EDUCATION CONVERSATIONS

The vision of the industry and how they visualise the skills development requirements.

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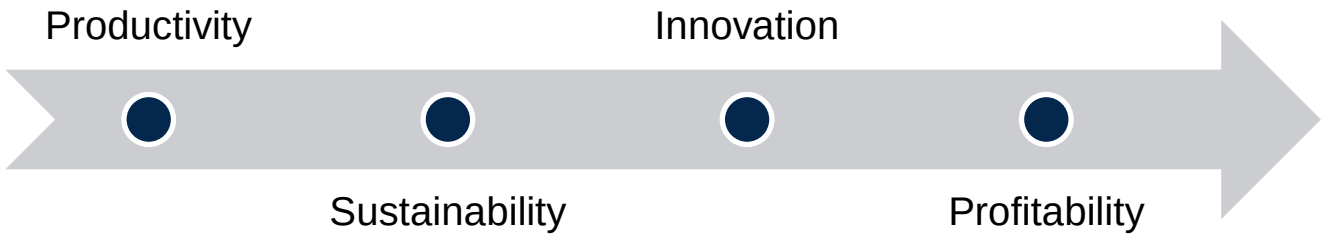
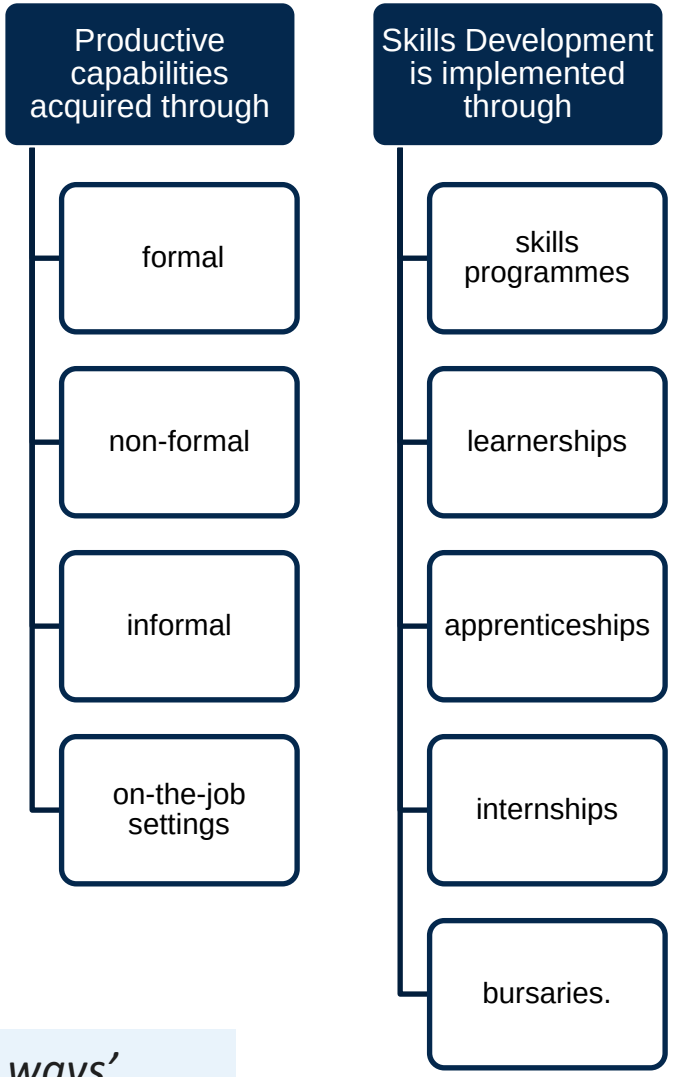
Presentation Outline

- Industry vision
- Productive capabilities
- Labour Status quo
- Why Skills development
- Views on skills development
- Traditional Skills planning
- Different types of Skills
- Example of green economy discipline gap analysis

Industry Goals





'The future belongs to those who learn more skills and combine them in creative ways'

Productive Capabilities

- **Sustain** current operations,
- **Build** for the low carbon future and
- **Access** new opportunities

- assess jobs potential looking at a country, company and technology level
- establish the skills gap relating to decarbonization pathways and sustainability
- develop a competency map of existing skills vs future need skills and put together a roadmap that will guide skills journey
- skills development requires a roadmap with clear milestones to ensure a labour force that is future fit for the green economy.

Labour Status Quo

- About 23 % of firms cite **workforce skills as a significant constraint** to their operations. In some African and Latin American countries, this share rises to 40–60 %.
- Most African and most South Asian countries **do not have data on workforce skills**.
- Employers complain about a **lack in soft skills** among graduates from tertiary education institutions
- **Changes in education and labour markets amid the global mega trends**, such as automation, action against climate change, the digitalization of products and services, and a shrinking labor force are changing the nature of work and skills demands.
- For e.g. Green Hydrogen, majority of the Labour force (> 50%) has a trade qualification or lower
  - National Senior Certificate employees constitute the largest portion however they have proportionally the fewest job roles
  - Over 66% of the trades qualified personnel is under 40 years of age
  - Over 54% of the trades qualified personnel work as Artisan, these competencies can be transitioned to e.g. renewable energy and hydrogen economy with minimum disruption
  - A combination of on-the-job training and external programmes can be considered
- The higher skilled personnel with **degree qualification has a much higher age** profile, necessitates fit for purpose training

Source: World Bank 2024

Why Skills Development

Preserving employment opportunities

Adapting workforce

Underpinned by continued support of socio-economic value creation opportunities in our host communities

- for increased productivity, private-sector development, inclusive economic growth and poverty reduction.
- to **reduce un- and underemployment** and improve standards of living. Investing in upskilling or reskilling people for jobs of the future **makes economic sense**
- **curriculums to be adjusted** to include green economy aspects
- **effective, sustainable approaches to workforce development** and employment must improve a combination of skills **for employability** of individuals, and at the same time build a sustainable system for **improved private-sector competitiveness**.

Views on skills development

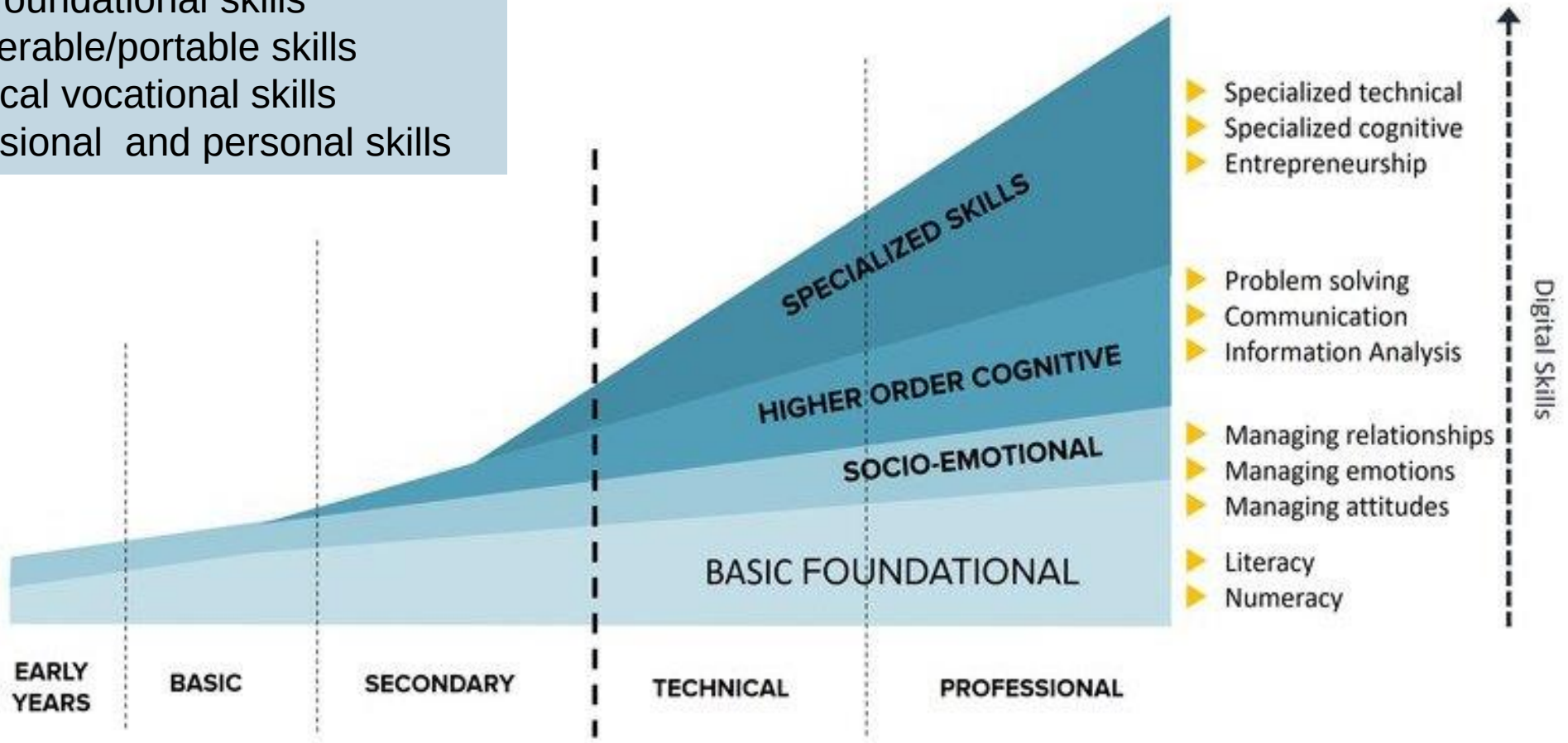
- Some jobs will become obsolete, shifting production locations, urbanization
- Urgent need to prepare for disruptions- automation jobs and increasing demand for higher skills
- Need to improve education and training- reskill and upskill
- Need to rapidly prepare highly skills tech literate workforce -Half the jobs in 10 years time will be new and do not exist today
- Diminishing mining reserves, drop in commodity prices, currency fluctuations, energy reliability, & deteriorating infrastructure
- Issues
  - Data security and privacy- hackers- insufficient talent to implement these changes
  - Loss of control over IP
  - Youth adapt to technology quicker that the education system
  - Shift from training school age leaners to upskilling workforce
  - lack of funding and resources available to implement these programs
  - Access and completion- in Brazil, graduates of vocational programs earn wages about 10 % higher than those with a general secondary
  - Relevance- technical and vocational education and training —which lasts from 6 moths to 3 years gives better paying lobs
  - Efficiency- governance financing and quality impact efficiency
  - Adaptability - rapid pace of technological advancements and evolving labor markets make one quickly outdated
  - Quality- vocational track being a second-best option quality assurance is needed

Traditional Skills Planning and why it's not working

- **pace of change** has changed (technological and scientific) – increased complexity
- **predicting skills in high uncertainty** and rapid technological change is **highly limited** and bound to fail
- mostly **lean on quantitative forecasting** – assumptions of prediction and control
- **ongoing skills mismatch** between the private sector and the TVET college system
- a **diversity of methods** and skills assessment approaches are needed to imagine and anticipate the **emerging labour market landscape**
- calls for **strengthening of skills governance**, skills foresight, and skills anticipation system
- need for a **conducive policy and regulatory framework** to support localization potential of new opportunities

Different types of skills

- Basic foundational skills
- Transferable/portable skills
- Technical vocational skills
- Professional and personal skills



'Repetition is the mother of skill'

World Bank, 2024

Green Economy disciplines gap analysis

An overview of the current skills gap suggests that there are no existing skills to support wind and solar opportunities .

Disciplines for renewables and green hydrogen pathways

- Artisans (e.g. Millwrights, Electricians, Mechanical etc) and Operators (e.g. Water and Waste, Gas pipeline, Tank Farm etc), Maintenance and Inspectors
- Engineers and Technicians (wind, biomass and solar)
- Storage, Transportation and Distribution aspects
- Marketing & Sales
- Data Science and AI (Analysts); Information & Communication Technicians & Specialists
- Environmental positions
    - Waste Management & Recycling
    - Environmental Impact
    - Water Resource Management & Economy(Scientists & Technical)
    - Entrepreneurs (including Social Enterprises)
    - Biodiversity Management
- Scientists and Laboratory positions
- People development (Learning and Talent)
- Energy Management
- Agriculture (Primary - Tertiary)

Soft skill
Client management
Communication (verbal and written)
Conflict management
Critical thinking
Cross-cultural relationships
Decision-making
Emotional intelligence
Flexibility / ability to cope with uncertainty
Interpersonal relations
Leadership
Multi-disciplinary thinking
Negotiation
Positive attitude
Professionalism
Self-confidence
Self-management
Teamwork
Time-management / punctuality
Willingness to learn
Work ethic / Integrity

Thank You