ACQF

ACQF
African Continental
Qualifications Framework

Global Gateway

Funded by the European Union

African Union

ETF Working together Learning for life
European Training Foundation

# Day 2:
# Session 6

# Green and digital skills

## Green and digital transformation

NQF Consultation Week

21-24 May 2024

Eduarda Castel-Branco

01

# Green and digital skills – in-demand

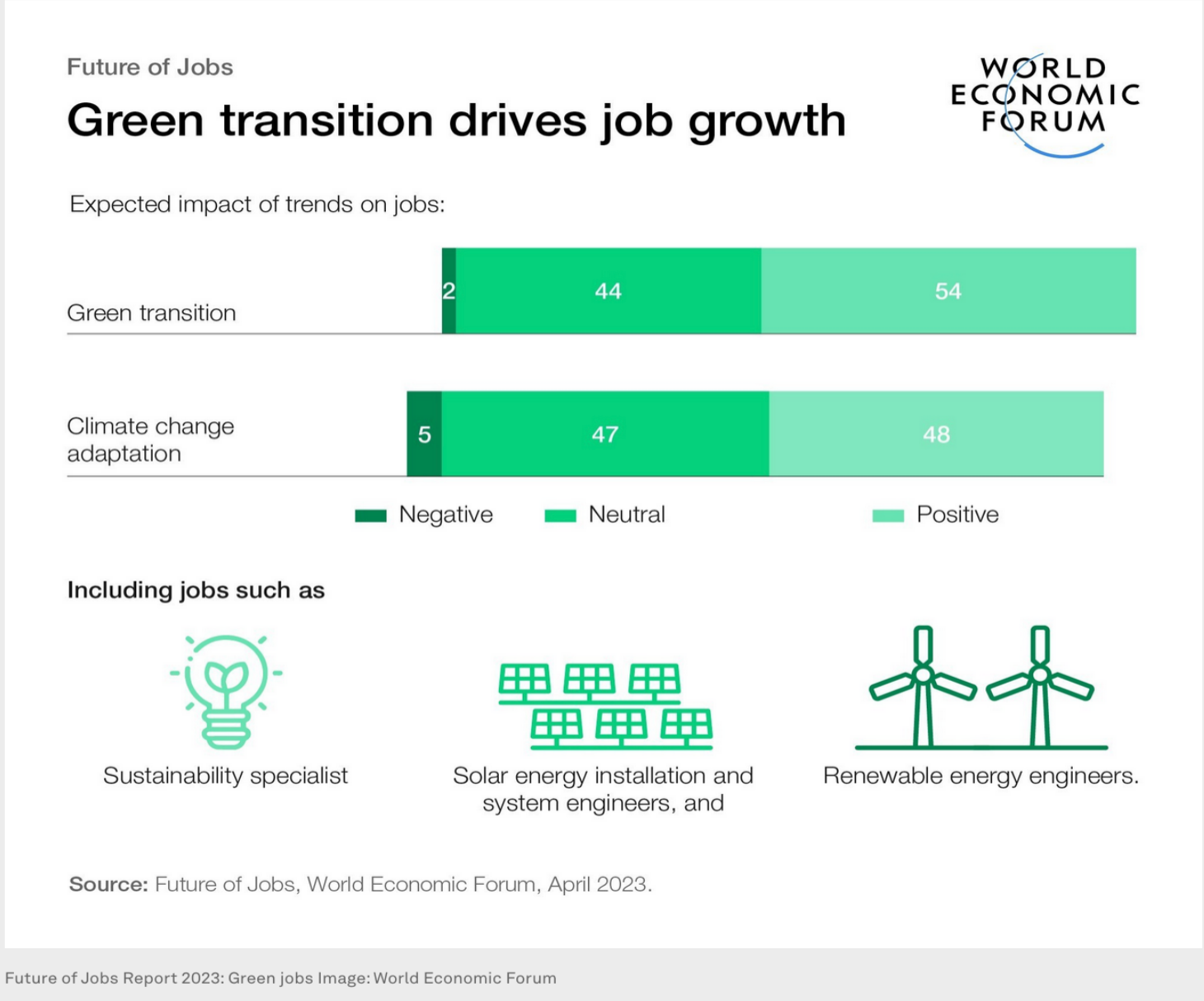
# Green-enabled recovery and growth

- Green with a touch of brown is the colour of recovery
- Greening of the economy and society – at heart of post-Covid19 recovery strategies and growth in many countries
- **Green growth opportunities abound across massive sectors such as energy, mobility, and agriculture**.
- Just as digital-economy companies have powered stock-market returns in the past couple of decades, so green-technology companies could play that role in the coming decades.
- EU, US, China, Japan, South Korea's Green New Deal, Canada, Africa – green stimulus packages

**Major implications for jobs, education, training and skills;**

- need to develop **environmentally friendly** technologies, production processes, products, services, and business models across all sectors of the economy;
- It changes the way **traditional occupations** are performed (and taught) and creates **new occupations**;
- It creates a demand for new skills and knowledge and the need to **upskill** and **reskill** large numbers of people;
- need to increase **environmental awareness** in education and training curricula;
- requires close interaction between education and training systems and their environments to build **skills ecosystems** in which skills development goes hand in hand with economic, technological and social change.

# Green transition drives job growth




Future of Jobs Report 2023: Green jobs Image: World Economic Forum

https://www.weforum.org/agenda/2023/04/future-jobs-2023-fastest-growing-decline

# Greener jobs future

- To compensate for expected job losses, global efforts to decarbonize in response to the climate crisis are giving rise to a wealth of green jobs across sectors and industries.
- A green-recovery scenario could generate around 3.5% of additional global GDP growth and a net employment gain of 9 million new jobs each year, according to International Energy Agency data.
- The green transition could **create 30 million jobs globally in clean energy, efficiency and low-emissions technologies by 2030.**
- But while there has been continued growth in green jobs for the past four years, **reskilling and upskilling towards green skills is not keeping pace.**

https://www.weforum.org/agenda/2023/04/future-jobs-2023-fastest-growing-decline

02

# What is the labour market demand for - green and digital skills?

# Based on a data of ETF Big Data LMI project (ex.: Egypt, Kenya)

# Green skills Demand

## ETF Data – Online Job Vacancies Kenya, Egypt

# Definitions

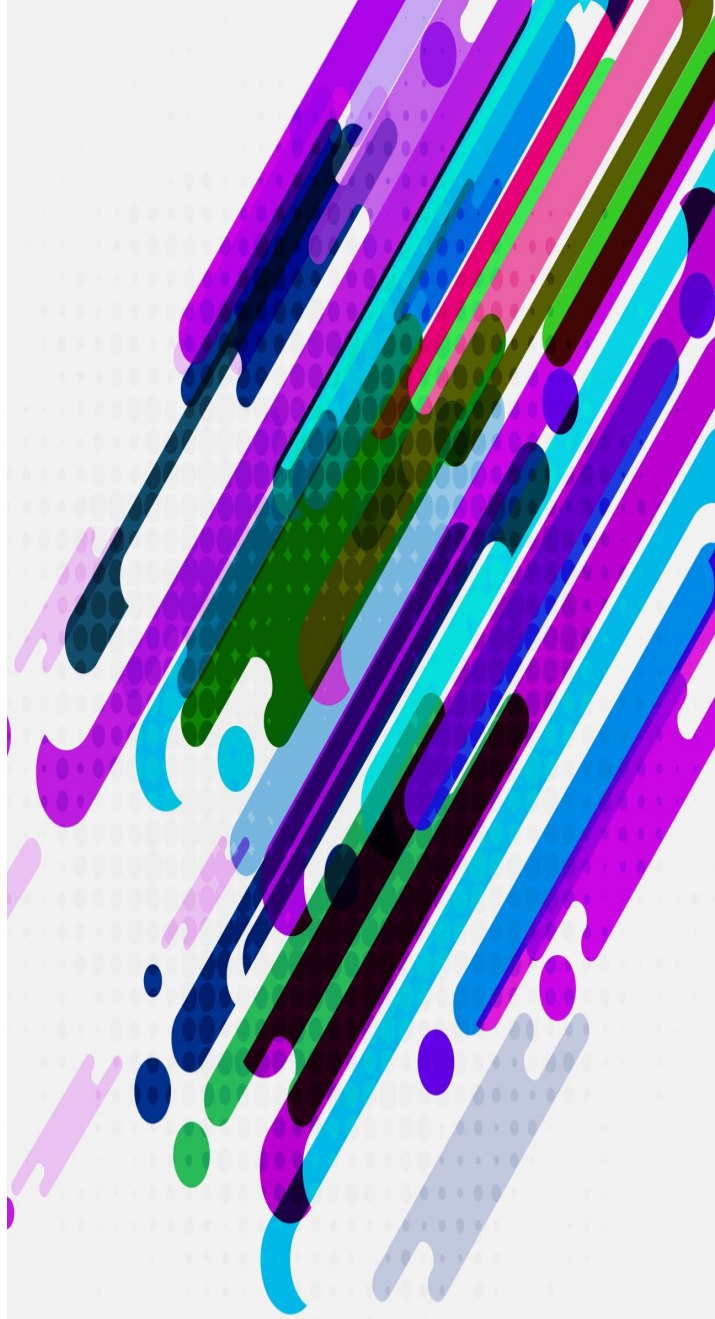
**Green skills – an important area of debate and policy action and which has become a priority in research (quantitative and qualitative) and social communication. Several international organisations are working on the analysis and taxonomies related to green competences.**

**Cedefop defines** green skills as "the knowledge, skills, values and attitudes needed to live, work and act in economies and societies that seek to reduce the impact of human activity on the environment".

**Skills for the green economy consist of:**

- **transversal skills, linked to sustainable thinking and acting, relevant to all economic sectors and professions;**
- **specific skills needed to adapt or implement standards, processes and services to protect ecosystems and biodiversity and reduce energy, materials and water consumption;**
- **highly specialised skills needed to develop and implement green technologies such as renewable energy, wastewater treatment or recycling;**

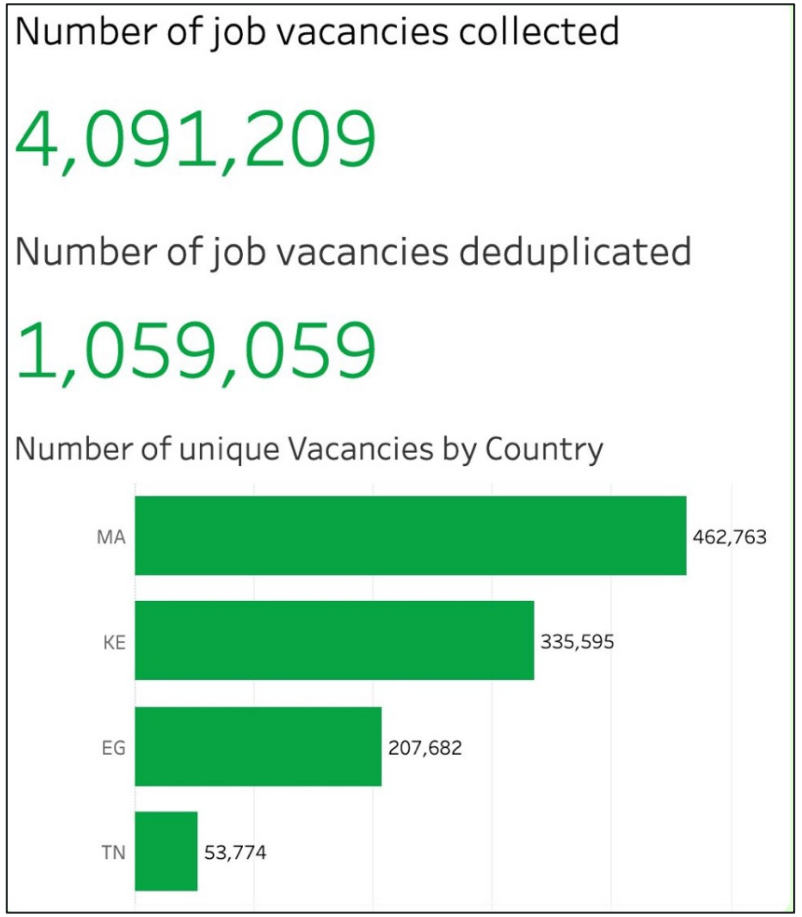
**Skills for the green economy are also referred to as skills for green jobs, skills for the green transition or green skills.**



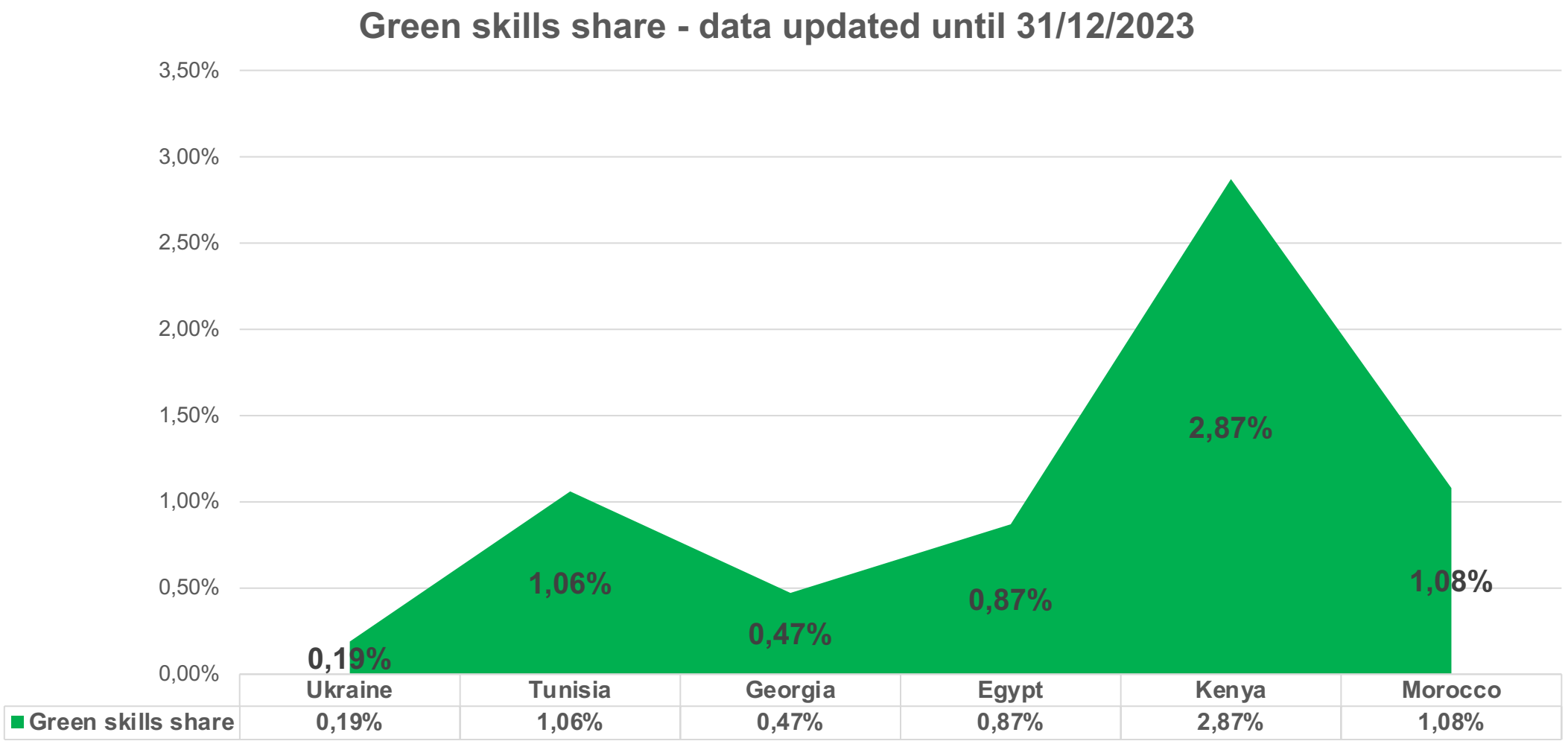
# Analysis of demand for skills: online job vacancy data

- **New dashboards @ ACQF Website:**

[https://acqf.africa/skills-data-focus/online-job-ads-analysis-dashboard](https://acqf.africa/skills-data-focus/online-job-ads-analysis-dashboard)



# ETF project: Online job vacancy – Big data for LMI




Green skills share = share of online job vacancies that required at least 1 green skill

Kenya: highest green skills share, Ukraine – the lowest

Used green skills taxonomy: ETF (225 terms)

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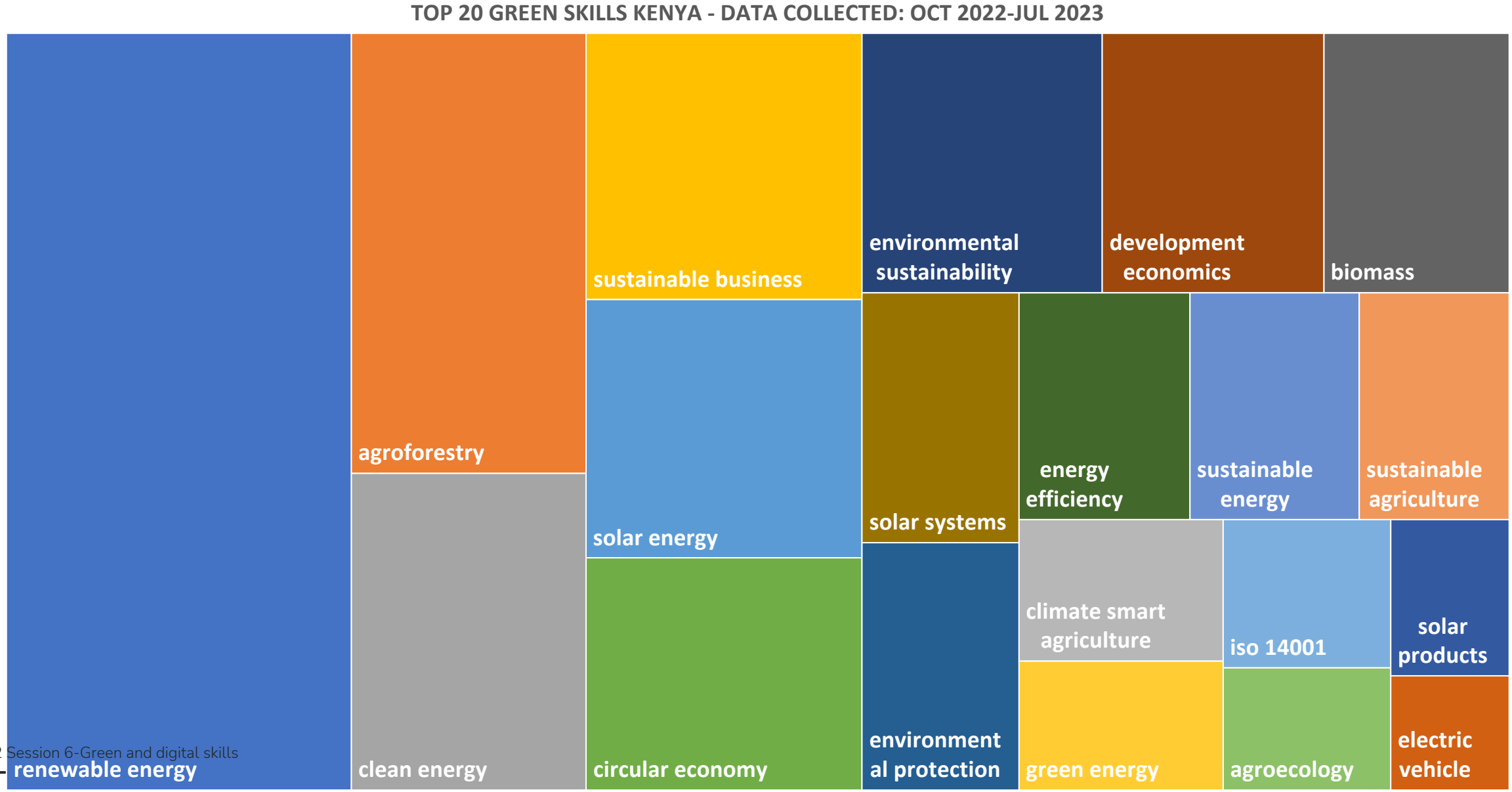
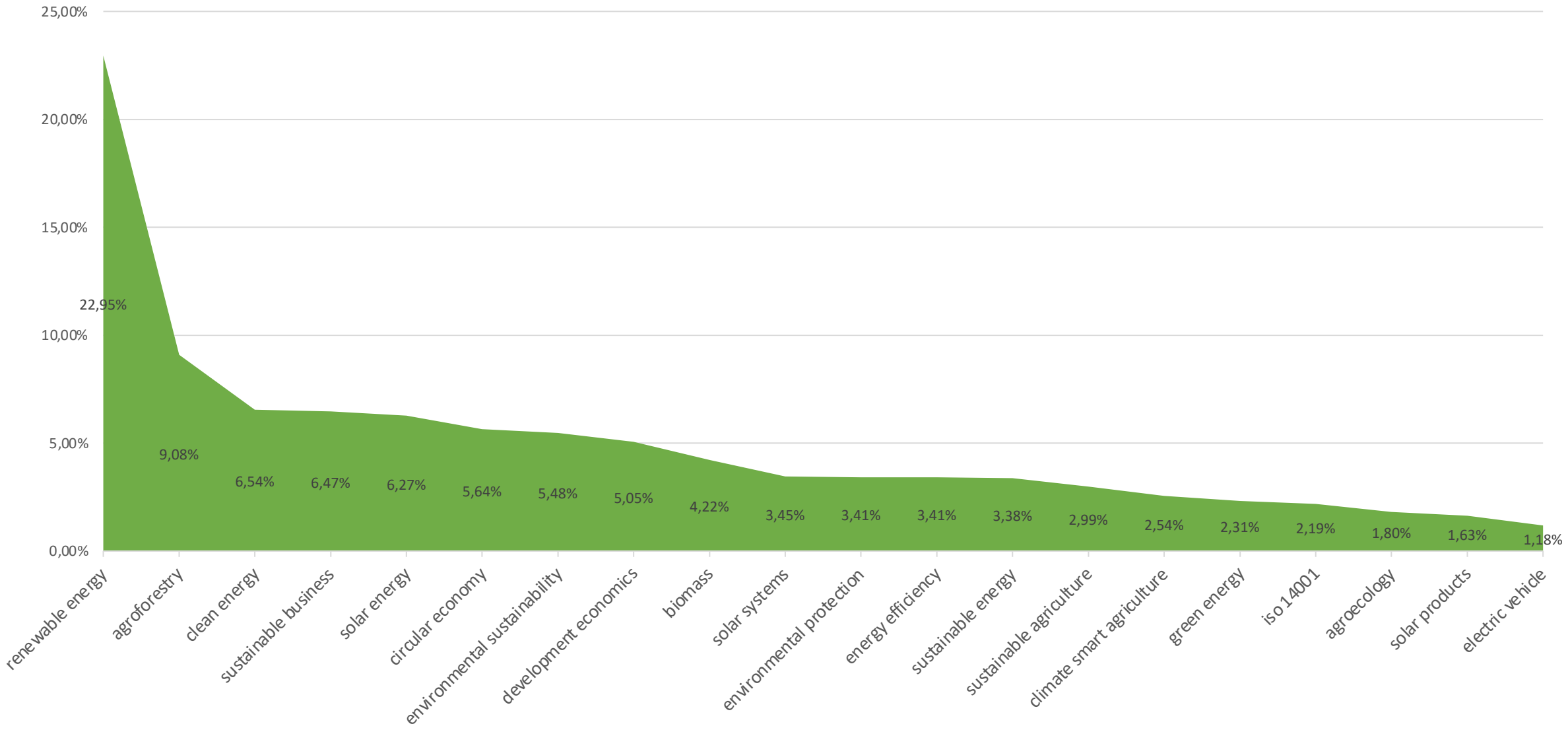
# Top 20 Green Skills Kenya

| Skills / skill set | % (from 20) | Nº unique job postings |
|---|---|---|
| renewable energy | 22,95% | 2.598 |
| agroforestry | 9,08% | 1.028 |
| clean energy | 6,54% | 740 |
| sustainable business | 6,47% | 732 |
| solar energy | 6,27% | 710 |
| circular economy | 5,64% | 638 |
| environmental sustainability | 5,48% | 620 |
| development economics | 5,05% | 572 |
| biomass | 4,22% | 478 |
| solar systems | 3,45% | 390 |
| environmental protection | 3,41% | 386 |
| energy efficiency | 3,41% | 386 |
| sustainable energy | 3,38% | 382 |
| sustainable agriculture | 2,99% | 338 |
| climate smart agriculture | 2,54% | 288 |
| green energy | 2,31% | 262 |
| iso 14001 | 2,19% | 248 |
| agroecology | 1,80% | 204 |
| solar products | 1,63% | 184 |
| electric vehicle | 1,18% | 134 |

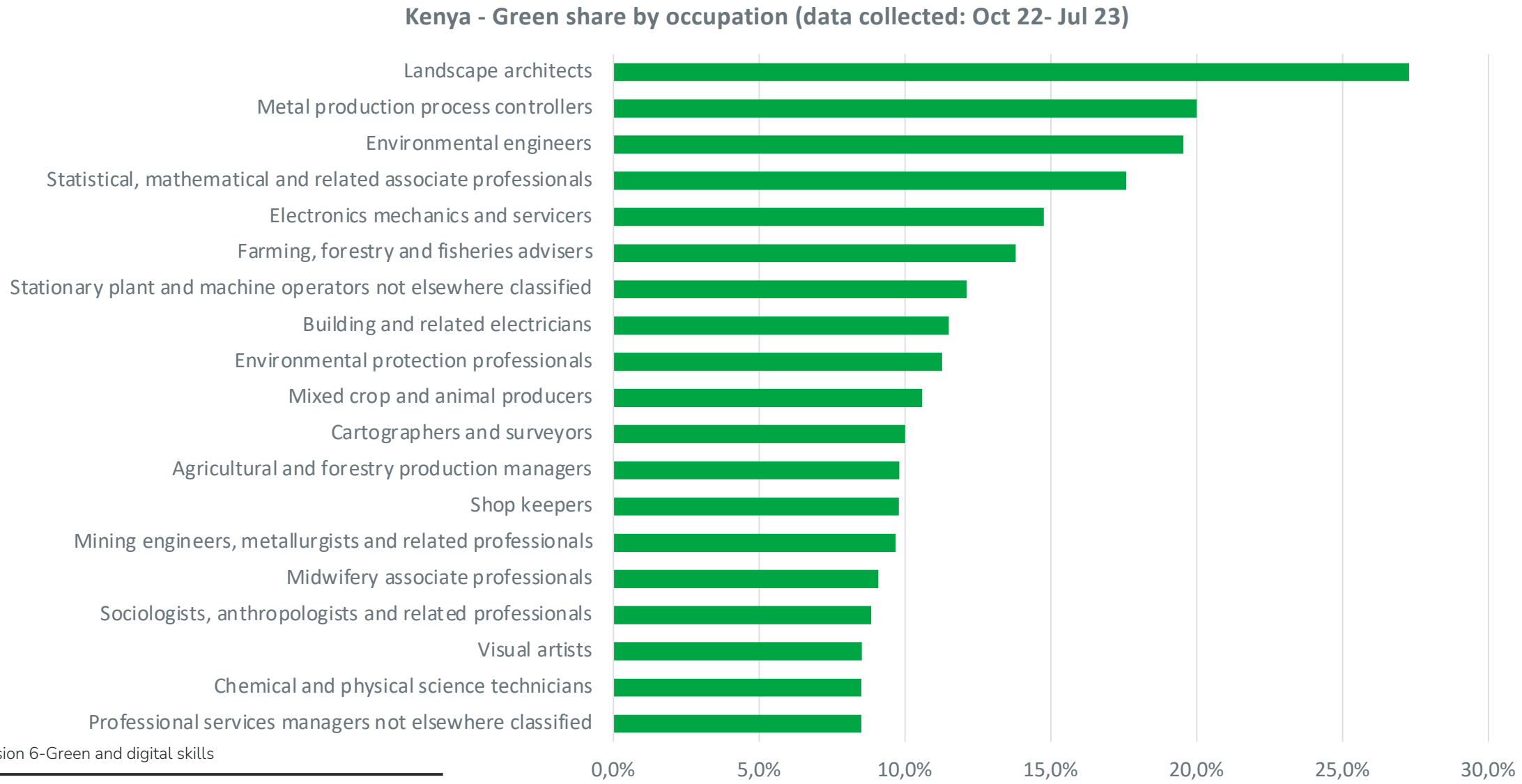
# Top 20 green skills in OJV: Kenya



# Top 20 Green Skills Kenya (2)



# Kenya: green skills by occupation (share)



# Kenya: Green skills required for selected occupations

| Occupation | Green skill | Unique Job postings (Oct 22- Jul 23) |
|---|---|---|
| Electronics mechanics and servicers | solar panels | 7 |
| | solar energy | 2 |
| | environmental protection | 2 |
| Environmental engineers | environmental sustainability | 32 |
| | environmental protection | 19 |
| | sustainable procurement | 9 |
| | renewable energy | 9 |
| | sustainable business | 7 |
| | energy efficiency | 7 |
| | sustainable energy | 5 |
| | circular economy | 4 |
| | development economics | 3 |
| | climate smart agriculture | 3 |
| | green energy | 2 |
| | ecotourism | 2 |
| | clean energy | 2 |
| | carbon footprint reduction | 2 |
| | sustainable agriculture | 1 |
| | sustainability performance | 1 |
| | iso 14001 | 1 |
| | hydroponics | 1 |
| | clean technology | 1 |
| | agroforestry | 1 |
| Metal production process controllers | iso 14001 | 2 |
| Statistical, mathematical and related associate professionals | environmental protection | 18 |
| | clean energy | 18 |
| | energy efficiency | 11 |
| | green building | 9 |
| | sustainable materials | 6 |
| | sustainable building | 6 |
| | sustainable agriculture | 6 |
| | renewable energy | 5 |
| | circular economy | 5 |
| | biomass | 4 |
| | agroforestry | 4 |
| | sustainable energy | 3 |
| | hydropower | 1 |
| | biofuels | 1 |

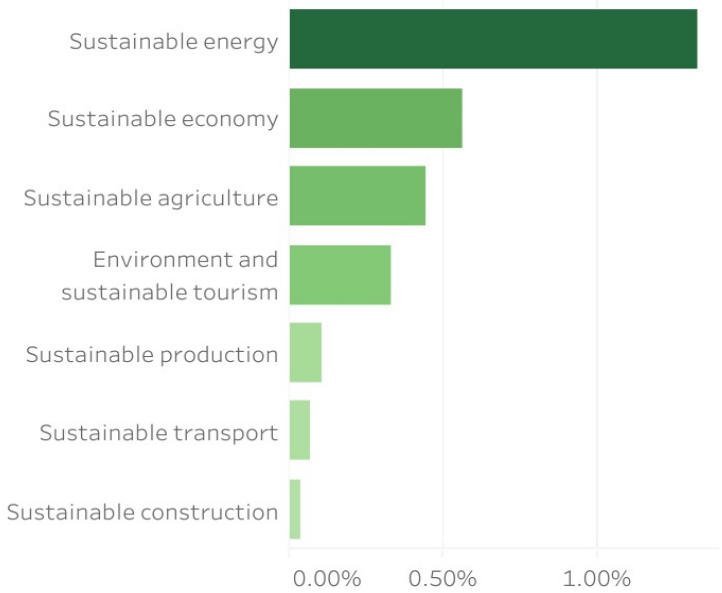
Select Release Date
October 2022 to July 2023
and Null values

# KENYA

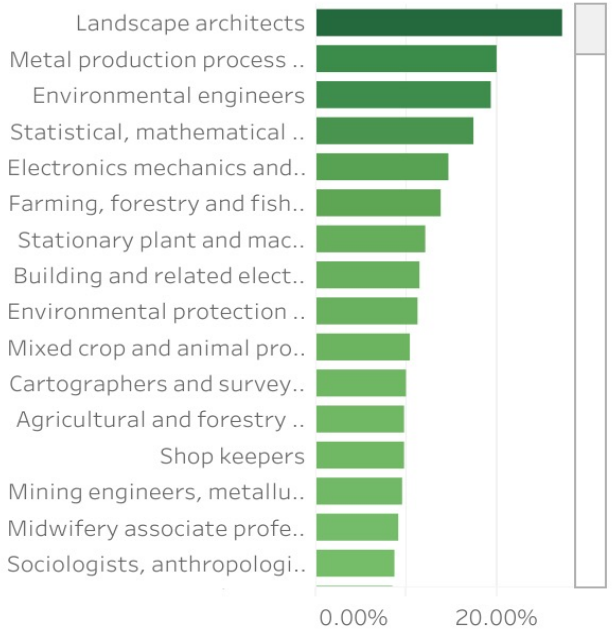
## Green Share

2.59%

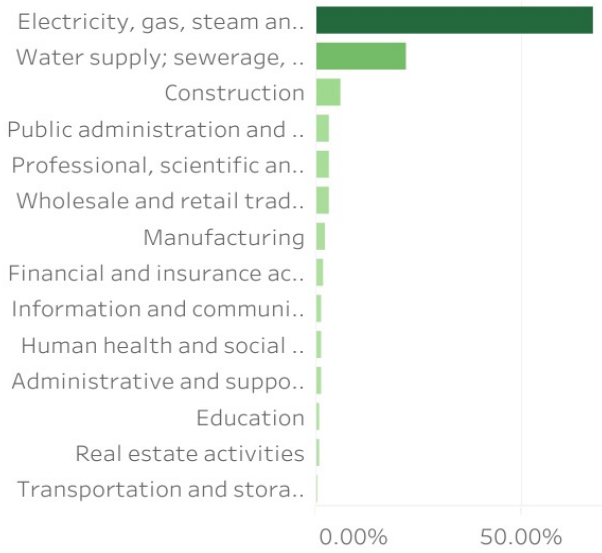
## Select the Green skill family that you want to Analyze (then select it againg to reset your choose)



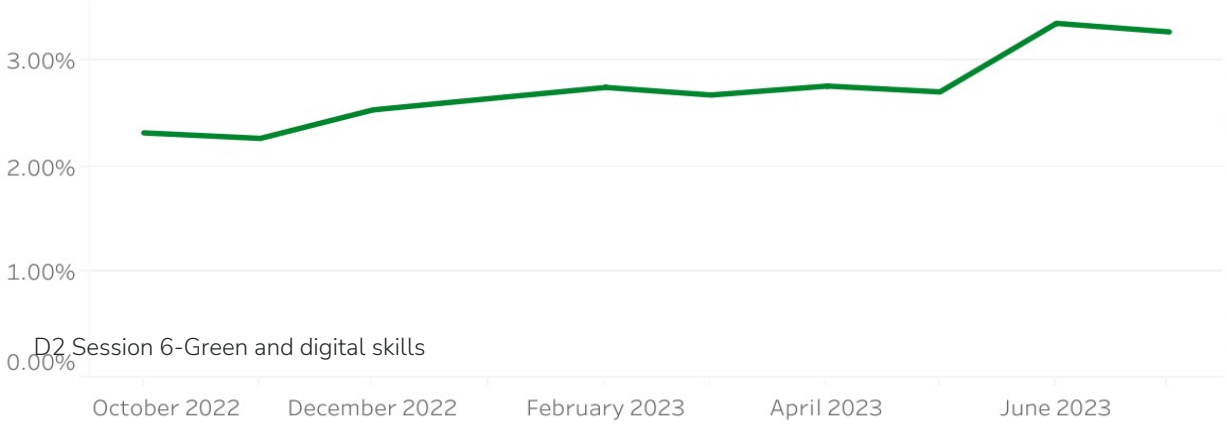

## Share of green skill by occupation




## Share of green skill by industry



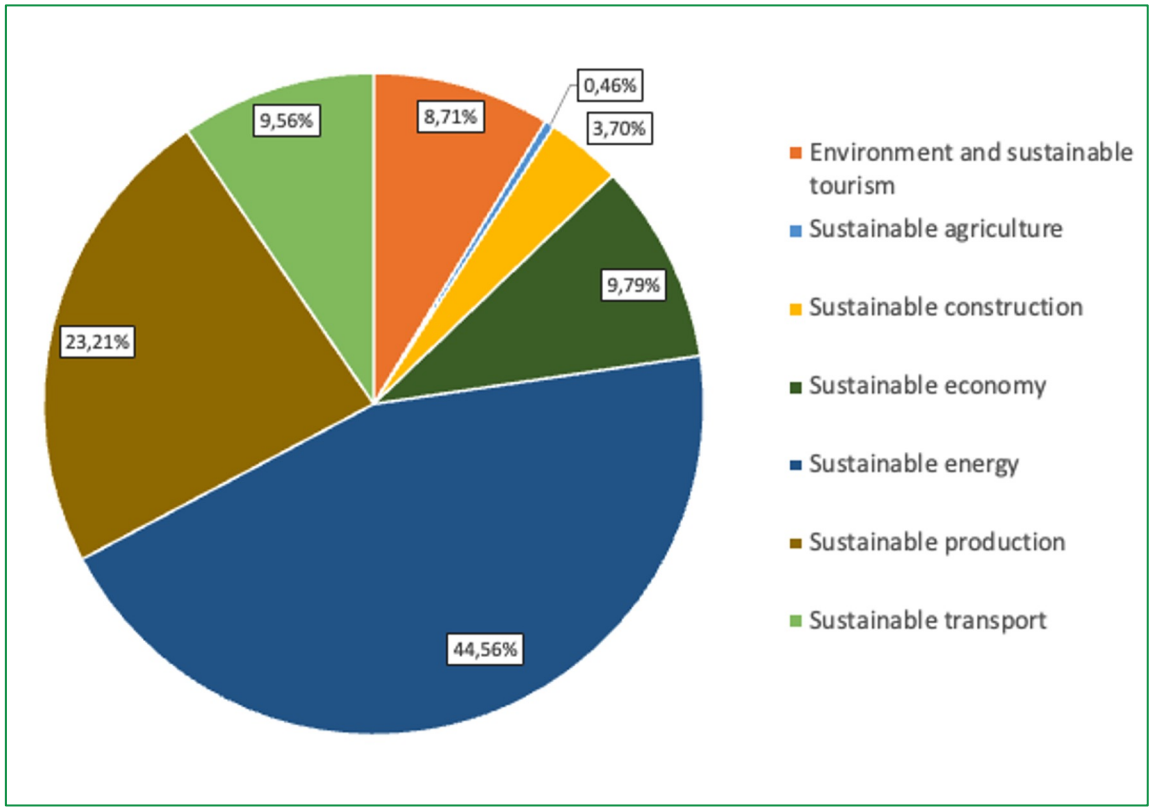

## Share of green skill by release date



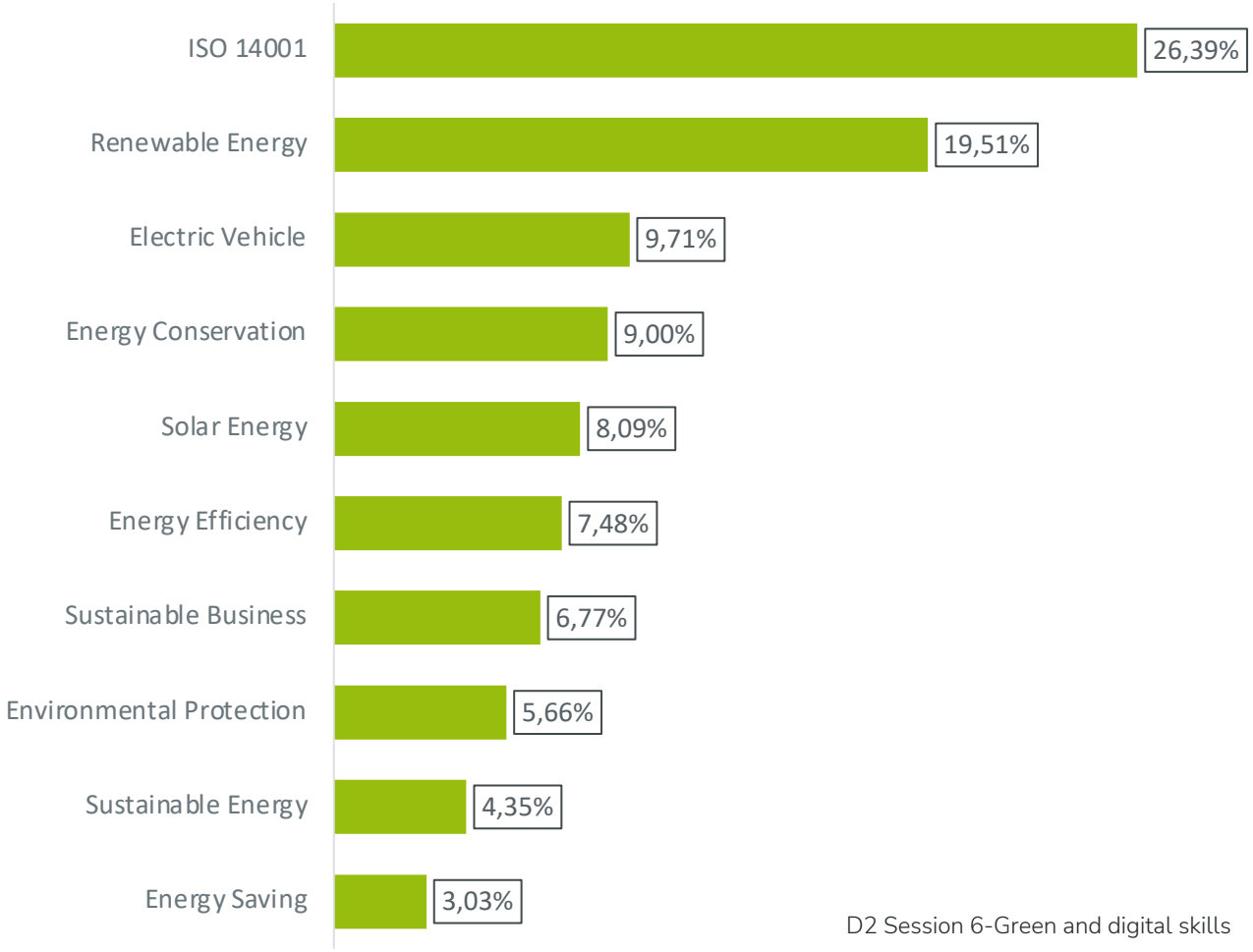

## Most requested green skill

# Egypt: Green Skills: TOP 10

By Groups – classification ETF



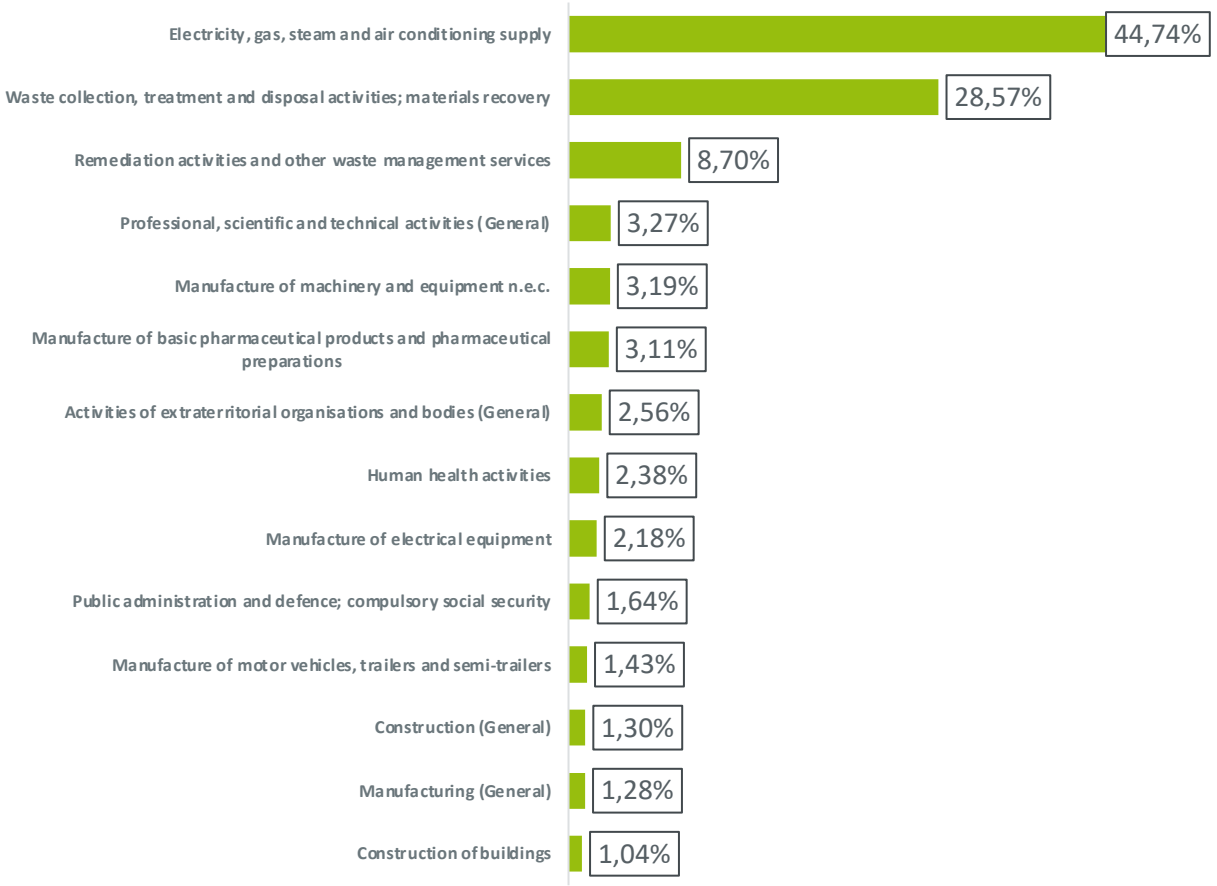

Top Green skills



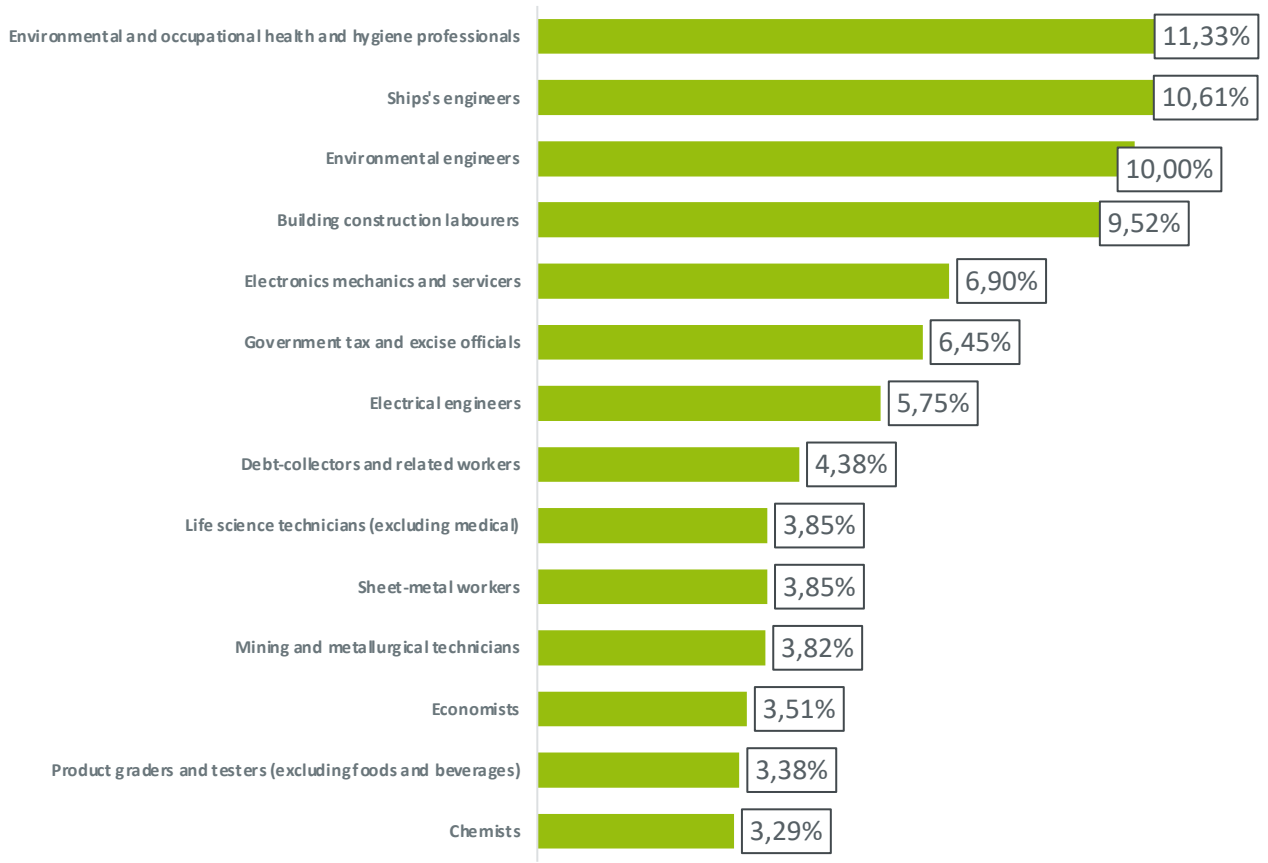

Source: ETF Job Postings – Egypt 2022

# Egypt: Green skills: % by sectors and occupations

## Sectors

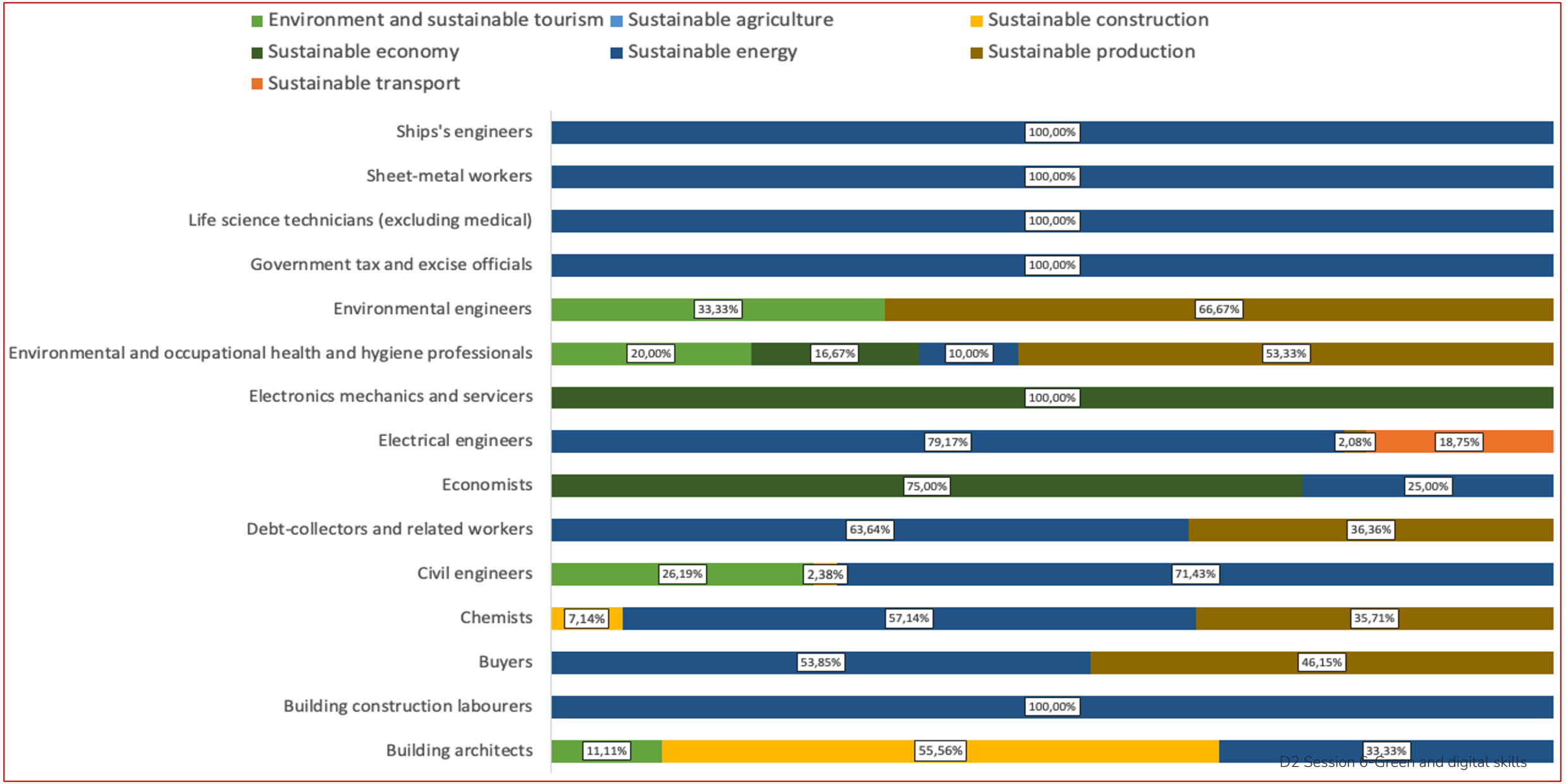



## Professions




Source: ETF Job Postings – Egypt 2022

# Egypt: Green skills: profiles of the greenest occupations

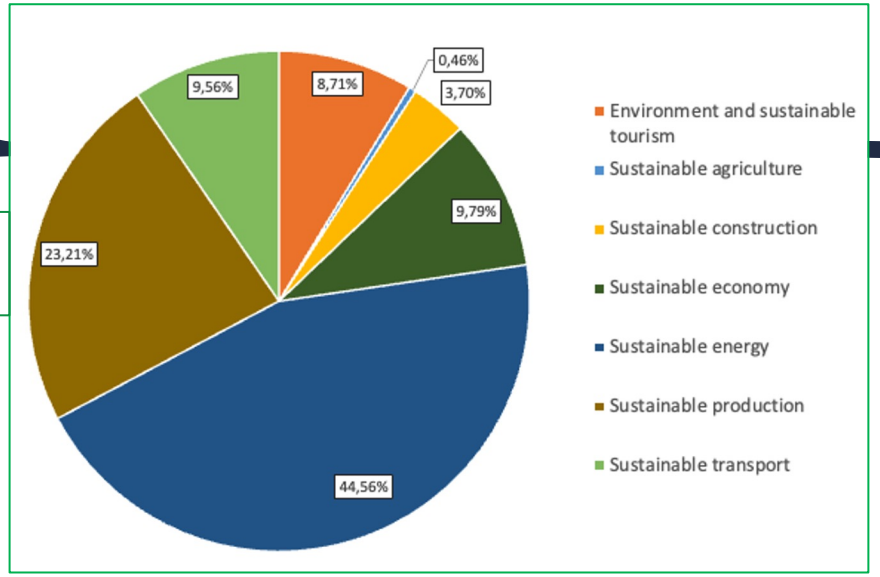




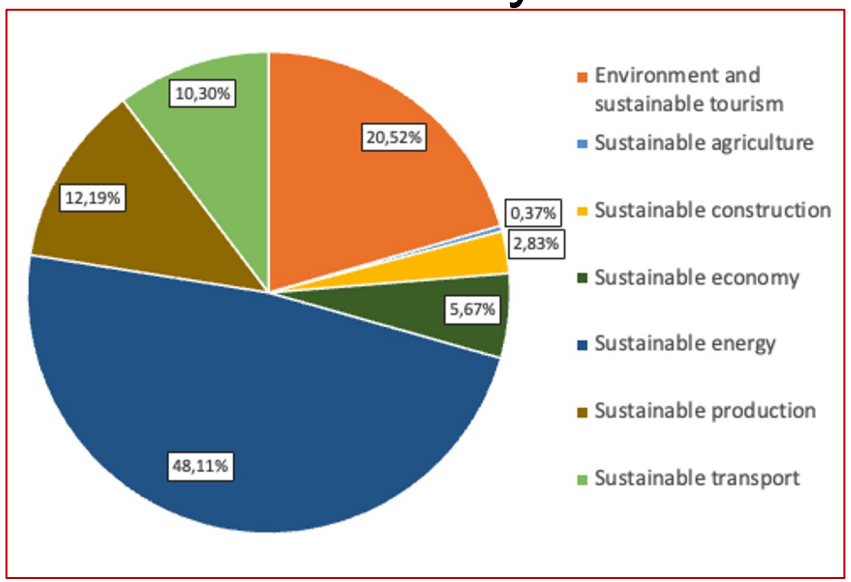

Source: ETF Job Postings – Egypt 2022

# COMPARISONS: % OF GREEN SKILLS BY CATEGORIES

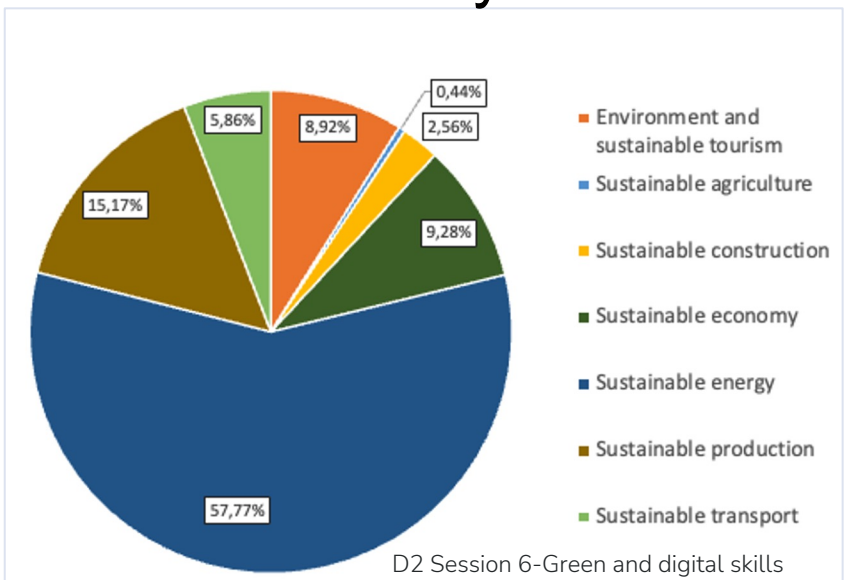
Egypt




Germany




Italy




Source: ETF Job Postings – Egypt 2022 and Lightcast Data - Germany / Italy 2022

# Case study: Senegal

- Skills for Green Jobs

# How about education – qualifications for green skills?

**Could you share some examples of Sierra Leone?**

How can you *Green* the NQF?

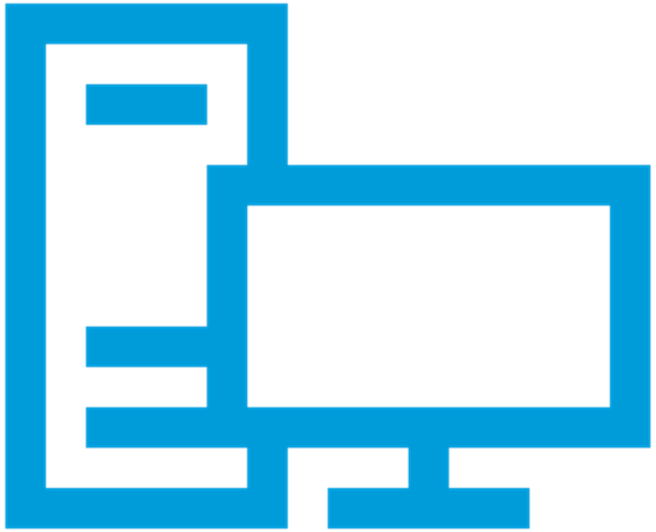
03

# Digital skills

# Digital skills – overview of some features of demand

## Analysis based on ETF data Job Listings - Egypt

ACQF



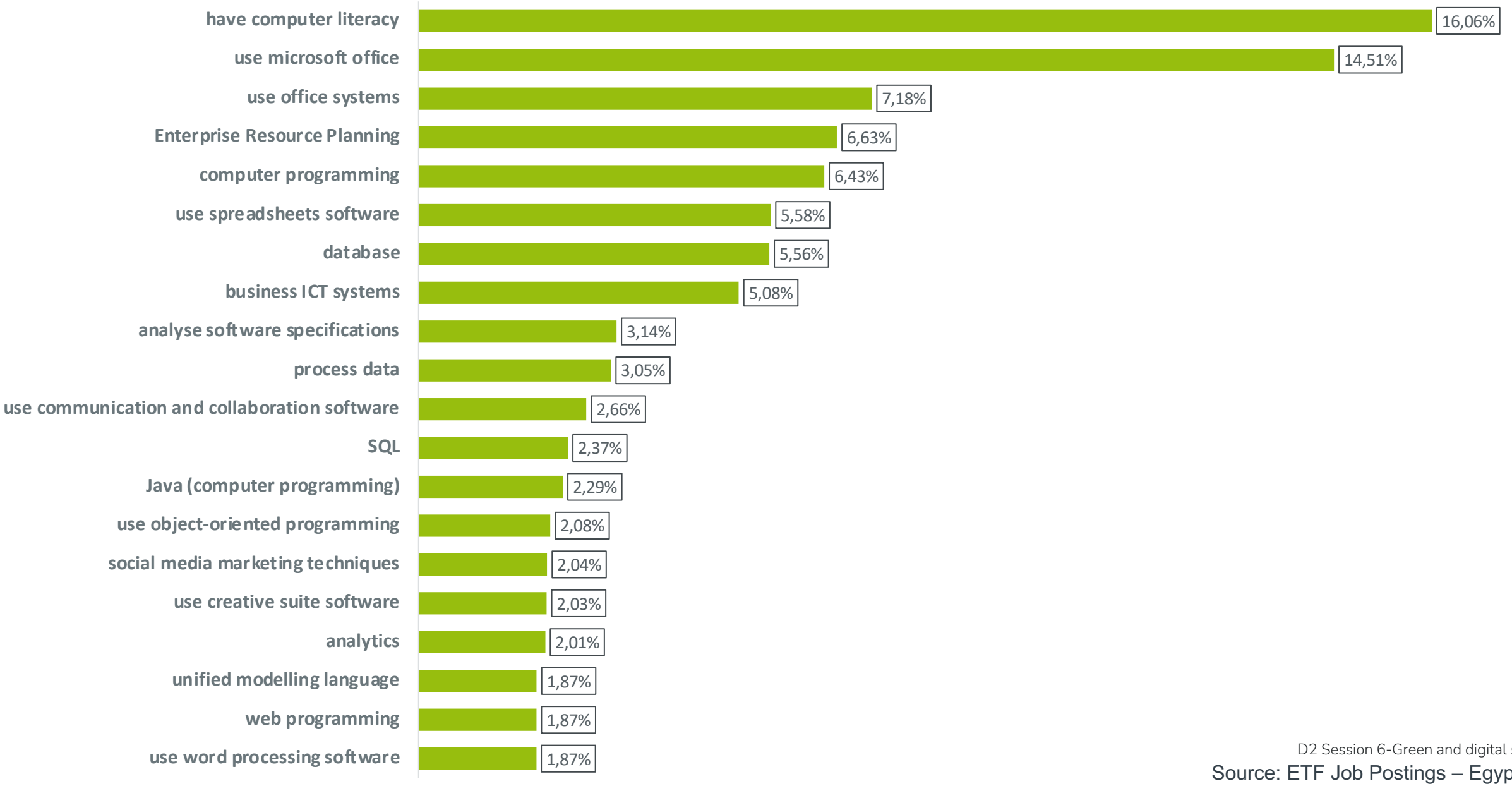
# Digital skills - definition

Ability to use digital technologies confidently, critically and responsibly and engage with them for learning, at work and for participation in society.

**Dimensions of digital skills:**

information and data literacy,
communication and collaboration,
media literacy, digital content creation (including coding),
security (including digital wellbeing and cybersecurity-related skills),
intellectual property issues,
problem-solving
critical thinking.

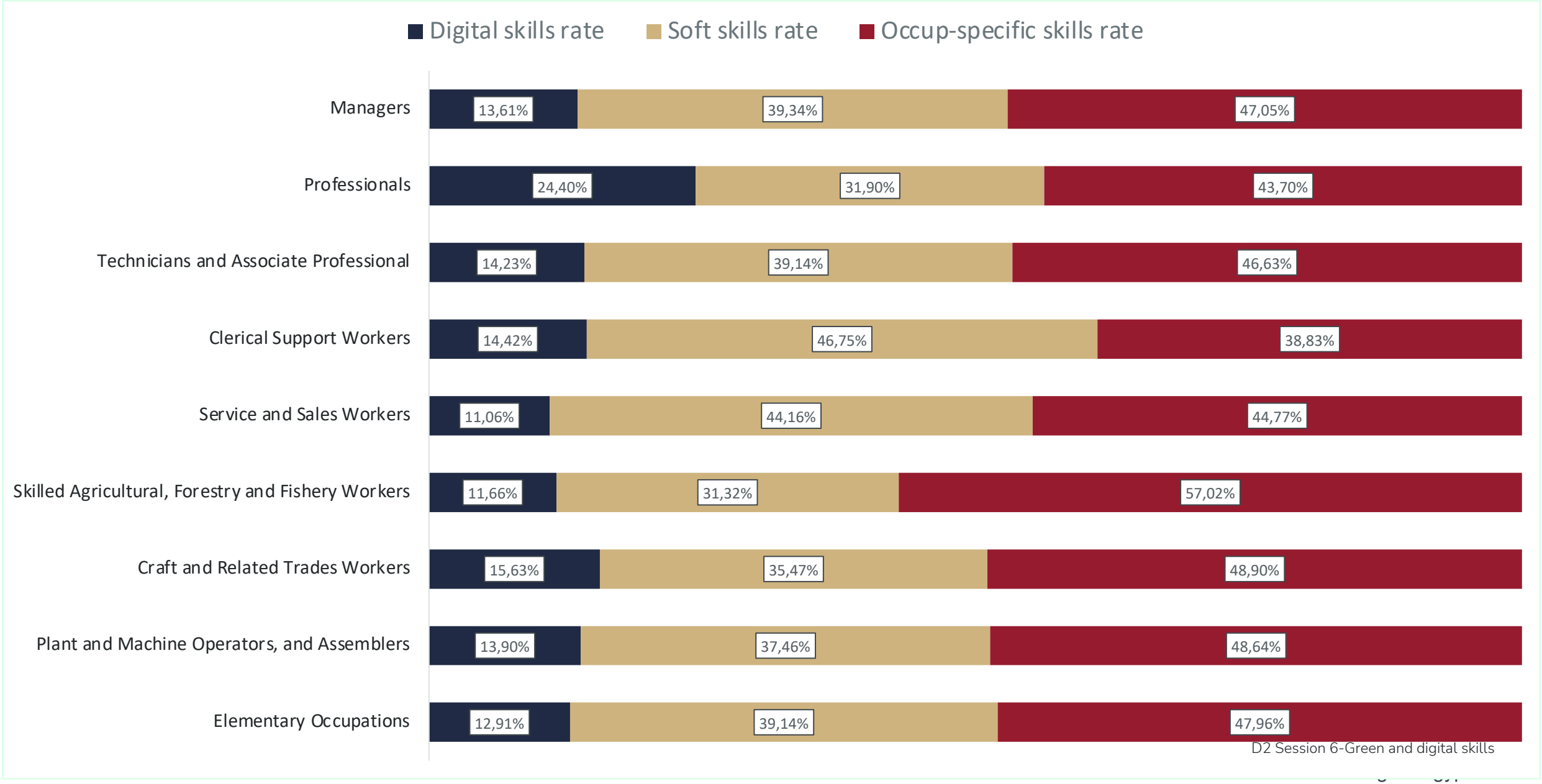
# Egypt: DIGITAL SKILLS: TOP 20






Source: ETF Job Postings – Egypt 2022

# DIGITAL SKILLS: BY ISCO GROUPS (Occupations)



# DIGITAL SKILLS: IN DIGITAL AND NON-DIGITAL OCCUPATIONS

| Occupation (ISCO 08) | Unique OJV 2022 | Digital skills rate | Soft skills rate | Occupational-specific non digital skills rate |
|---|---|---|---|---|
| Database designers and administrators | 158 | 54,00% | 20,00% | 26,00% |
| Web and multimedia developers | 5418 | 48,00% | 23,00% | 29,00% |
| Systems administrators | 1366 | 47,00% | 25,00% | 28,00% |
| Applications programmers | 1343 | 44,00% | 24,00% | 32,00% |
| Software developers | 14752 | 40,95% | 26,32% | 32,73% |
| Data entry clerks | 351 | 40,13% | 30,64% | 29,23% |
| Mathematicians, actuaries and statisticians | 174 | 39,08% | 28,53% | 32,38% |
| Database and network professionals | 1780 | 38,77% | 26,57% | 34,66% |
| Computer network professionals | 397 | 38,29% | 29,08% | 32,63% |
| Systems analysts | 6593 | 28,64% | 33,62% | 37,74% |
| Graphic and multimedia designers | 3686 | 25,39% | 25,93% | 48,69% |
| General office clerks | 2022 | 21,92% | 44,19% | 33,89% |
| Environmental engineers | 58 | 19,53% | 36,15% | 44,31% |
| Business services and administration managers | 1785 | 15,78% | 40,38% | 43,84% |
| Personnel and careers professionals | 4122 | 15,77% | 39,97% | 44,26% |
| Accounting and bookkeeping clerks | 240 | 11,88% | 33,99% | 54,13% |
| Handicraft workers in textile, leather and related materials | 2022 | 19,75% | 31,85% | 48,41% |

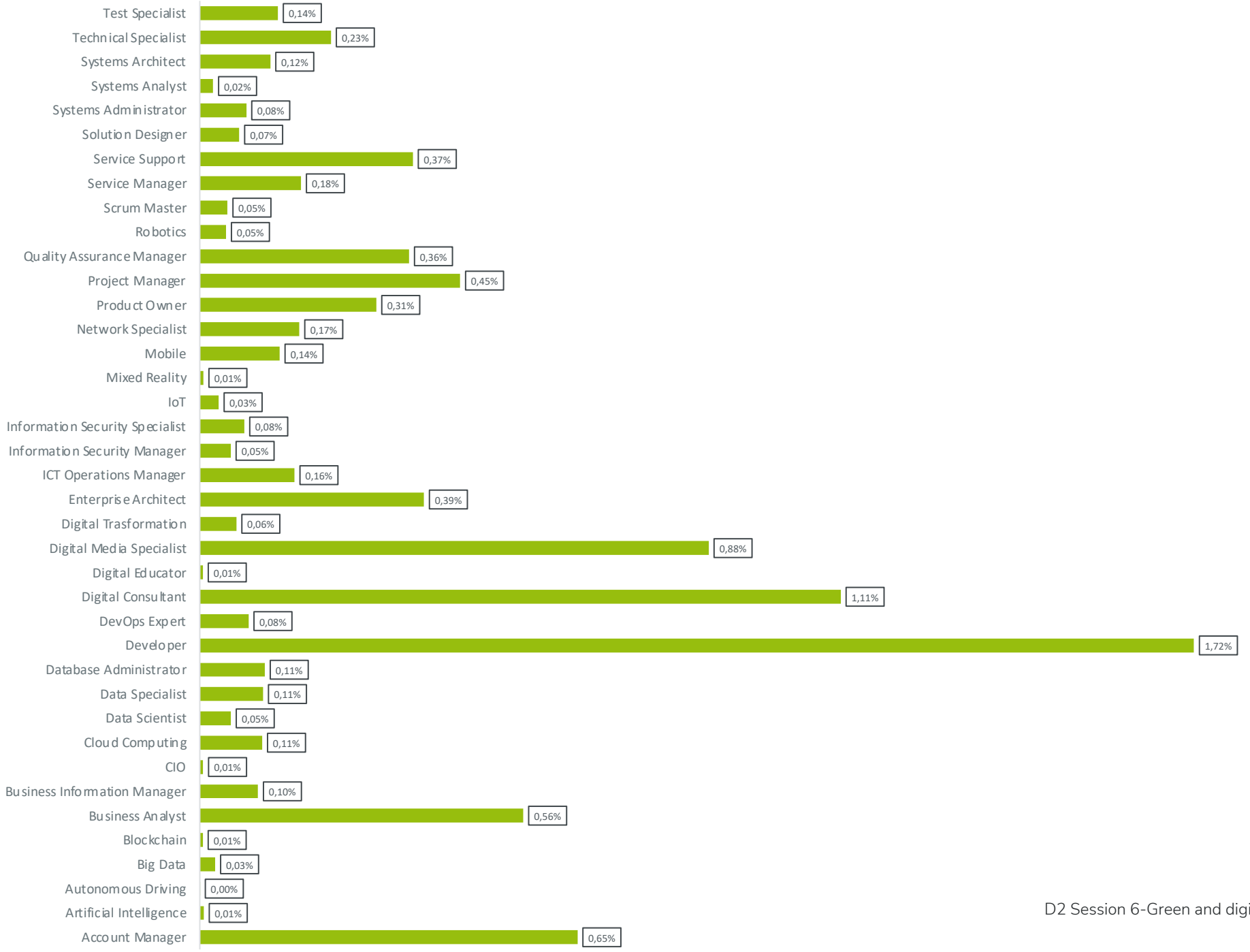


Source: ETF Job Postings – Egypt 2022

# ICT profiles

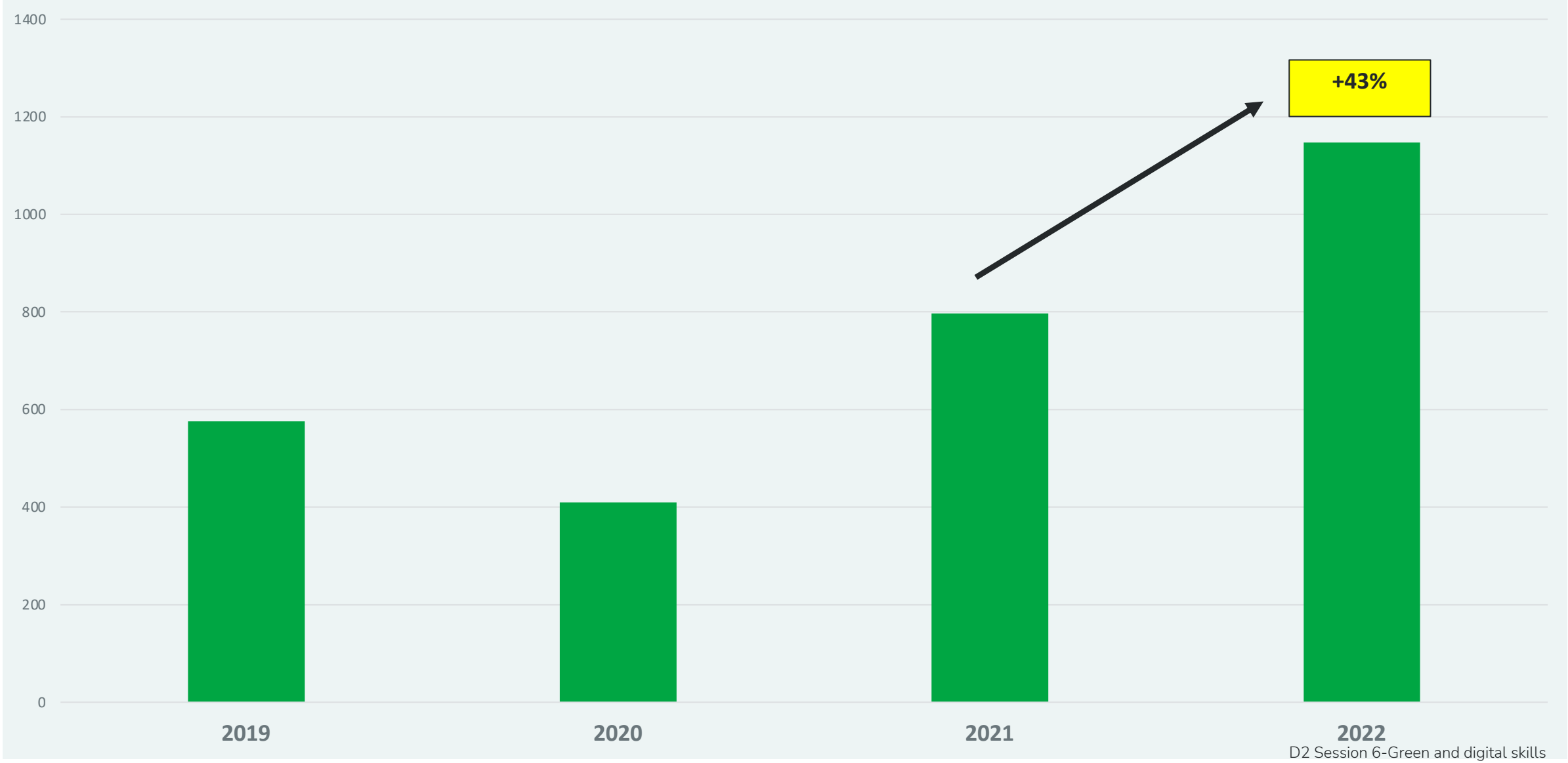
## CEN-SENELEC

## (UNIQUE OJV)




Source: ETF Job Postings – Egypt 2022

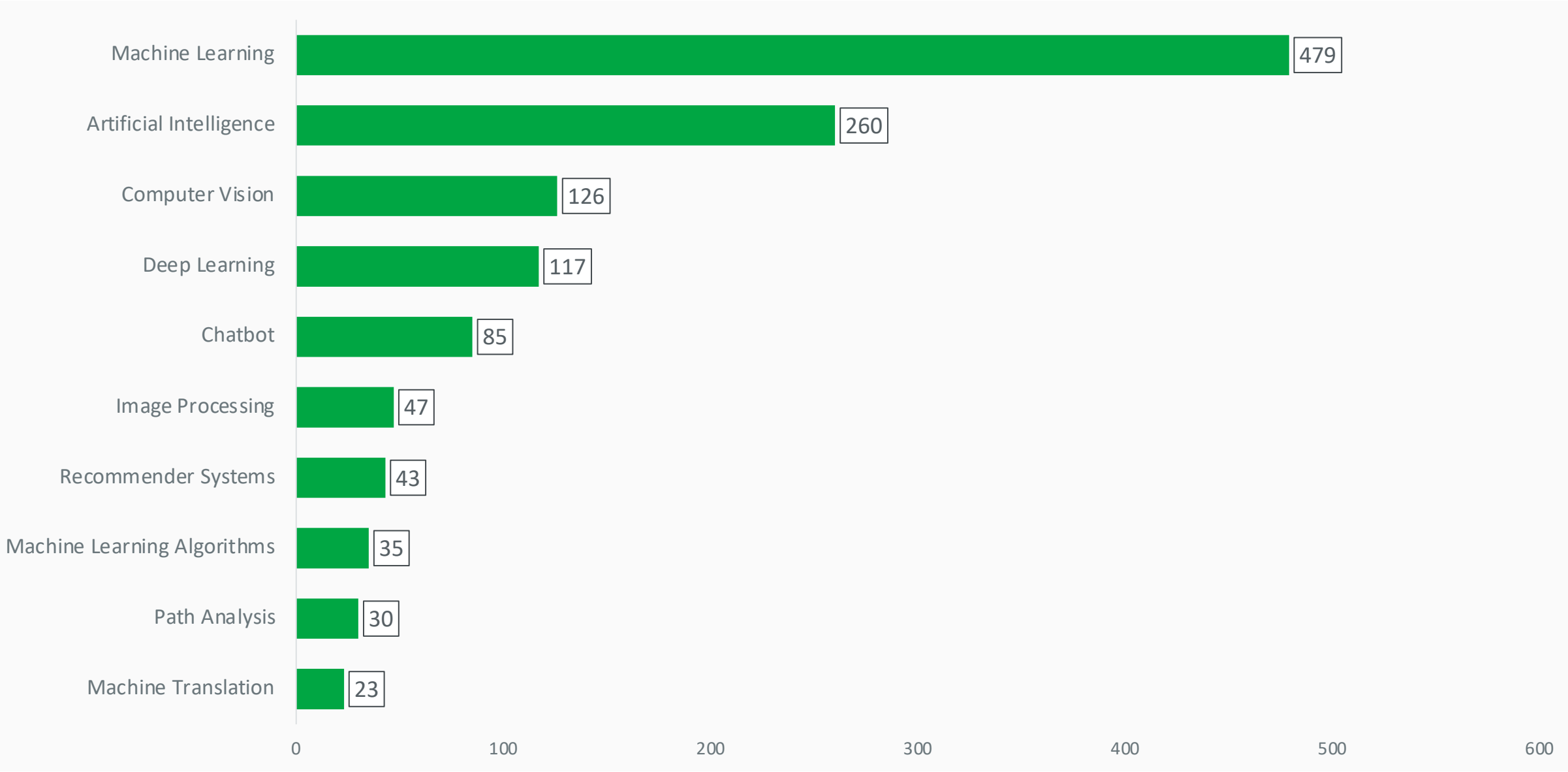
# Demand for AI skills: growth (time for AI literacy)?






Source: ETF Job Postings – Egypt – Lightcast AI Skills list

# TOP AI skills: from online job vacancies




Source: ETF Job Postings – Egypt – Lightcast AI Skills list

# Reflection on digital skills Sierra Leone

What are the top Digital Skills on demand?

Are education and training programmes / LLL - adjusted / reviewed to meet demand?

How can the Ecosystem NQF-RPL-CATS address the skills gaps?

# Tenki !