

# Advances in labour foresight exercises as mechanisms for anticipating demand

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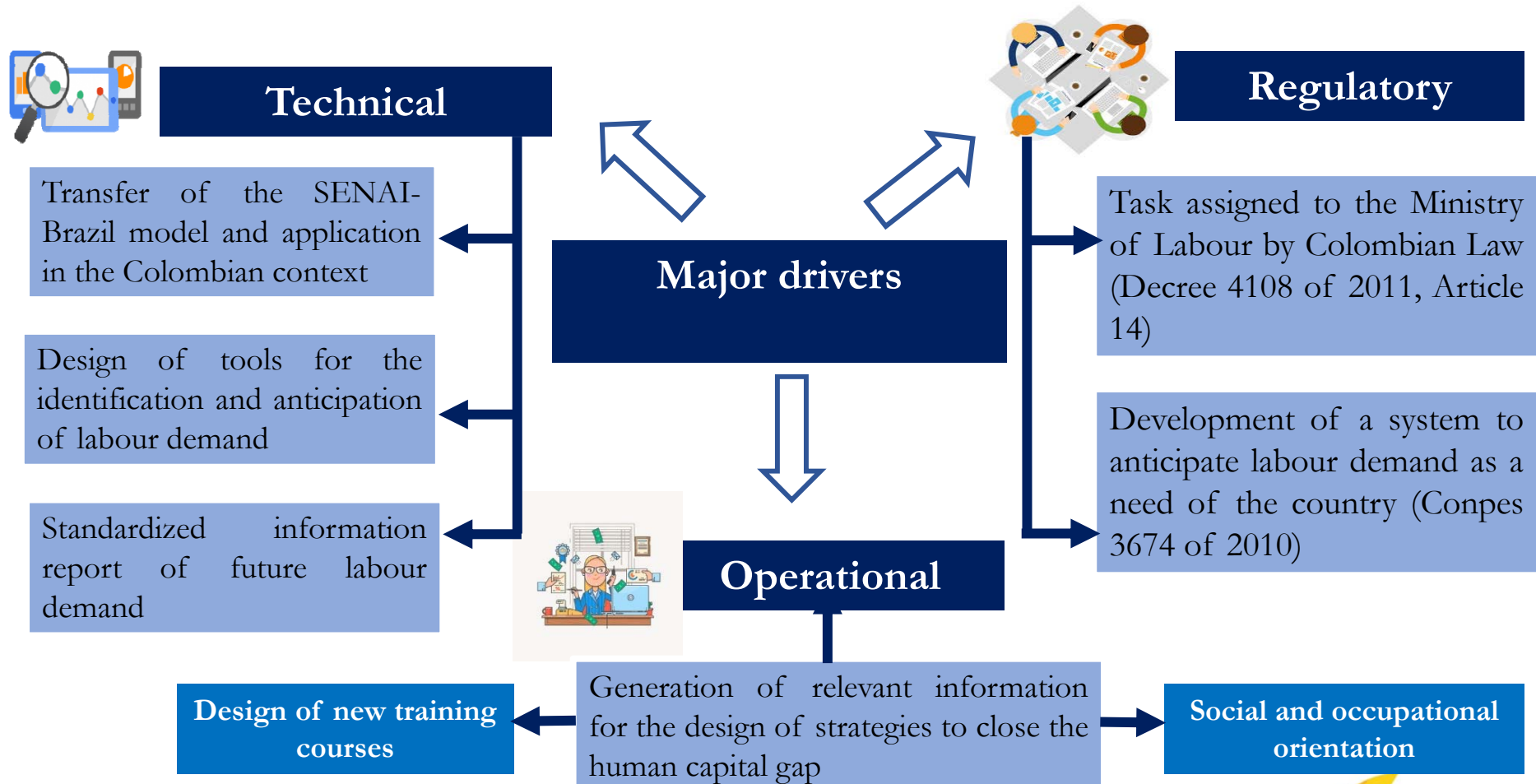
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1. Qualitative foresight of the labour market: The need to adapt a methodology for Colombia
2. Phases of the methodology and the tools that have been used
3. Anticipating human talent needs at sector level: An account of the case studies carried out for Colombia
4. Challenges and final considerations

# What is the objective of Qualitative Labour Foresight?

1. Qualitative Labour Foresight: The need to adapt a methodology for Colombia
2. Phases of the methodology and the instruments that have been used
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# 1. Qualitative Labour Foresight: The need to adapt a methodology for Colombia

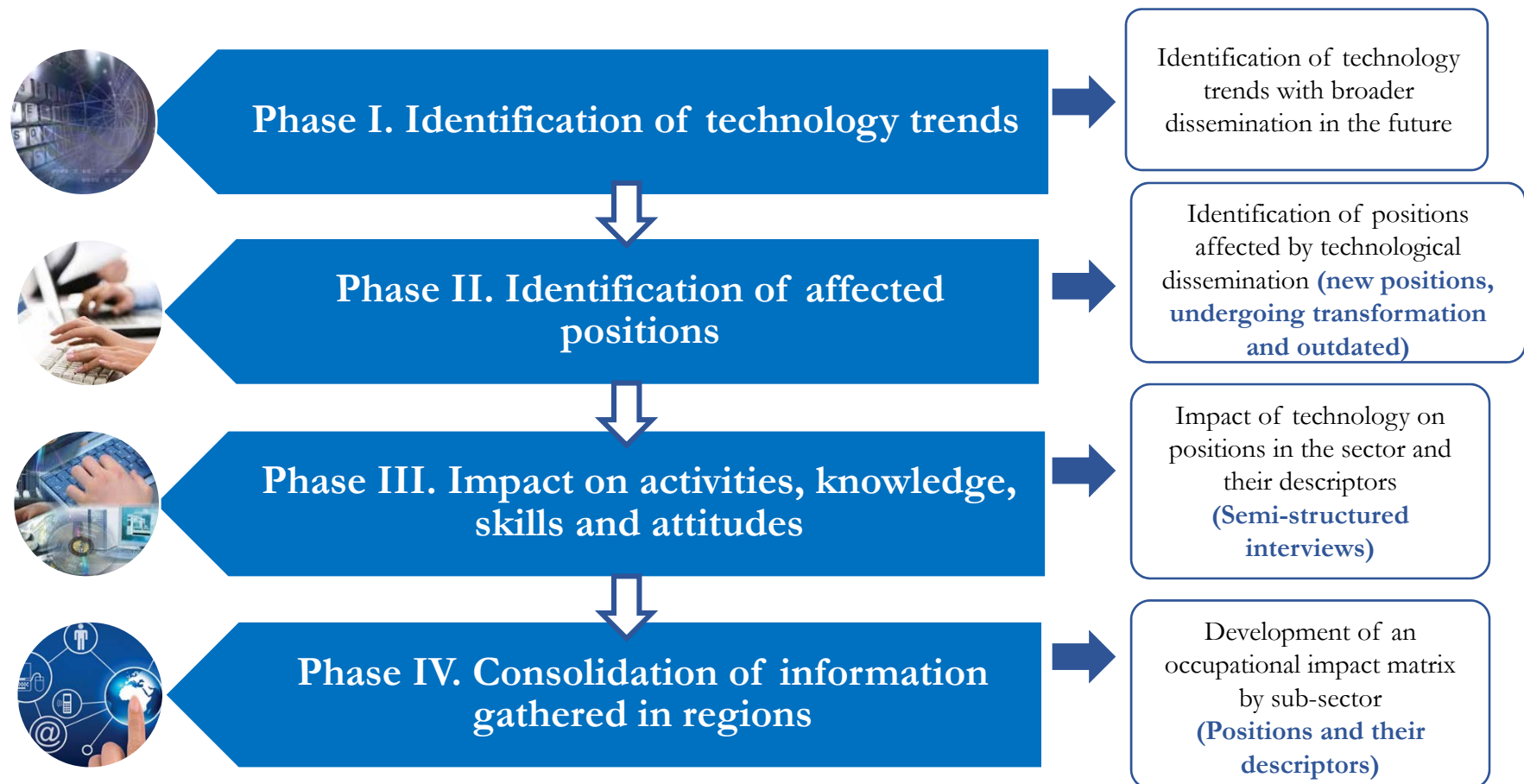


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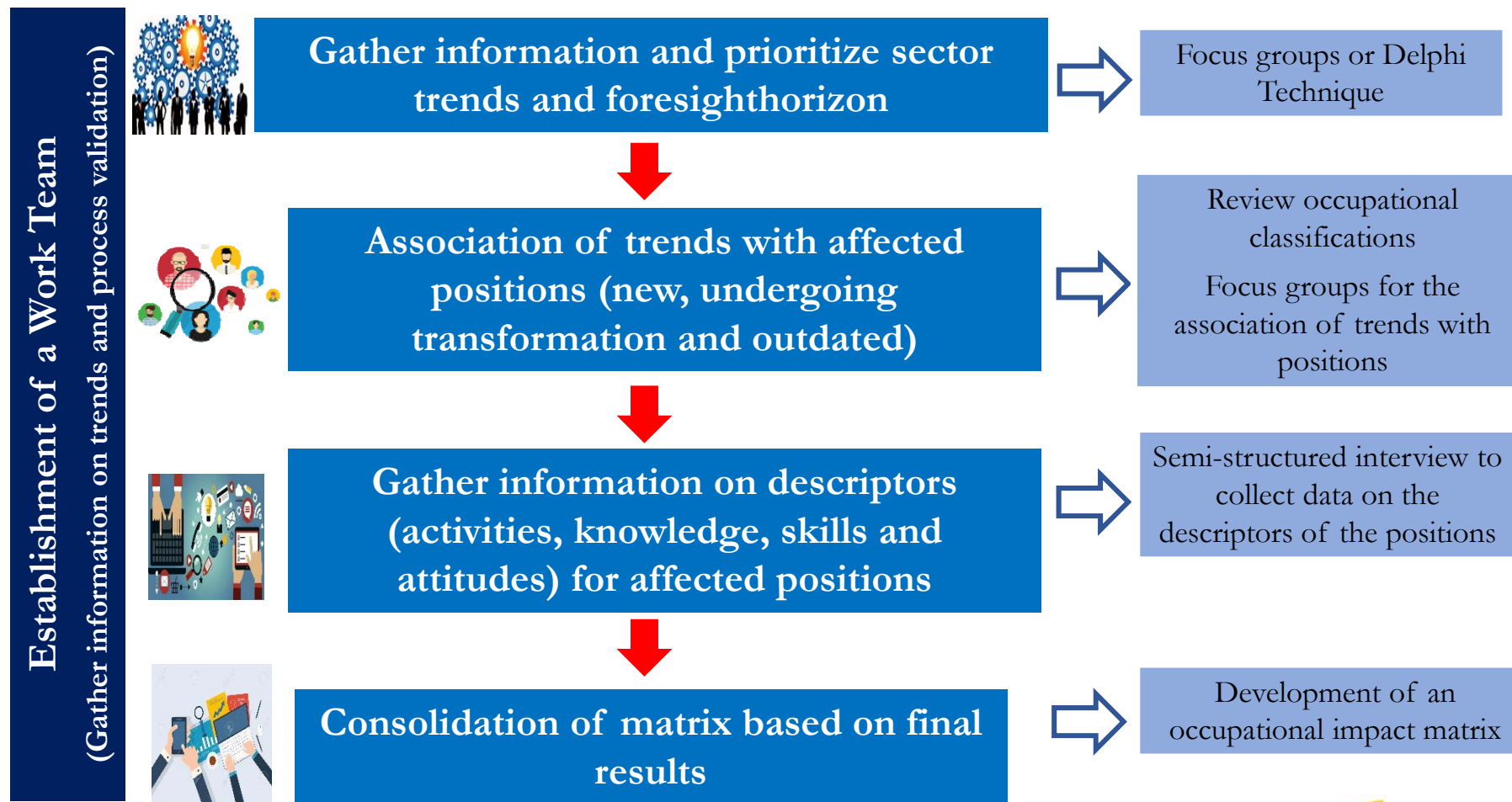
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## 2. Phases of the Labour Foresight Methodology

- ❖ **Objective:** Anticipate future needs of human resources in terms of occupations or positions and skills for an economic sector according to technology trends that will affect their future development in coming years.



# Instruments used in each phase



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### 3. Anticipating human talent needs at sector level: An account of the case studies carried out for Colombia

#### IT sub-sectors

**Short term:** Less than 2 years  
**Medium term:** From 2 to 5 yrs.  
**Long term:** More than 5 years



Software development



IT services other than software development



IT and Hardware infrastructure



Digital contents



Telecommunications (Services and Infrastructure)



#### Construction of buildings sub-sector

Time horizon of 5 to 10 years



#### Early childhood education sub-sector

Time horizon of 10 years



#### Port logistics sub-sector

Time horizon of 10 years

# Some major technological trends in the building construction sub-sector (I)



# What positions will this sub-sector require in Colombia for the coming years?

Performance Supervisor \*

Smart system installer\*

Urban gardener\*\*

Vegetated Infrastructure installer\*

Engineer specialized in surfaces, trails or filtering beds \*

Trail, surfaces of filtering bed installer\*

Engineer specialized in surfaces, trails or filtering beds \*\*

Waterproofing installer\*

Condition and pathology assessor\*

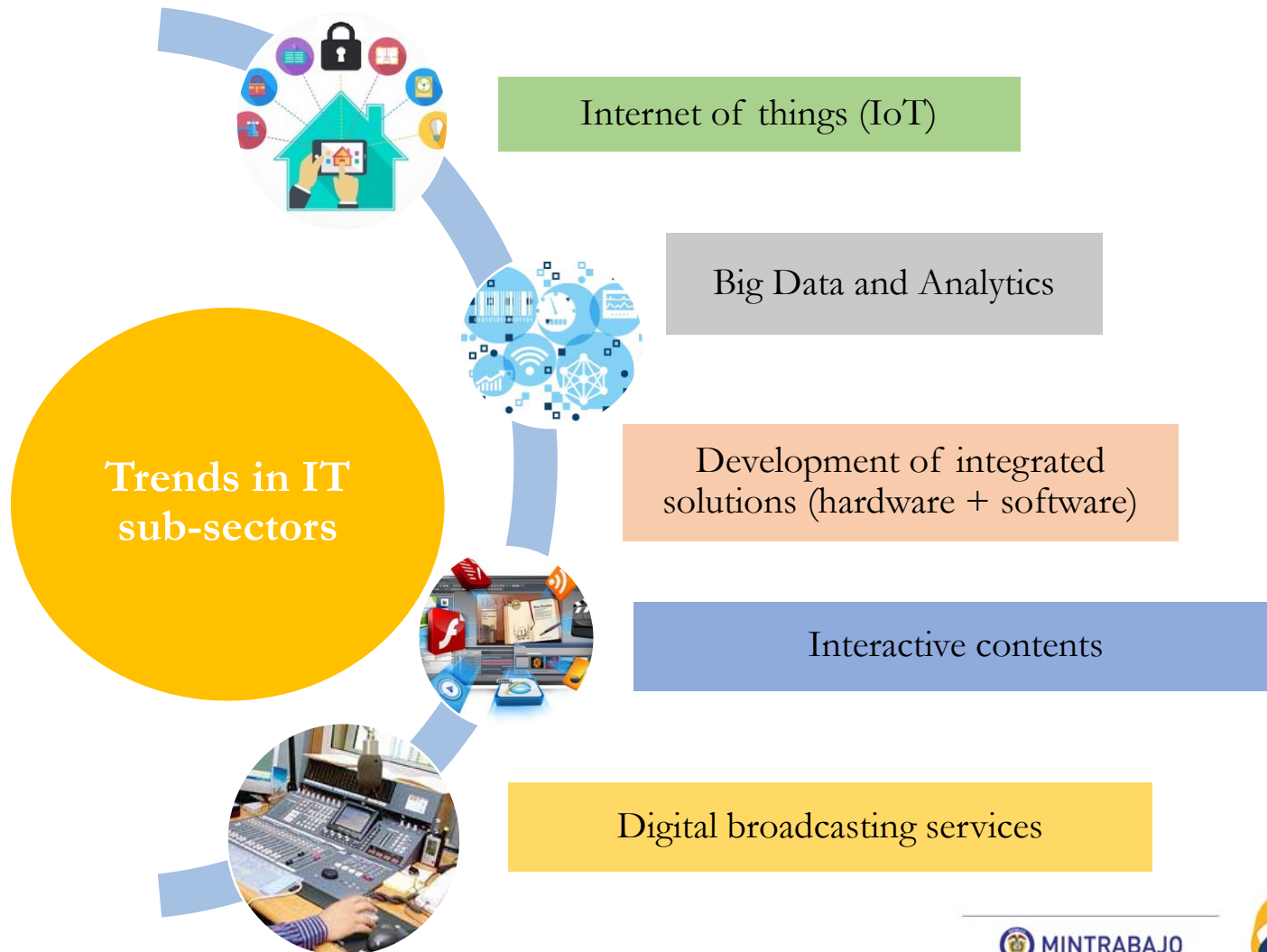
Architectural concrete worker\*

Automation engineer\*

A TOTAL OF 74 POSITIONS HAVE BEEN FOUND

\* 14 NEW POSITIONS

# Some major technology trends in the IT sector



# Some results for positions that will be in demand in the IT sector in coming years

Development Engineer

Web designer

Software or game testers\*

Database administrator

Cyber security director\*

Community manager

Software architect

Technicians, installation technicians, operation and maintenance of networks

Security analyst

Software developer


**\*NEW POSITIONS**

Computer game developer


**A TOTAL OF 172 POSITIONS HAVE BEEN FOUND**

# Some Major Trends for the Early Childhood Education Sub-Sector

## Trends in the early childhood education sub-sector



Cooperation among teachers in the classroom for the development of pedagogical experiences that promote child development.



Promotion of artistic expressions, games, literature and the exploration of the environment in the life of children geared towards development and learning purposes.

Research on the assessment of comprehensive development and its contributions to the educational environment.

Comprehensive care of children as part of early childhood education.

# Some results for positions that will be in demand in the early childhood education sector in coming years

Ethno-education teachers

Artistic Expressions instructor

Early childhood environmental educator\*

Support staff to respond to diversity\*

Directors of Educational Establishments

Database administrators

Research professor in early childhood

Special education teachers

Educational advisor

Early childhood education policy makers

**\*NEW POSITIONS**

Psychosocial support staff

Early childhood educator

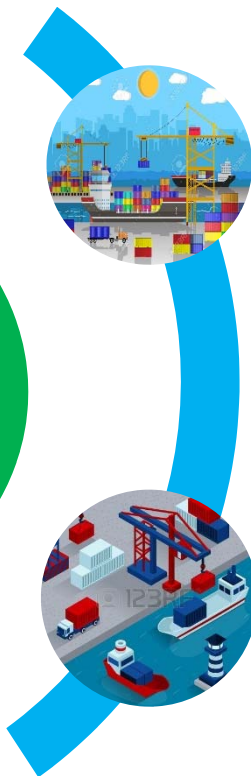
Educational psychologist

**A TOTAL OF 23 POSITIONS HAVE BEEN FOUND**



# Some major technological trends in the port logistics sub-sector

## Trends in the port logistics sub-sector



Using RFID (Radio Frequency Identification) on non-containerized cargo

Green ports (compliance with international standards and minimization of environmental impact)

Single windows for port logistics operations

Gantry crane simulation

Berthing and departure maneuvers simulation



# Some results for positions that will be in demand in the port logistics sub-sector in coming years

Warehouse Manager



Warehouse and Cargo Hold Assistant

Rigger– Banksman

Wharf Superintendent - Port Supervisor



Director of the Department of Transport-  
Ship Planner/Yard Planner

Forklift Operator

Ship Master - Tugboat Captain



Crane Operator

Winch operator

**A TOTAL OF 25 POSITIONS HAVE  
BEEN FOUND**

Maritime and river pilots



# An example of the descriptors used for the Gardener position in the sub-sector of the construction of buildings



## Gardener

Technology: Vegetated Infrastructure (Terraces and green façades)	Activities	Knowledge	Skills	Attitudes
Position title	Gardener			
Current context	Carry out and handle leafy green material according to technical design specifications	Gardening techniques, use of substrates	Physical and mental skills	Care, responsiveness, willingness to follow orders
Position undergoing transformation	Urban gardener (Gardener transformation)			
Future context	Carry out and handle leafy green material according to technical design specifications	Gardening techniques, use of substrates, high-rise work techniques, anchorage techniques	High-rise work, use of tools and equipment, ability to write reports	Care, responsiveness, willingness to follow orders, team work
	Perform maintenance tasks of the vegetated Infrastructure according to the conditions	Knowledge of power tools and hydraulic equipment, irrigation system and hydraulics, pest control	Use of specialized tools and equipment	Environmental conservation, care, team work

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## 4. Challenges and final considerations

- ❖ Qualitative labour foresight data provides information on the future needs in terms of human talent, which **serve as input for:**
  - ✓ Creation of a qualifications catalogue of the sector
  - ✓ Programmes related to social and occupational orientation or retraining and capacity building
- ❖ Coordinated action is required between the entities involved in order to guarantee active participation of the productive sector in this type of exercises
- ❖ At the technical level, labour foresight exercises are a valuable source of information to update occupational classifications and design occupational dictionaries that gather the needs of the country' workforce.

Thank you!