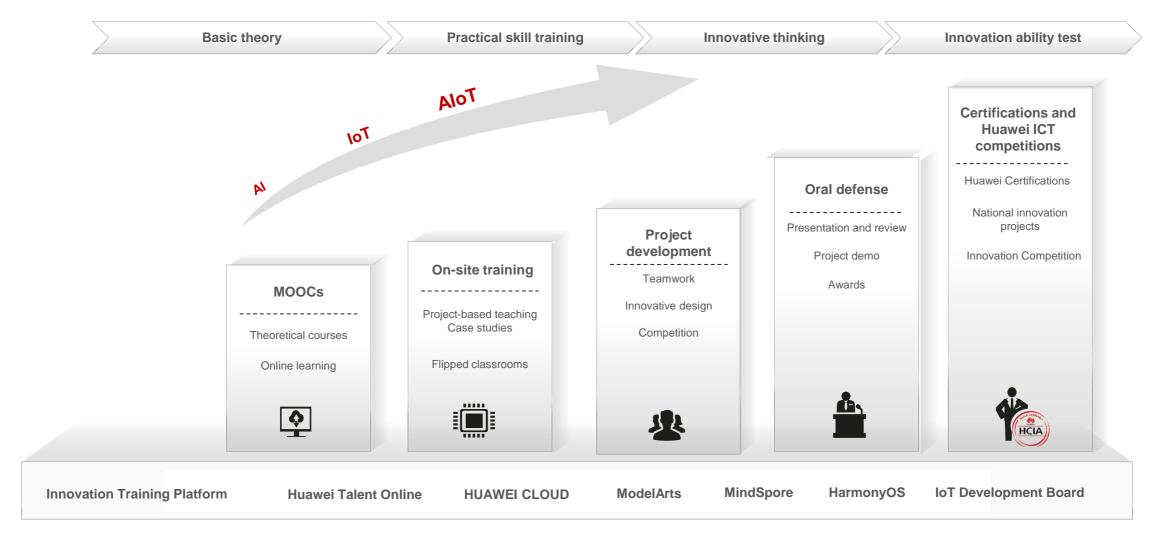
Education

Industry

Public



## Driving innovation and entrepreneurship in colleges and universities





## Promoting educational equity with international organizations

# UNESCO Promote projects and develop expert resources United Nations Educational, Scientific and Cultural Organization Redunt APPROXIMENT United Nations Cultural Organization Redunt APPROXIMENT UNITED United Nations Cultural Organization In Education In Education





- ICHEI IIEO Platform Cooperation
- · IITE Develop courses in English and other languages
- · Signed the TECH4ALL framework agreement
- · UNESCO Africa office Africa1000 Project

# ITU-D Deliver training on AI and collaborate on capability standards TUAcademy





- · Signed a framework agreement with ITU-D in 2019
- · Delivered two Al training sessions at Geneva HQ
- Enabled regional CoE training center and cooperated on course resources











- · Became a member of in 2019
- 2019 GEDC Industry Forum in Paris and IFES Annual Conference in Chile
- · Co-hosted two "Learn ON" online education seminars in 2020



## Huawei ICT Competition: Promoting learning and teaching







## 3. Talent Ecosystem

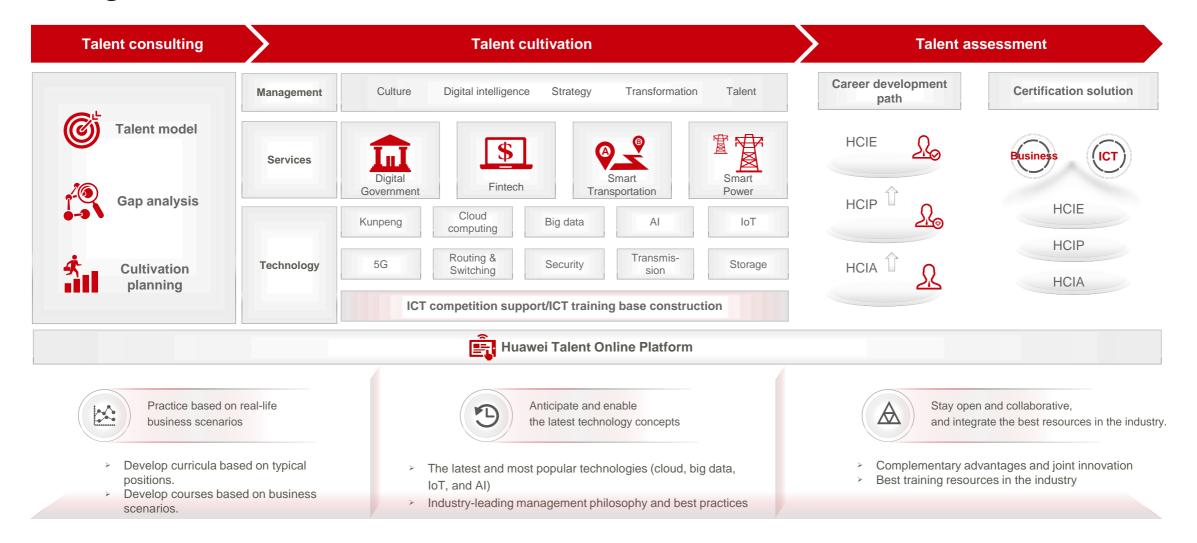
Education

Industry

Public



# Huawei Talent development service: Meeting the industry demand for digital transformation talent







## 3. Talent Ecosystem

Education

Industry

Public



## We believe in public-private synergies in LAC, for LAC

## **UNESCO** Regional Office of Education for Latin America and the Caribbean

Letter of Intent

We assume our responsibility to work under the guidance of international organizations to help develop digital talent in Latin America.



## 1,000 talents for Digital Development in Latin America and the Caribbean

1000 scholarshi ps Through public-private synergies, we seek to create a talented Latin American ecosystem that facilitates the growth and transformation of the industries in the region.





## Local initiatives to meet immediate needs 2021

## Colombia

## **ICT Enterprise**

iNNpulsa Colombia and Huawei present the CeNube program, a technological accelerator that aims to support the growth of startups to contribute to a smarter and fully connected Colombia.

33
Supported enterprises



## **Argentina**

## **Equal ICT leadership**

A cycle of talks to make the theme visible and put it on the agenda of the various sectors of society;

A program of international training and certifications to close the digital gender divide.

## 2500

Young women registered to date



## **Central America**

## Free educational material

We support Ayundinga
Foundation with Cloud to bring
virtual education to more boys
and girls in Central America.
Together, we meet in Central
America the need for free, free,
inclusive and quality education,
diminishing the impact of the
pandemic on thousands of
students.

## +12 million

Class visualizations in LAC.



#### Caribbean

### **Seeds for the Future**

Trinidad and Tobago joined in 2016

- 50 students

Jamaica joined in 2017

- 38 students

Guyana joined in 2018

- 3 students

Suriname will join in 2021





## 1,000 talents for Digital Development in Latin America and the Caribbean

1000 scholarshi ps Through public-private synergies, we seek to create a talented Latin American ecosystem that facilitates the growth and transformation of the industries in the region.



## 30 spots per country:

## Online self-study + livestream courses + experts' guidance + HCIA Certification

Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Co-operative Republic of Guyana, Haiti, Jamaica, Santa Lucia, Federation of Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.



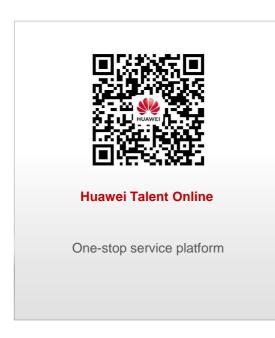


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# Thank you.

Bring digital to every person, home, and organization for a fully connected, intelligent world.

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