International Labour Organization

Anticipating Future Skills Needs in the Green and Digital Economy:

Practical Tools for Cambodia

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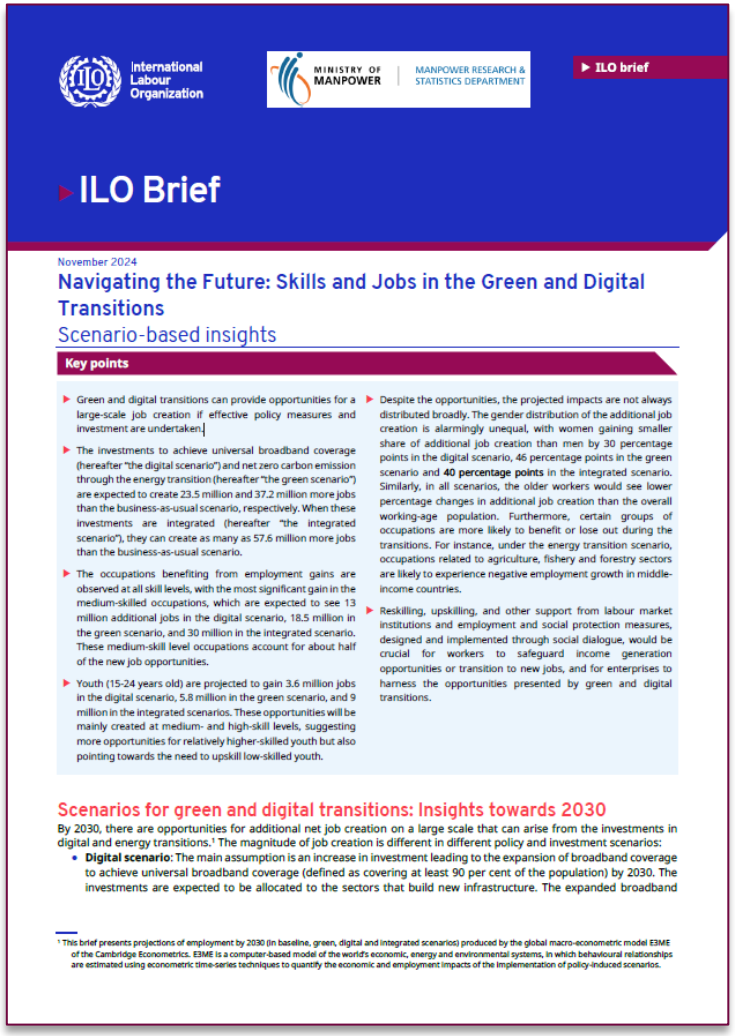
Global Evidence: The Scale of the Green and Digital Transition

- **375 million**
  Jobs created through transition to low-carbon economy in the next decade
- **60% employers**
  Expect digital access and technology to transform their business by 2030
- **9 in10**
  Jobs will require digital skills by 2030

Source: COP30 2025 Jobs and skills for the new economy, WEF 2025, Future of Jobs Report, UNESCO 2023.

Global Research: An Integrated Green and Digital Transition



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MINISTRY OF MANPOWER | MANPOWER RESEARCH & STATISTICS DEPARTMENT

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November 2024

Navigating the Future: Skills and Jobs in the Green and Digital Transitions

Scenario-based insights

Key points

- Green and digital transitions can provide opportunities for a large-scale job creation if effective policy measures and investment are undertaken.
- The investments to achieve universal broadband coverage (hereafter "the digital scenario") and net zero carbon emission through the energy transition (hereafter "the green scenario") are expected to create 23.5 million and 37.2 million more jobs than the business-as-usual scenario, respectively. When these investments are integrated (hereafter "the integrated scenario"), they can create as many as 57.6 million more jobs than the business-as-usual scenario.
- The occupations benefiting from employment gains are observed at all skill levels, with the most significant gain in the medium-skilled occupations, which are expected to see 13 million additional jobs in the digital scenario, 18.5 million in the green scenario, and 30 million in the integrated scenario. These medium-skill level occupations account for about half of the new job opportunities.
- Youth (15-24 years old) are projected to gain 3.6 million jobs in the digital scenario, 5.8 million in the green scenario, and 9 million in the integrated scenarios. These opportunities will be mainly created at medium- and high-skill levels, suggesting more opportunities for relatively higher-skilled youth but also pointing towards the need to upskill low-skilled youth.
- Despite the opportunities, the projected impacts are not always distributed broadly. The gender distribution of the additional job creation is alarmingly unequal, with women gaining smaller share of additional job creation than men by 30 percentage points in the digital scenario, 46 percentage points in the green scenario and **40 percentage points** in the integrated scenario. Similarly, in all scenarios, the older workers would see lower percentage changes in additional job creation than the overall working-age population. Furthermore, certain groups of occupations are more likely to benefit or lose out during the transitions. For instance, under the energy transition scenario, occupations related to agriculture, fishery and forestry sectors are likely to experience negative employment growth in middle-income countries.
- Reskilling, upskilling, and other support from labour market institutions and employment and social protection measures, designed and implemented through social dialogue, would be crucial for workers to safeguard income generation opportunities or transition to new jobs, and for enterprises to harness the opportunities presented by green and digital transitions.

Scenarios for green and digital transitions: Insights towards 2030

By 2030, there are opportunities for additional net job creation on a large scale that can arise from the investments in digital and energy transitions.[1] The magnitude of job creation is different in different policy and investment scenarios:

- **Digital scenario:** The main assumption is an increase in investment leading to the expansion of broadband coverage to achieve universal broadband coverage (defined as covering at least 90 per cent of the population) by 2030. The investments are expected to be allocated to the sectors that build new infrastructure. The expanded broadband

[1] This brief presents projections of employment by 2030 (in baseline, green, digital and integrated scenarios) produced by the global macro-econometric model E3ME of the Cambridge Econometrics. E3ME is a computer-based model of the world's economic, energy and environmental systems, in which behavioural relationships are estimated using econometric time-series techniques to quantify the economic and employment impacts of the implementation of policy-induced scenarios.

- Green and digital transitions are mutually reinforcing
- Together they generate more jobs and productivity gains

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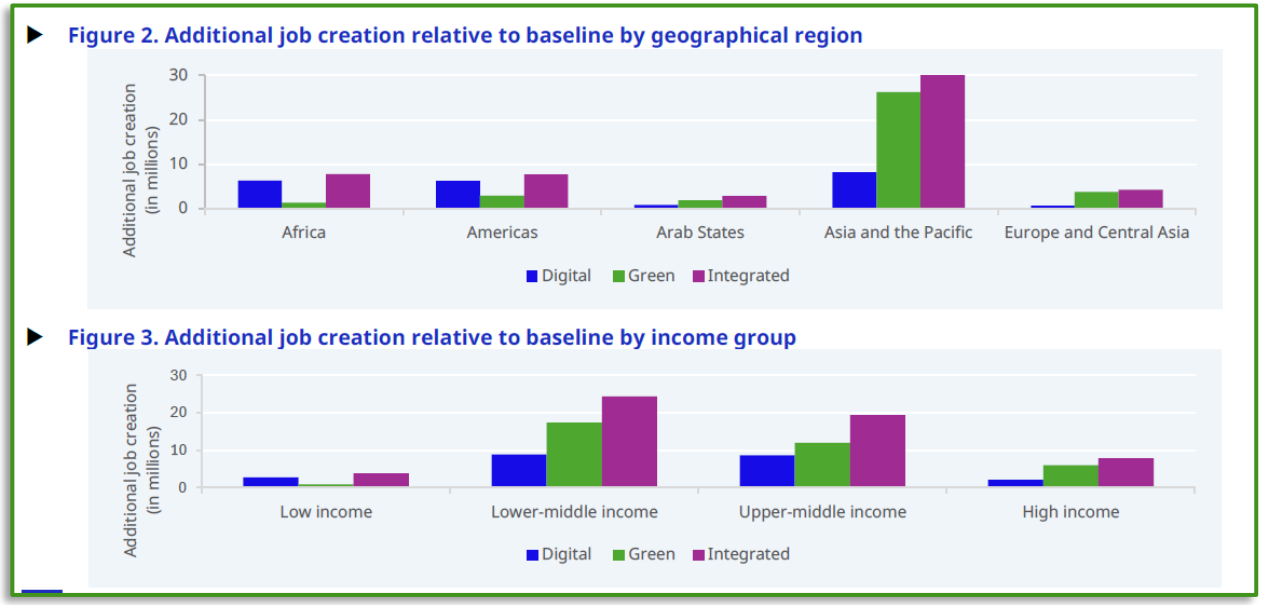
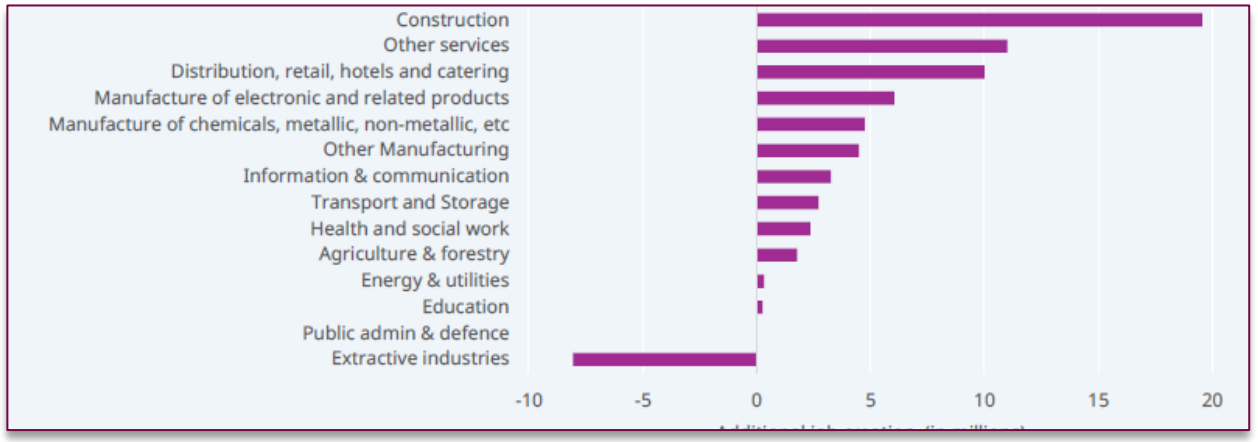
Where will the Growth Occur?





- Asia Pacific
- Lower middle-income countries
- Construction, manufacturing, hospitality

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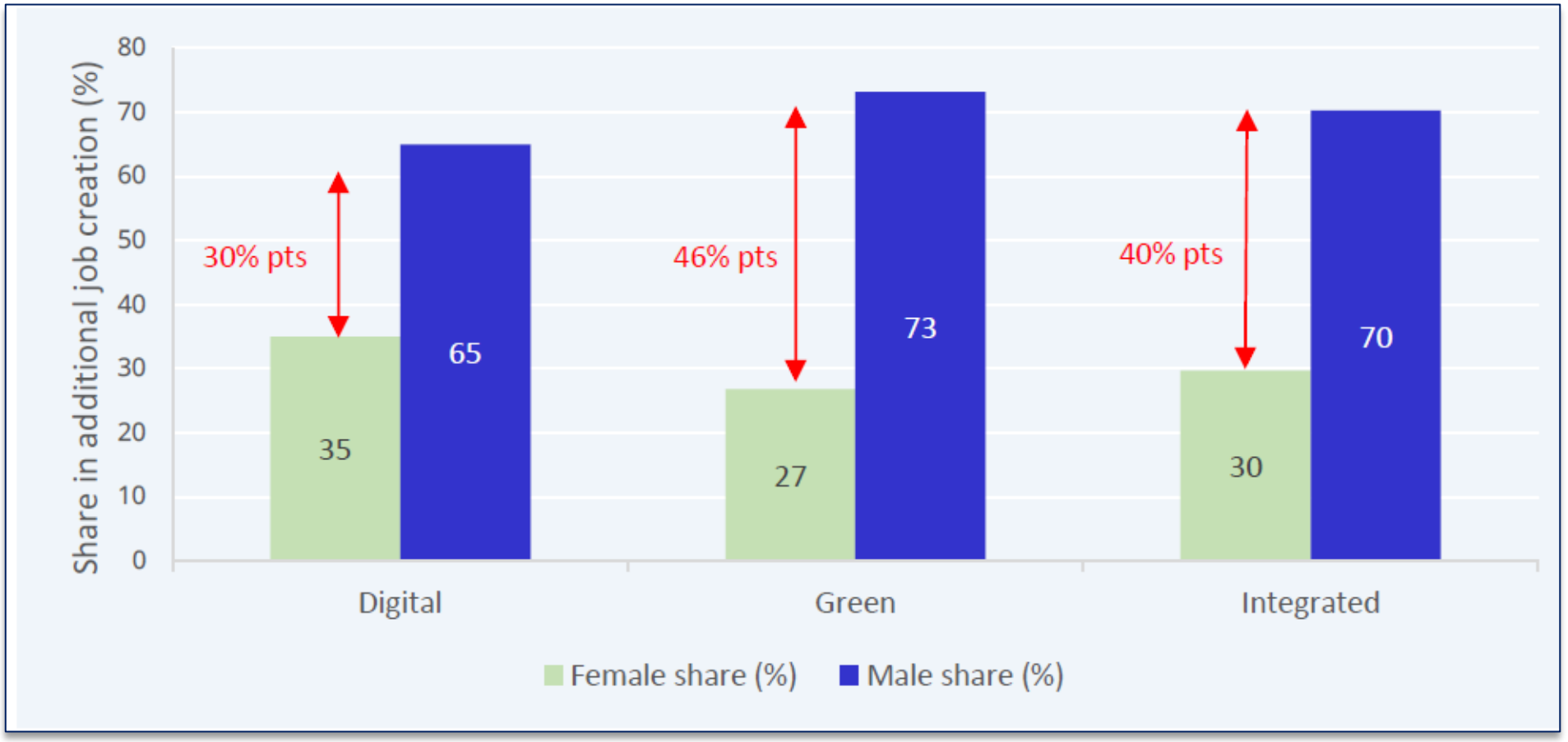
Gender Gaps in Employment Opportunities



- Integrated scenario: **Women forecast to gain around 23 million LESS jobs** than men.

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Cambodia's Context

- Growth prospects
- Young demographics
- Trade uncertainties / geopolitics
- LDC graduation
- High informality
- Low skills base
- Elevated labour supply

Skills Priorities

Embed green and digital core skills for new entrants

Sector-led skills responses to remain competitive

Stronger lifelong learning pathways

Core Skills: Skills Needed Across All Sectors

Basic skills for green jobs
- Environmental awareness
- Waste reduction and waste management
- Energy and water efficiency
- Occupational Health and Safety

Social and emotional skills
- Communication
- Teamwork
- Adaptability

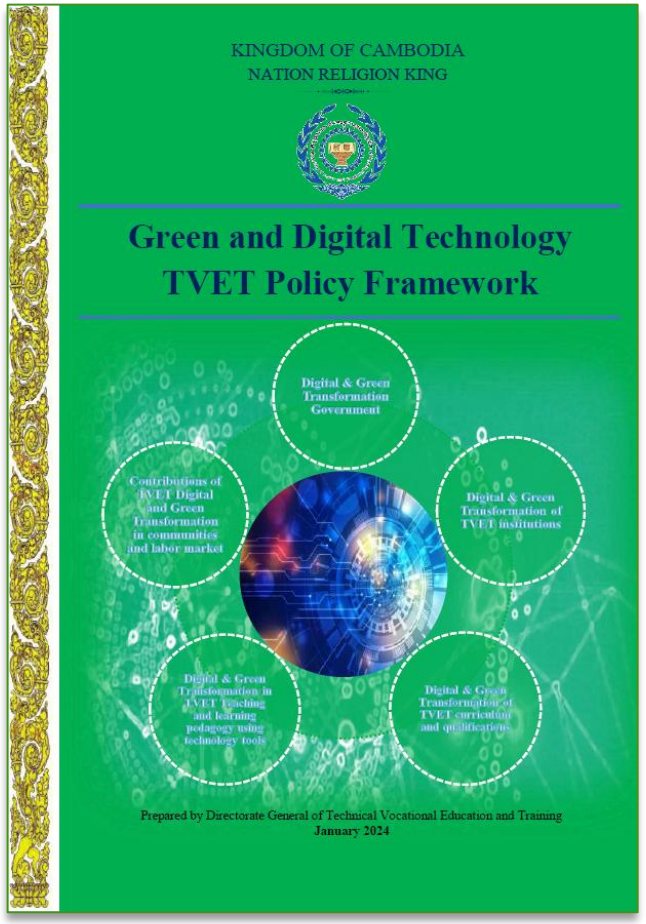
Basic digital literacy
- Ability to access and use technology to function at minimum levels in digital societies and economies

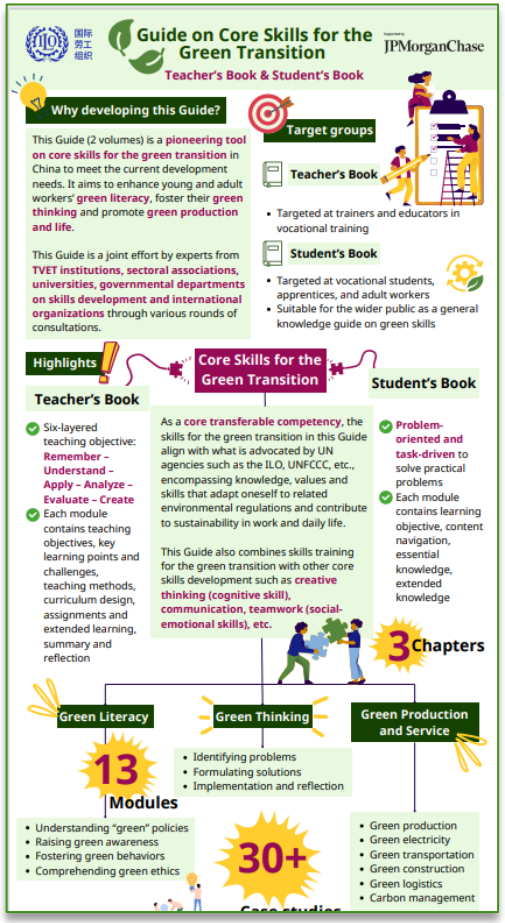
Cognitive and metacognitive skills
- Learning to Learn
- Analytical and critical thinking
- Problem solving

ILO 2021, Global Framework on Core Skills for Life and Work in 21 Century

Core Skills: Skills Needed Across All Sectors

In practice





- Cambodia's Green and Digital Technology Policy Framework
- ILO China embedding green skills across TVET subjects

Good Practice

- Integrate skills at subject level
- Consult with employers for real life examples

Why Skills Anticipation for Green and Digital transitions?

- Which jobs and skills are emerging, which are declining?
- Which policies or investments will support quality job growth through green and digital transitions?
- Who is at risk of being left behind?
- How should limited skills resources be allocated?

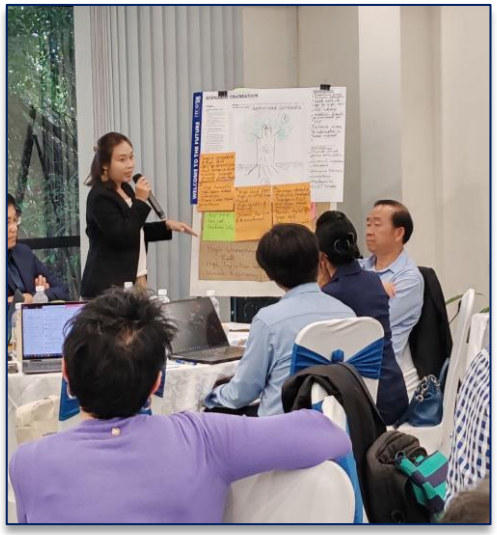
Anticipating Skills Needs in a Dynamic Skills System

- Evidence-based TVET planning, funding
- Develop and implement new skills pathways to decent employment

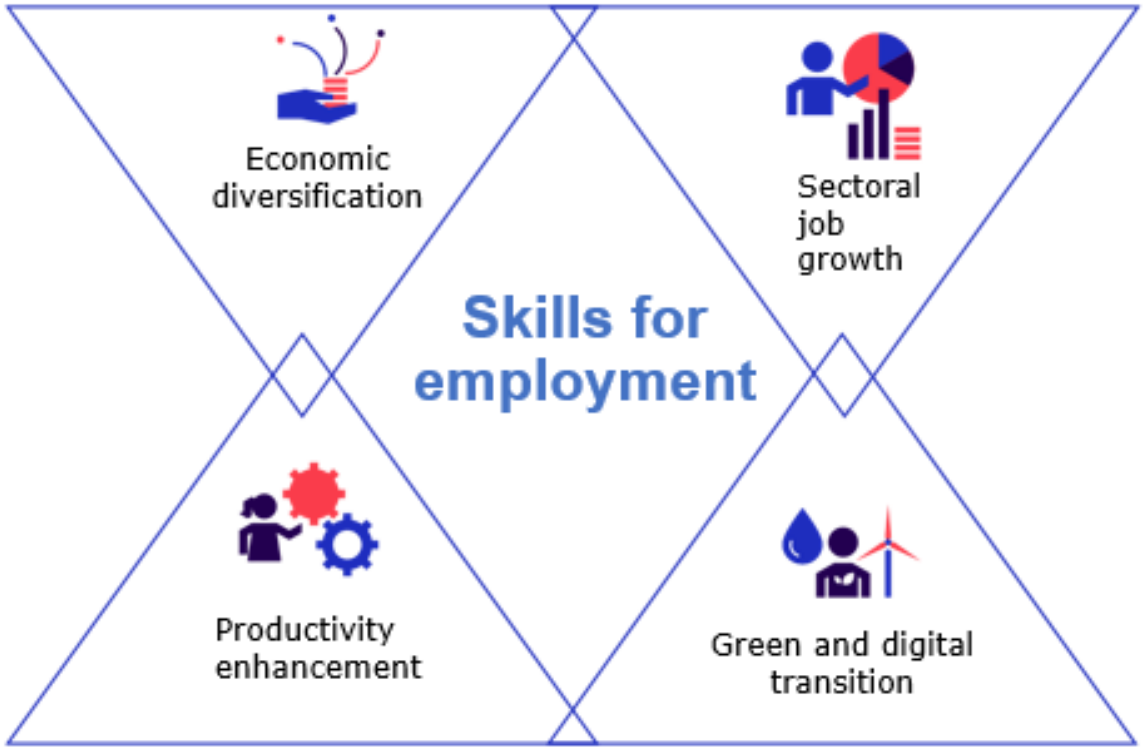
ILO, ETF, Cedefop, 2016. Compendium on Skills Anticipation and Matching

Anticipating Skills Needs in a Dynamic Skills System

In practice



Skills for Productivity, Environment and Economic Diversification (SPEED)

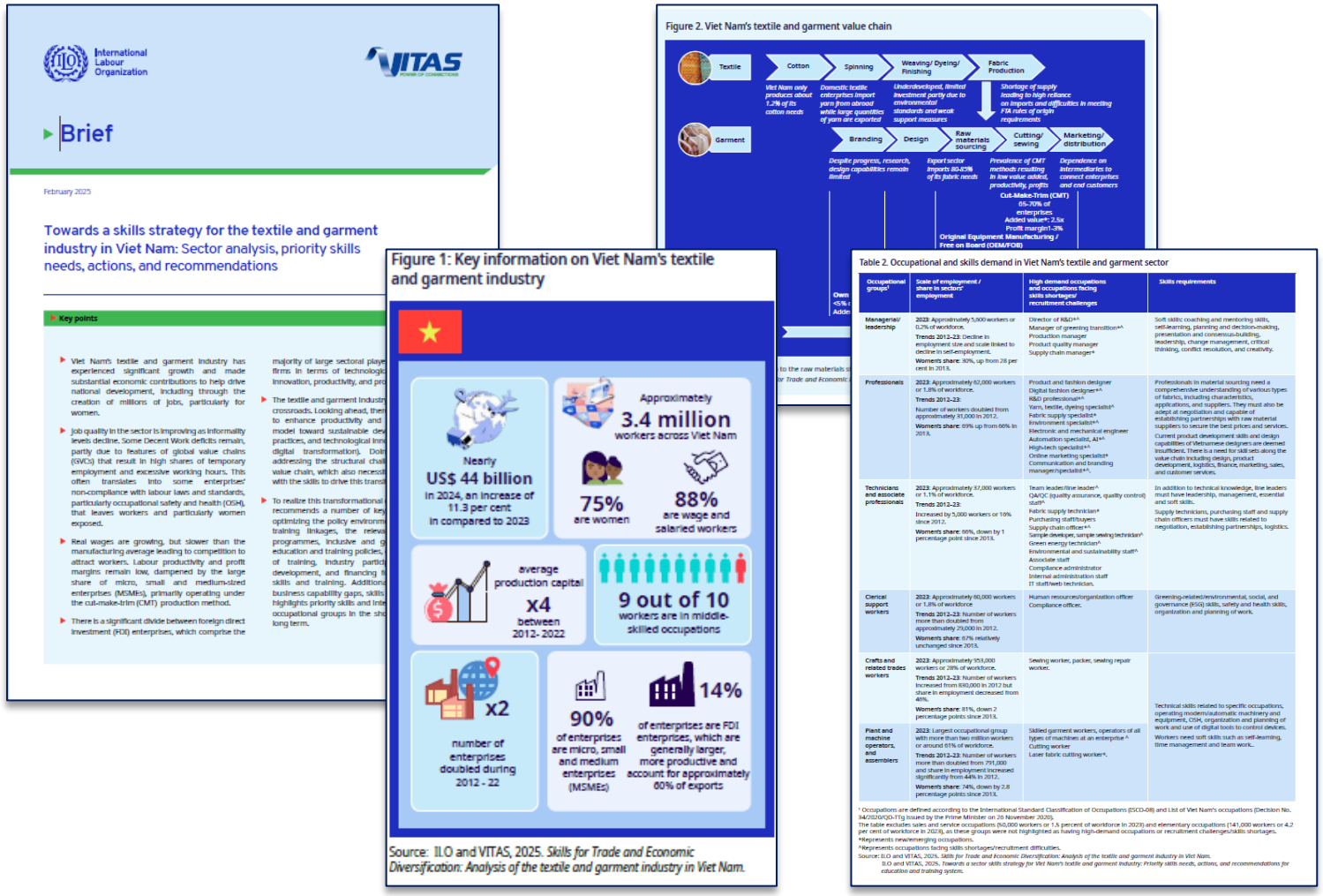


- Tool to maximise local employment impact of green and digital transition by addressing critical skills challenges
- Consultative approach to skills needs anticipation
- Embeds skills policy into broader industrial development strategies

- Skills system capacity building tool
- Sectoral skills priorities
- Skills frameworks

SPEED Analysis

In practice



- Facilitated through VITAS
- Capability gaps across value chain
- Actionable recommendations on integration of environmental standards for European markets
- Digital upskilling for marketing, distribution and sales

Skills Needs Anticipation

In practice: SENAI, Brazil Foresight model

3million
Enrolments

90%
Employment

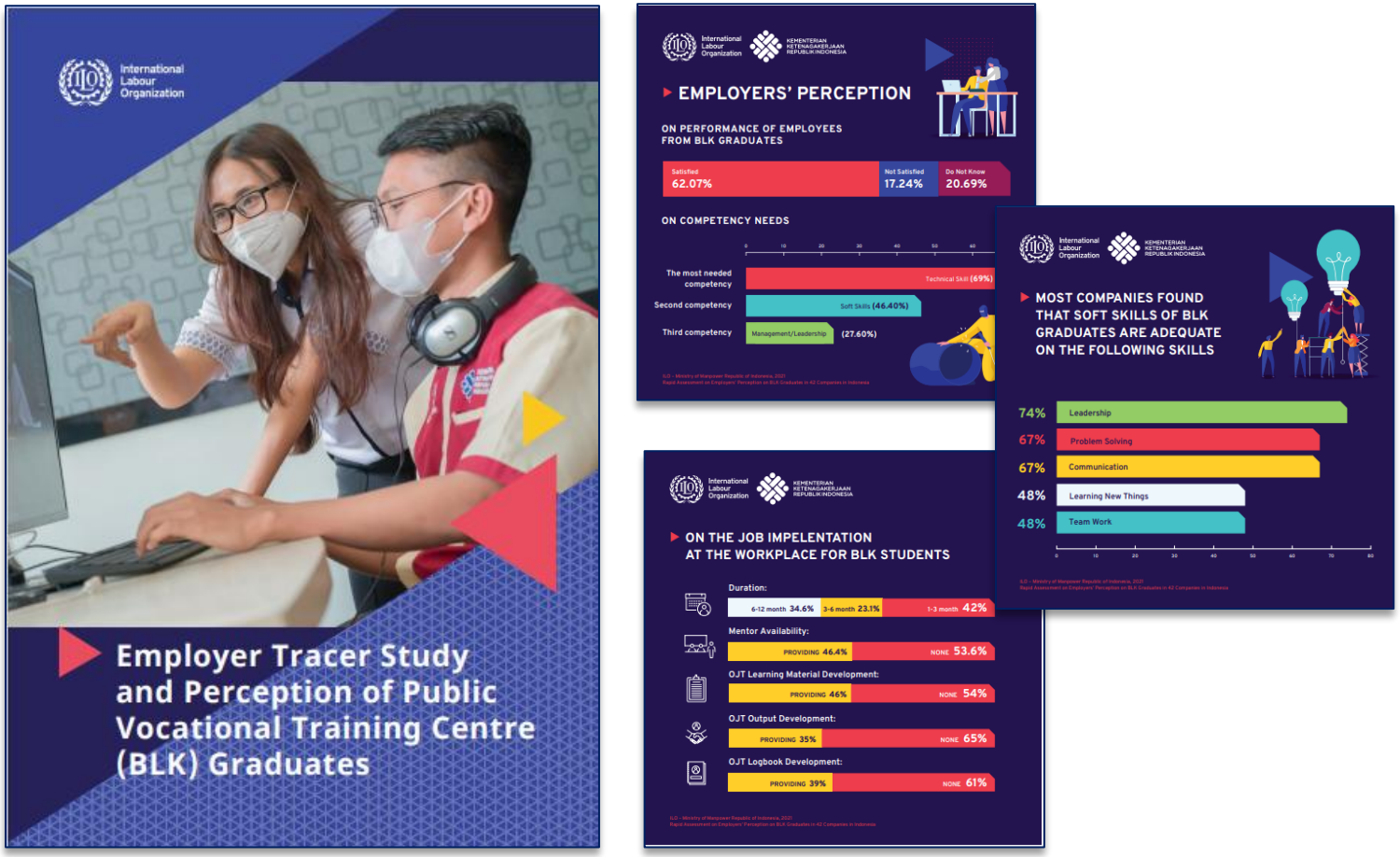
2035
Gender parity

- Technological and organizational trends requiring a response in terms of labour training
- Steering TVET provision to meet anticipated industry skills demands
- Able to forecast skills needs at a city level

2025, Global Skills Forum

Tracer Studies and Employer Perceptions Surveys

In practice



- Are graduates finding work?
- Are they using the skills they were taught?
- Are inclusion initiatives working well?

- Can be used to target TVET financing

ILO, 2022

Targets for Skills for Green and Digital Transitions to Maximize Employment Gains

Digital access, digital and green skills across all TVET

Strengthen LMI and skills anticipation coordination

Create gender-responsive and inclusive skills pathways

Develop sector level skills strategies with industry and workers

Focus incentives and skills financing to courses linked to decent job growth

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Thank you for listening

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