



**2022-23**

# INTERNATIONAL MAYORS FORUM

**Dakar, Senegal**  
25-28 April, 2023



[https://unosd.un.org/events/2022\\_IMF](https://unosd.un.org/events/2022_IMF)



DEPARTMENT OF  
**ECONOMIC AND  
SOCIAL AFFAIRS**





**United  
Nations**

Department of  
Economic and  
Social Affairs



**Agenda of 2023 International Mayors Forum  
25-28 April 2023, King Fahd Palace Hotel, Dakar, Senegal**

## **Session 5**

# ***“SDG 9 – Resilient Infrastructure, Inclusive and Sustainable Industrialization, and Innovation”***

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**Centre for Socio-Eco-Nomic Development**

# Cities are key for sustainability



## 11 SUSTAINABLE CITIES AND COMMUNITIES



UNIVERSITY OF  
SASKATCHEWAN

SUSTAINABLE  
DEVELOPMENT GOALS

[un.org/sustainabledevelopment/](https://un.org/sustainabledevelopment/)



2 BILLION PEOPLE

DO NOT HAVE ACCESS  
TO WASTE COLLECTION  
SERVICES

1 OUT OF 4 URBAN RESIDENTS  
LIVE IN SLUM-LIKE CONDITIONS (2018)



ONLY HALF (53%) OF URBAN RESIDENTS HAVE  
CONVENIENT ACCESS TO PUBLIC TRANSPORT (2018)



9 OUT OF 10 URBAN  
RESIDENTS  
BREATHE POLLUTED AIR



150 COUNTRIES  
HAVE DEVELOPED  
NATIONAL URBAN  
PLANS, WITH ALMOST  
HALF OF THEM IN THE  
IMPLEMENTATION  
PHASE

Cities = 80 % of  
global GDP.

Cities = 70 % of  
global Greenhouse  
gas emissions.

Cities = 60% of the  
world population  
(2030). 1 out of 3  
in cities with  
at least half a  
million inhabitants.

# SDG 9: Infrastructure, Industrialisation & Innovation



**TARGET 9-1**



DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURES

**TARGET 9-2**



PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION

**TARGET 9-3**



INCREASE ACCESS TO FINANCIAL SERVICES AND MARKETS

**TARGET 9-4**



UPGRADE ALL INDUSTRIES AND INFRASTRUCTURES FOR SUSTAINABILITY

**TARGET 9-5**



ENHANCE RESEARCH AND UPGRADE INDUSTRIAL TECHNOLOGIES

**TARGET 9-A**



FACILITATE SUSTAINABLE INFRASTRUCTURE DEVELOPMENT FOR DEVELOPING COUNTRIES

**TARGET 9-B**



SUPPORT DOMESTIC TECHNOLOGY DEVELOPMENT AND INDUSTRIAL DIVERSIFICATION

**TARGET 9-C**



UNIVERSAL ACCESS TO INFORMATION AND COMMUNICATIONS TECHNOLOGY



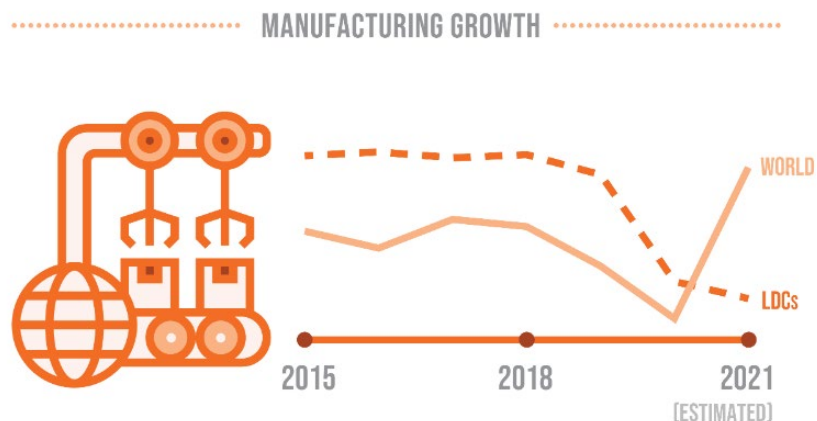
## My Focus

**“Digital Transformation & Partnerships as Pathways to Achieve Inclusive and Sustained Industrialisation in the cities and urban areas” with special focus on the larger cities in the LDCs**



# De-industrialisation?

## GLOBAL MANUFACTURING HAS REBOUNDED FROM THE PANDEMIC BUT LDCs ARE LEFT BEHIND



**1 IN 3** MANUFACTURING JOBS  
ARE **NEGATIVELY IMPACTED** BY THE CRISIS

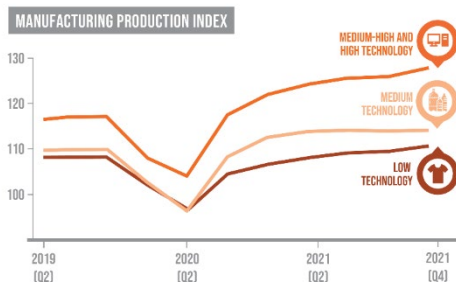


(Source: The SDR 2022,  
<https://sdgs.un.org/goals/goal9>)



# SDG 9 Needs to be Prioritised for Urban Development

**HIGHER-TECHNOLOGY INDUSTRIES**  
ARE FAR MORE RESILIENT IN CRISES  
THAN THEIR LOWER-TECH COUNTERPARTS



**SMALL-SCALE INDUSTRIES**



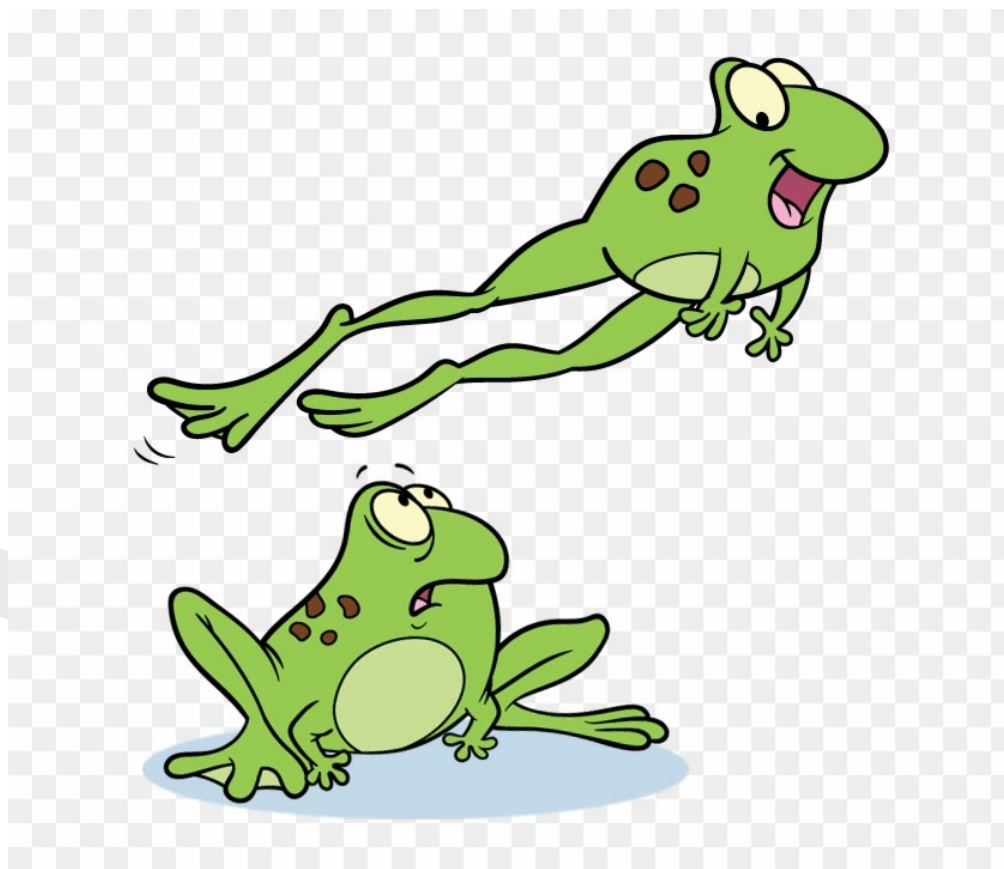
LACK ACCESS TO FINANCIAL  
SUPPORT FOR RECOVERY



**ONLY 1 IN 3 SMALL MANUFACTURERS**  
ARE BENEFITING FROM A LOAN OR LINE OF CREDIT  
(2020-2021)

THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2022: [UNSTATS.UN.ORG/SDGS/REPORT/2022/](https://unstats.un.org/sdgs/report/2022/)

## Both quantity and quality







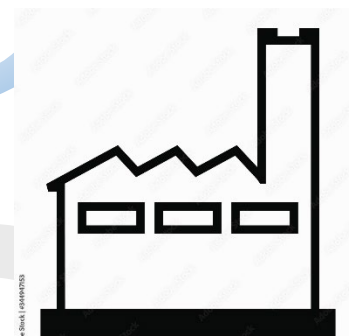
# Strengthening of Productive Capacities in the Developing Cities: An Imperative

## □ What are productive capacities?

- ❖ Productive resources (including human and talents)
- ❖ Entrepreneurial capabilities
- ❖ Production linkages (supply and value chains)

## □ Different stages of capacities & economy

- ❖ Factor driven
- ❖ Efficiency driven
- ❖ Innovation driven

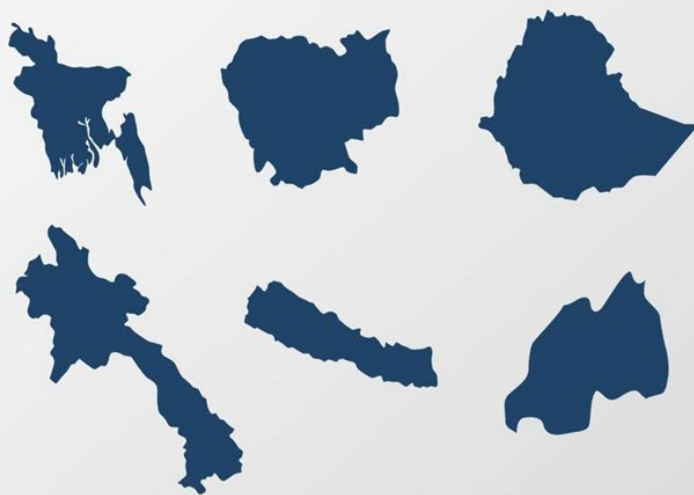


<https://stock.adobe.com/>

# Success Story

□ Since 2000 a few LDC countries have managed their economic transformation successfully.

e.g. Bangladesh, Cambodia, Ethiopia, Myanmar, Lao PDR, Nepal, Rwanda



- ↗ industry
- ↗ modern service sectors
- ↗ ↗ labour productivity

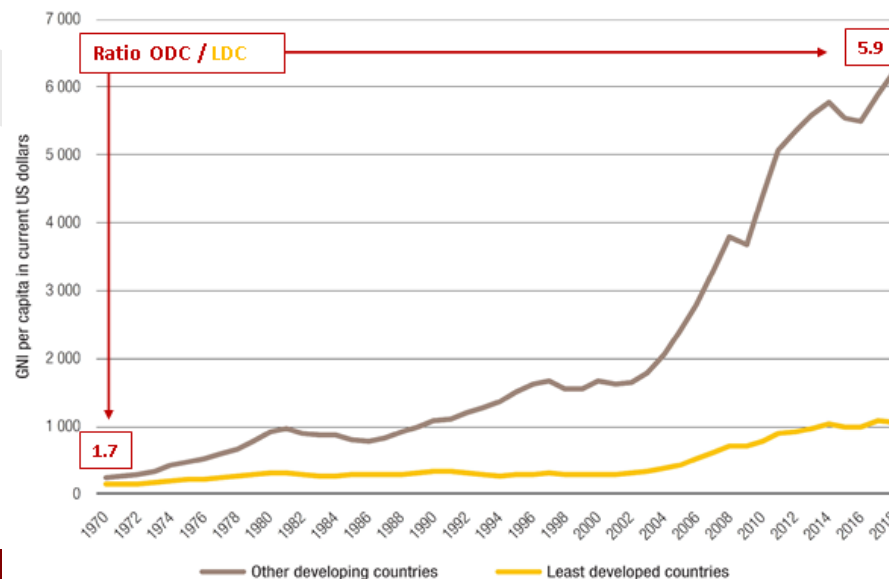
(Source: UNCTAD LDCR 2020)

# Most of LDCs..



- ❑ Low productivity sectors predominate, such as traditional agriculture and traditional services. In turn, they
  - ❖ hold down the standard of living (UNCTAD, 2020 LDCR)
  - ❖ Constrain the country's financial capacity to engage in the SDG transition

GNI per capita gap of least developed countries in comparison to other developing countries, average in current US dollars



(Source: UNCTAD LDCR 2020)

# 4IR contributes to Target 9.2 &



- **Target 9.2**, Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national (local) circumstances, and double its share in least developed countries

# 4IR and ADP



- ❑ **Fourth Industrial Revolution (4IR) = digital transformation of the value creation processes of agricultural production, manufacturing and services at different levels.**
- ❑ **ADP technologies are at the core of smart factories and new production ecosystems that combine hardware (3D printing, robotics, drone), software (AI, ML, data analytics) and connectivity (IOT, cloud computing) in addition to energy generation and storage.**



# International Consensus for Rapid Adoption



- ❑ 2019 **Abu Dhabi Declaration** adopted at the 18<sup>th</sup> General Conference of UNIDO
- ❑ “New technologies associated with 4IR, with both transformative and disruptive potential, offer great opportunities **to advance inclusive economic growth, reduce inequality and contribute to Sustainable Development**, resilience and human well-being, to address climate change and safeguard the environment in the framework of a circular economy as one of the means to achieve sustainable development” (Clause 11).

# Digital Technologies as Potential Accelerators?



- ❑ Digital technologies could make it possible for LDCs to leapfrog development stages by shortening the learning curve. Some examples in Tanzania (drones and medicine), Tanzania (ICT for drug store inventory management)
- ❑ Policy challenge: Prioritising SDG 9 that will increase production capacities and productivity gains while support social and environmental objectives

# Digital Technologies as Potential Accelerators? -2



Digital technologies will strongly influence the development of future productive capacities



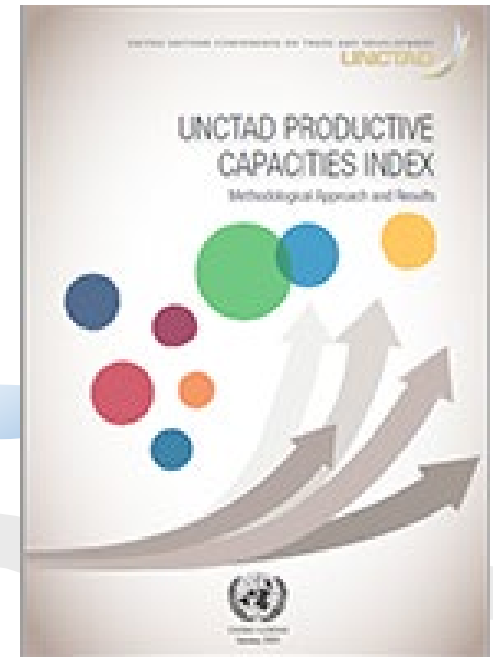
By an large, LDC's hopes to leapfrog did not happen – mobile use increased, but producers' (firms and farms) adoption of ADTs "insipient"

(Source: Rolf Traeger, 2021, Launching of LDCR)

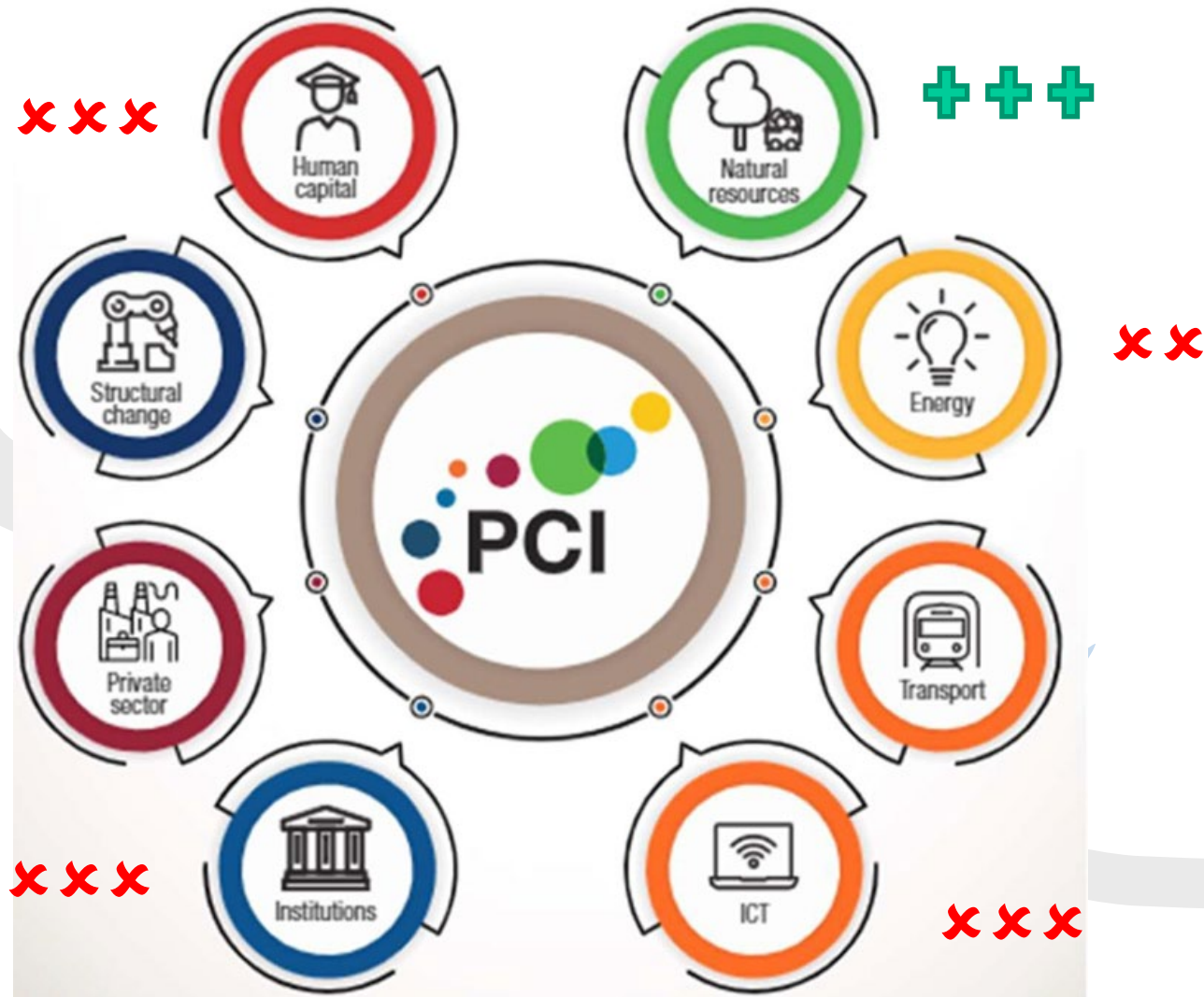
# PCI



- ❑ UNCTAD has developed a Productive Capacity Index (PCI, <https://unctad.org/topic/least-developed-countries/productive-capacities-index>) - first comprehensive attempt to measure productive capacities **in all economies** and construct a multidimensional index that can provide country-specific insights and diagnostics of productive capacity development.



# Weaknesses of PC in LDCs (UNCTAD, 2020 LDCR, based on PCI)





# Policy Dilemmas



- Digital divide and equitable access?
- **General low level literacy and numeric skills?**
- Incremental transformation vs Discontinuous transformation?
- **Push for digitalisation – winners and losers?**
- Youth engagement and participation – STEM + Entrepreneurial capacities versus older workforce
- **S&T poverty (availability, access, human capital, demands) vs other societal needs**
- **Financial resources and win-win partnerships**

(adopted from Forbes  
Sep 19, 2013, 11:07am EDT)

# Good Practices

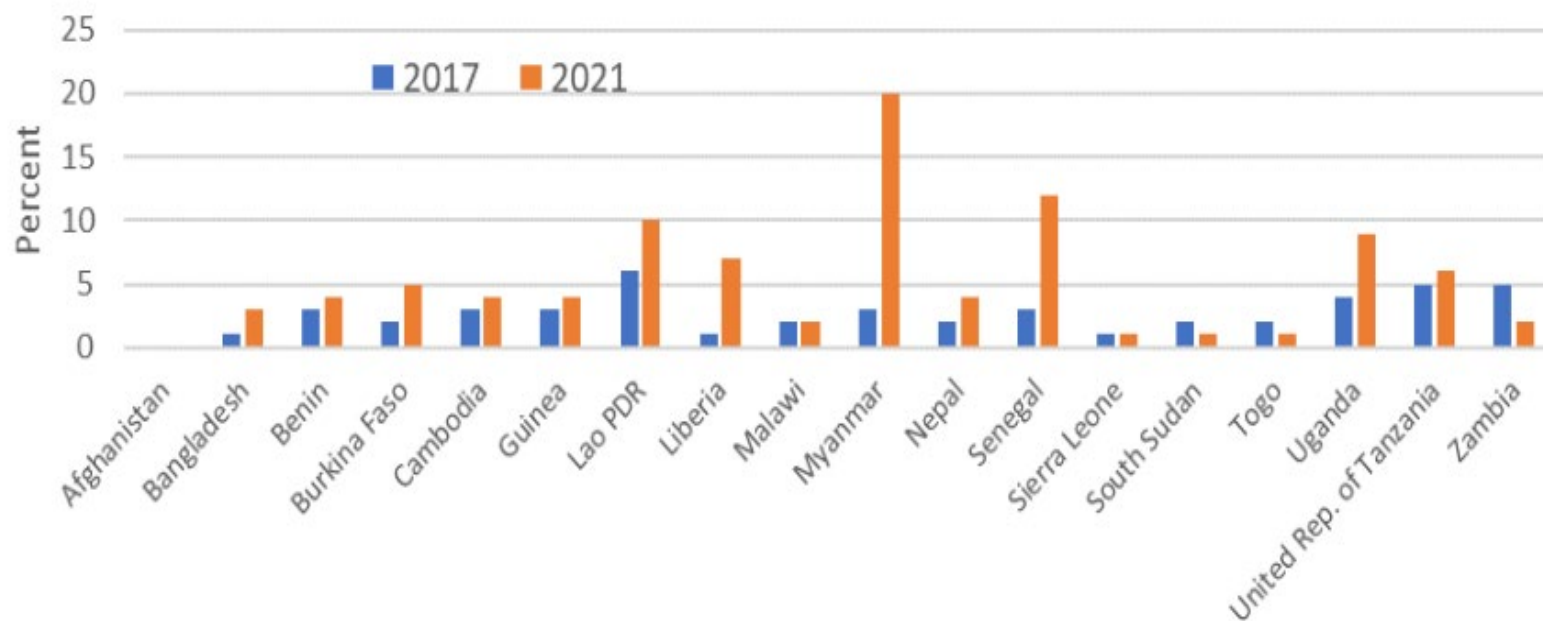


- ❑ Cape Verde – youth skill development coupled with mentoring and business incubation in digital economy
- ❑ Business facilitation – M-PESA, non bank banking service in Africa
- ❑ Innovative business models (SSEOs) & cooperative platforms
- ❑ Targeting women and girls

# E-commerce and Supply Side of Trade



Figure 1: Share of people aged 15+ who used a mobile phone or the internet to buy something online, selected LDCs, 2017 and 2021



<https://www.un.org/technologybank/news/ldc-insight-4-strengthening-digital-capacities-least-developed-countries-even-more-urgent-post>

# Partnerships for Technology Transfer



- ❑ **Target 17.6**, Enhance North-South, South-South and triangular regional and international cooperation on and **access to science, technology and innovation and enhance knowledge sharing** on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a **global technology facilitation mechanism**
- ❑ **Target 17.8**, Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for **least developed countries by 2017** and enhance the use of enabling technology, in particular **information and communications technology**

# Partnerships for Technology Transfer



- ❑ **Target 17.16**, Enhance the **Global Partnership** for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries
- ❑ The elephant in the room is “IPRs” and the role of World Intellectual Property Organisation (WIPO)



# 4IR contributes to Target 9.2



- ❑ **Target 9.2**, Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

# The Enabling Conditions for Launching 4IR



1. Digital skill development through quality education & TVET (SDG 4)
2. Equitable access to economic opportunities, e.g., business license, export permit and decent work/wage (SDG 8)
3. Supporting SME development through designated authority, especially for the ones engaged in production of transforming raw materials into products
4. Equitable access to ICT infrastructure

(Source: Saner-Yiu, 2021, UNIDO Working document on Fourth Industrial Revolution Strategic Framework )

