"Identification of digital skills and employability needs in Senegal in the technology sector".

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1. Introduction

1.1. Context of the report and objectives

AFRICANTECH is an international cooperation project co-financed by the ERDF (INTERREG MAC Territorial Cooperation Programme), whose main objective is to improve the competitiveness of small and medium-sized enterprises in both the Canary Islands and Africa, strengthening their capacities in innovation and digitalisation, and contributing to the economic, social and institutional development of both regions.

The initiative gives continuity to the activities carried out in recent years by the ConfiAfri consortium in the field of internationalisation, extending to the countries participating in the INTERREG MAC 2021-2027 programme. It also incorporates new objectives aimed at addressing emerging challenges in a global context marked by accelerated digital transformation, process automation and the need to promote the development of technological competences in the business fabric.

In this context, FEMEPA, in collaboration with programme partners, has committed to produce a detailed report on the **identification of digital skills and employability needs in Senegal**, with a specific focus on the technology sector. This report aims to provide an accurate diagnosis of the digital skills required, existing gaps and opportunities for improvement to align the training of the workforce with the demands of the digital economy in Senegal.

Digitalisation has become a determining factor for global socio-economic development, highlighting the crucial role of information and communication technologies (ICT) in the generation of employment opportunities and business competitiveness. In this framework, Senegal, one of the most dynamic economies in West Africa, faces the need to adapt its workforce to the demands of the digital market. Digital skills, understood as the acquisition of key competencies in areas such as data analytics, software development, cybersecurity and process automation, are essential to boost the country's employability and sustainable growth.

This report aims to analyse in depth the digital skills and employability needs in Senegal, identifying the priority areas of training to enhance the competitiveness of companies and the inclusion of the population in the labour market. Through a methodological approach based on field studies, surveys and interviews with key actors in the technology sector, it seeks to identify the existing gaps between the skills available and those required by companies, in order to formulate practical and sustainable recommendations.

In recent years, the expansion of ICTs has driven global economic growth; however, their adoption has been uneven, leading to the so-called "digital divide", which reflects the disparity between countries with access to advanced technologies and those that still face challenges.

advanced technologies and those that still face challenges in their implementation. According to figures from the Dakar Chamber of Commerce, Senegal has 10,079,000 internet users in 2023, representing approximately 60% of the population, with 21,092,000 active mobile connections, equivalent to 121.8% of the total population, reflecting exponential growth in mobile connectivity.

The main objective of this study is to identify the **main digital skills gaps in** Senegal **and to propose concrete strategies to strengthen the technological skills of workers.** To this end, data obtained through surveys and interviews with companies and employees in the technology sector will be analysed, in addition to reviewing previous reports on the level of digitisation in the country. It will also consider structural factors such as the available technological infrastructure and existing public policies that influence ICT adoption.

The report will also identify **employability opportunities in emerging sectors** such as e-commerce, fintech and technologies applied to traditional sectors such as agriculture and manufacturing. Although government and private initiatives are already in place to boost digitisation in the country, they remain limited in scope compared to market needs, making the formulation of broader and more inclusive strategies imperative.

In short, this report seeks to lay the foundations for the design of policies and training programmes that promote the development of digital skills in Senegal, identifying success stories and good practices that can serve as a reference for the implementation of effective solutions. The ultimate goal is to promote a more competitive and inclusive work environment, where digital skills play a central role in the economic and social transformation of the country. With this approach, it is expected to contribute to Senegal not only bridging its internal digital divide, but also positioning itself as a relevant player in the digital economy at regional and international level.

Definition of the ICT sector

The sector known as ICT, or Information and Communication Technologies, encompasses a broad set of manufacturing and service industries whose main activity is related to the development, production, commercialisation and intensive use of information and communication technologies. This sector includes a variety of activities that can be classified into different categories according to the Spanish National Classification of Economic Activities (CNAE 2009).

Manufacturing industries:

- Manufacture of electronic components (CNAE 2611).
- Manufacture of assembled printed circuits (CNAE 2612).
- Manufacture of computers and peripheral equipment (CNAE 2620).
- Manufacture of telecommunications equipment (NACE 2630).
- Manufacture of consumer electronic products (CNAE 2640).
- Manufacture of magnetic and optical media (CNAE 2680).

Services:

- Wholesale trade of computers, peripheral equipment and computer software (CNAE 4651), as well as electronic and telecommunications equipment (CNAE 4652).
- Publishing of video games (CNAE 5821) and other computer software (CNAE 5829).
- Telecommunications by cable (CNAE 6110), wireless (CNAE 6120), satellite (CNAE 6130) and other related activities (CNAE 6190).
- Computer programming activities (CNAE 6201), computer consultancy (CNAE 6202), computer resource management (CNAE 6203) and other services related to information technology (CNAE 6209).
- Data processing, web hosting and related activities (CNAE 6311) and web portals (CNAE 6312).
- Repair of computers and peripheral equipment (CNAE 9511) and communication equipment (CNAE 9512).

1.2. Executive summary

At a time when Africa is emerging as a continent of digital opportunities, Senegal is at a fascinating crossroads. This report, part of the AFRICANTECH project and supported by the European INTERREG MAC programme, reveals a country that is moving steadily towards digital transformation, but faces significant challenges that require immediate attention and innovative solutions.

This paper, based on the analysis of numerous sources and interviews with key players in the Senegalese technology and business ecosystem, as well as surveys of SMEs, paints a picture of contrasts. On the one hand, we find a country that has made remarkable progress in digital connectivity, with internet penetration reaching 43% of the population and mobile coverage exceeding 114% in terms of subscriptions. On the other hand, we observe persistent gaps that threaten to leave important sectors of the economy behind, especially in rural areas and in traditional industries such as agriculture and manufacturing.

The Senegalese business fabric has particular characteristics that condition its capacity for technological adoption. The high geographical concentration in Dakar, where more than 50% of companies are located, together with the predominance of the services sector, which accounts for 60% of GDP, has created a two-speed digital development. While the financial sector and telecommunications are leading the digital transformation with innovative solutions in fintech and e-commerce, a large part of the productive fabric, especially SMEs, is struggling to keep up with the digital revolution.

A particularly relevant condition is that around 80% of the business fabric operates in informality, a figure that underlines the magnitude of the challenge for inclusive digitalisation. This reality not only limits access to formal financing, but also excludes these companies from government support and digital training programmes.

Key stakeholder interviews have revealed an interesting paradox: while some companies are implementing artificial intelligence and blockchain solutions, many SMEs struggle to implement basic digital tools. According to the analysis of various reports, interviews and surveys, the most cited barriers include high technology costs (mentioned by 40% of entrepreneurs), lack of adequate training (48%) and limited access to finance (only 18% have secured loans for technology investment).

The Senegalese government has demonstrated its commitment to digital transformation through ambitious initiatives such as the Sénégal Numérique 2025 Strategy and the recent New Deal Technologique. However, our discussions with private sector representatives revealed a disconnect between public policies and the real needs of businesses.

The education system and vocational training in Senegal is also in a moment of transformation, driven by the growing demands of the digital economy and the need to adapt the workforce to the technological challenges of the 21st century. Educational institutions are making significant efforts to incorporate digital tools into their programmes, although the gap between the training offered and the needs of the labour market remains considerable.

Technical vocational education and training (TVET) has undergone a remarkable evolution, showing promising results in terms of success rates and employability. However, important challenges remain in terms of updating programmes, training of trainers and availability of modern technological equipment.

Instruments such as the Financing Fund for Vocational and Technical Training (3FPT) have played a fundamental role in the modernisation of the training system, financing initiatives that seek to align training with the needs of the productive sector. This mechanism has allowed the creation of specialised programmes in emerging areas such as artificial intelligence, software development and cybersecurity. However, according to the Ministry of Employment, Vocational Training and Apprenticeship, less than 30% of technology graduates are employed in the digital sector within six months of completing their studies, highlighting the need to strengthen the links between training and the labour market.

Public-private partnerships emerge as a crucial element for the success of vocational training in Senegal. Interviews with key actors in the sector reveal a consensus on the need to establish more effective cooperation mechanisms between educational institutions and enterprises. The dual training programme, which combines theoretical learning with practical experience in technology companies, is presented as a promising model that could be expanded with the right support. The Government of Senegal's strategies set ambitious targets in this regard, including the creation of sectoral consortia that bring together companies, training institutions and public bodies to design curricula aligned with the needs of the sector.

The opportunities for digital development in Senegal are as significant as the challenges. The fintech ecosystem is flourishing, with companies such as Wave and PayDunya leading the digital payments revolution. E-commerce is growing exponentially, driven by platforms such as Jumia and Boutique 221. Even traditional sectors such as agriculture are beginning to experiment with emerging technologies: drones for crop monitoring, IoT sensors to optimise irrigation, and mobile apps to connect directly to markets.

International collaboration, particularly with the Canary Islands through the AFRICANTECH project, emerges as a key piece of the puzzle. Canary Islands companies can contribute not only technical expertise and better

The cooperation will not only benefit Senegalese SMEs, but also access to financing for digitisation projects. This cooperation will not only benefit Senegalese SMEs; it will also open up new business opportunities for Spanish companies in an emerging market with huge potential.

Looking ahead, our analysis suggests that the digital transformation of Senegalese SMEs will require a comprehensive approach that combines several elements: specific funding programmes for digitisation, intensive training in digital skills, coordination between the public, private and training sectors, the improvement of technological infrastructure (especially in rural areas) and a robust regulatory framework that builds trust in the digital ecosystem.

The timing is crucial. With a young and increasingly connected population, Senegal has the opportunity to leapfrog its economic development through digitisation. Success will depend on the country's ability to turn plans and strategies into concrete actions that reach the heart of the business fabric: the small and medium-sized enterprises that are the engine of its economy.

Digital transformation is not just about technology; it is an opportunity to reimagine Senegal's economic future. With the right support, Senegalese SMEs can become catalysts for innovation and growth, creating quality jobs and helping to position the country as a digital hub in West Africa. The road will not be easy, but the foundations are in place for a transformation that can change the face of the Senegalese economy in the next decade.

2. Economic and technological context

2.1. African context

Africa has shown signs of recovery from global challenges, with GDP growth projected to average 4.5% in 2024. This growth is being driven by the expansion of the services sector, foreign direct investment and an increase in exports of natural resources, particularly hydrocarbons and minerals. Oil and gas production is expanding, and sectors such as mining continue to be key drivers of growth in several African economies. Structural reforms and the implementation of the African Continental Free Trade Area (AfCFTA) stand out as key elements for economic momentum.

Despite the optimistic growth figures, some significant challenges remain. In particular, inflation in several African economies has remained high, ranging between 6% and 20% in some cases, due to rising food and energy prices, exacerbated by the war between Russia and Ukraine. Debt levels also remain a concern in several countries, with public debt-to-GDP ratios ranging from 40 per cent to 100%, and in some cases exceeding this threshold, as in Eritrea, where debt exceeds 160% of GDP.

Table 1: Main economic indicators of the main West African economies. Source: own elaboration based on the latest available data from the World Bank and the African Development Bank.

Country	GDP growth (%)	Population (millions)	Income per capita (USD)	Rate inflation rate (%)	Unemployment rate (%) Unemployment rate (%)
Nigeria	2,9	213	2.150	19	30
Ghana	2,3	32	2.380	21,4	6,5
Côte d'Ivoire	3,5	27	2.867	12,5	7,3
Senegal	4	18,3	1.860	10	9
Burkina Faso	2,5	22	920	11	6
Mali	3	22	950	8,5	12
Benin	5	13	1.512	8,8	5,4
Togo	4,5	8	1.350	7,9	8
Sierra Leone	4	8	907	14,4	8,5
Gambia	3,5	3	880	7,2	6,1

West Africa is one of the most dynamic sub-regions in terms of economic growth, with projections pointing to GDP growth of 5% or more in countries such as Côte d'Ivoire, Benin and Senegal by 2024. This growth is being driven by expansion in key sectors such as agriculture, services and mining. Côte d'Ivoire, in particular, has maintained sustained economic growth, with projections suggesting that its economy will expand by 6.5% in 2024. Benin, meanwhile, also expects growth of 6.2 per cent due to its efforts in agricultural modernisation and infrastructure development.

Inflation in West Africa has ranged between 5% and 10% in most countries in the region, driven by rising food prices, with significant variations among import-dependent economies.

In addition, the current account deficit remains a challenge for several countries in the region. In Senegal, the current account deficit is projected to remain at around 6% of GDP in 2024, while in Nigeria, the region's largest oil producer, the deficit is expected to reach 4.8% of GDP.

In terms of the digitisation of the African continent, we start with the analysis of data from the International Telecommunication Union (ITU), an agency of the United Nations.

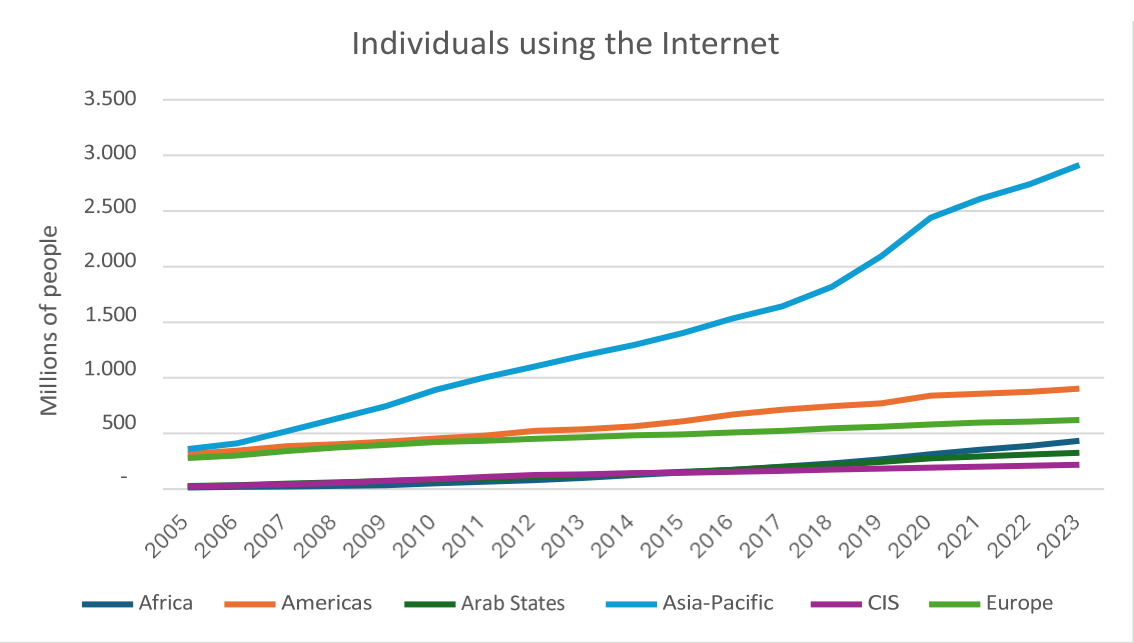
According to its latest report on digital development in 2023, the following picture emerges of Africa compared to other regions:

- **Internet connectivity and usage:** Africa continues to lag behind other regions in terms of internet access. Only 37% of the African population uses the internet in 2023, compared to a global average of 67%. In contrast, in Europe and the Commonwealth of Independent States (CIS) region, more than 90% of the population is online, approaching universal connectivity. The difference in access between urban and rural areas is also considerable in Africa, where 57% of urban dwellers use the Internet compared to 23% of rural dwellers, reflecting a 2.5-fold digital divide between these two groups. This gap is notably deeper in Africa than in other regions of the world.
- **Mobile network coverage:** Mobile network coverage also shows significant differences between Africa and other regions. While 95% of the world's population has access to mobile broadband networks, in Africa 4G coverage reaches only 43% of the population, and 5G covers less than 10%. This puts Africa far behind Europe, where 68% of the population has access to 5G networks. The majority of the African population still relies on 3G networks, which are often the only technology available in various parts of the continent.
- **Accessibility to ICT services:** The cost of telecommunications services remains a significant barrier in Africa. The price of a mobile broadband basket (2GB) represents 4.9% of gross national income (GNI) per capita in Africa, while globally this value is 1.3%. For fixed broadband, the cost in Africa is even higher at 14.8% of GNI per capita, making mass adoption difficult. These figures reflect that, although ICT services have become more affordable in recent years, Africa faces a huge cost barrier compared to regions such as Europe, where the cost of fixed broadband is only 1.0% of GNI per capita.
- **Gender gap in digital access:** Internet access continues to show significant gender disparities in Africa, where only 32% of women use the Internet, compared to 42% of men. While this gender gap is significant in Africa, it is also a global concern, with a 5 percentage point difference between men and women worldwide. However, in regions such as Europe and the Americas, gender parity in internet use is much closer to being achieved.

Mobile and broadband subscriptions: In terms of penetration of mobile broadband subscriptions, Africa has 48 active subscriptions per 100 inhabitants, much lower than the global average of 116 subscriptions. This low level of subscriptions reflects both coverage challenges and cost issues, and contrasts sharply with more advanced regions, such as the Americas and Europe, where mobile broadband penetration is more than double.

By 2023, Senegal has reached 99% coverage for basic mobile networks and 75% for 4G networks, consolidating its position as one of the countries with the highest coverage in West Africa.

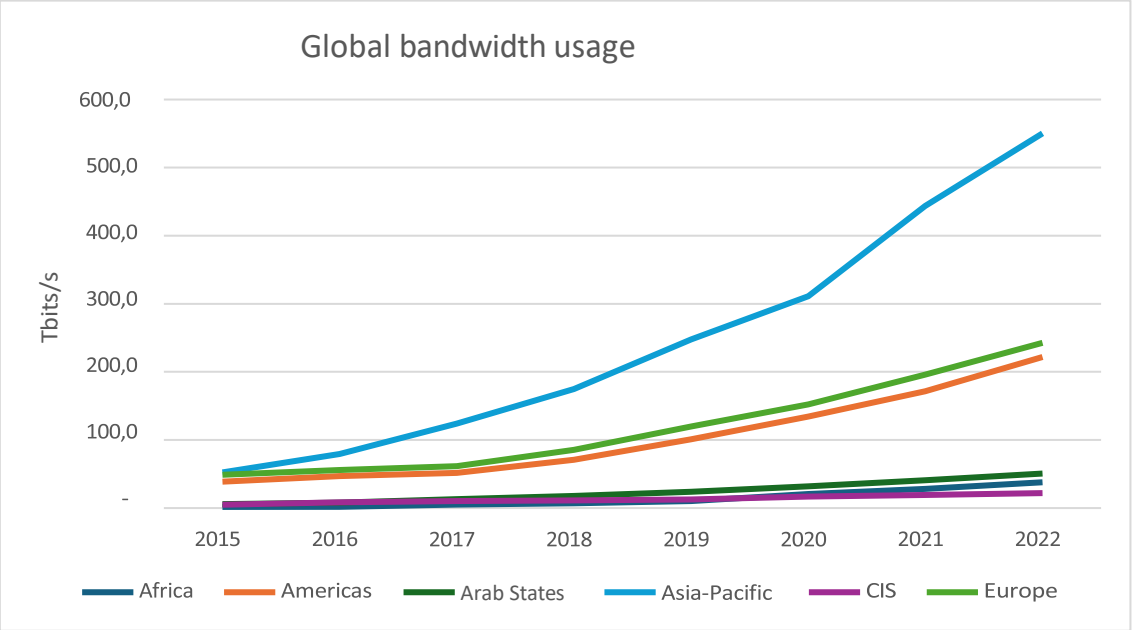
Figure 1: Internet users by world region. Source: UN ITU.



The graph below shows the evolution of the number of Internet users in millions over the years, broken down by world region. In the case of Africa, the growth is remarkable, although it starts from very low figures compared to other regions. In 2005, the continent had only 15 million internet users, and over the years it has experienced steady growth, reaching 434 million by 2023. This growth reflects both the increase in the availability of technological infrastructures and the expansion of access to mobile devices, which in many cases are the main gateway to the internet in the region.

Despite this significant growth, Africa still lags behind other regions of the world in absolute terms. For example, in 2023, Asia-Pacific had 2.914 billion users, while Europe and the Americas had 621 million and 903 million, respectively. However, the growth rate in Africa is one of the fastest, as in just over 15 years, the region has increased its number of users by almost 30 times.

Figure 2: Bandwidth usage by region. Source: UN ITU: UN ITU.



The chart above shows international bandwidth usage (in terabits per second, Tbit/s) by world region from 2015 to 2023. For Africa, there is significant growth, although it started later and from much lower levels than other regions. In 2015, Africa had an international bandwidth usage of only 1.7 Tbit/s, rising rapidly to 37.9 Tbit/s by 2022. This growth is a clear indication of the expansion of digital infrastructure on the continent, as well as the increase in data demand driven by increased internet access and use of digital services.

Despite this growth, Africa still lags behind other regions. For example, in 2022, the Americas recorded an international bandwidth usage of 221.9 Tbit/s, while Europe reached 242.7 Tbit/s, and Asia-Pacific ranked as the region with the highest usage at 550.3 Tbit/s. This reflects the differences in the level of technological development and connectivity between regions.

Table 2: Main ICT development indicators. Source: own elaboration based on UN ITU data.

Country	% of population with mobile coverage	% of population with mobile coverage (3G)	% of population with mobile coverage (at least 4G)	% of population owning a mobile phone	% households with Internet access	% households with a computer at home	% rural households with Internet access	% urban households with Internet access	Mobile phone subscribers (per 100 inhabitants) per 100 inhabitants)	Fixed telephony subscribers (per 100 inhabitants) inhabitants)	Active mobile broadband subscribers (per 100 inhabitants) inhabitants)	% population using the Internet
Benin	98%	80%	46%	-	5%	5%	-	-	92	0	27	26%
Burkina Faso	92%	48%	27%	-	-	5%	-	-	106	0	52	22%
Cape Verde	99%	94%	79%	72%	67%	35%	52%	74%	98	10	75	64%
Côte d'Ivoire	98%	95%	60%	68%	17%	12%	7%	25%	152	74	1	36%
Equatorial Guinea	70%	60%	0%	-	-	-	-	-	46	1	0	26%
Gambia	98%	88%	7%	-	63%	19%	-	-	111	2	55	36%
Ghana	97%	96%	68%	-	22%	16%	-	-	130	1	85	58%
Guinea	88%	40%	29%	77%	13%	7%	1%	9%	105	0	24	26%
Guinea-Bissau	100%	33%	0%	-	-	7%	-	-	97	0	40	23%
Kenya	96%	94%	77%	47%	18%	9%	15%	56%	114	0	47	29%
Liberia	76%	63%	35%	-	-	7%	-	-	33	0	7	26%
Mali	100%	65%	45%	-	22%	5%	10%	50%	125	1	46	27%

Morocco	100%	99%	99%	96%	85%	64%	57%	82%	134	6	75	84%
Mauritania	96%	43%	0%	-	3%	7%	-	-	106	1	62	41%
Niger	92%	24%	15%	65%	10%	12%	5%	39%	59	0	6	10%
Nigeria	91%	74%	41%	41%	15%	6%	2%	18%	99	0	42	35%
Senegal	99%	99%	75%	-	7%	10%	-	-	114	1	67	43%
Sierra Leone	85%	65%	40%	-	14%	6%	-	-	86	0	20	18%
South Africa	100%	100%	96%	78%	63%	23%	43%	70%	162	4	111	70%
Togo	98%	91%	67%	44%	26%	10%	-	-	79	1	31	24%

The table below contains key indicators of information and communication technology (ICT) development in several African countries, showing data such as mobile coverage (3G and 4G), internet penetration, the proportion of households with access to technology, and the number of fixed, mobile and broadband subscribers. Overall, the data reflect wide disparities in ICT adoption and access, highlighting differences between countries in terms of technology infrastructure and connectivity.

Cape Verde and South Africa stand out as leaders on several indicators, with high percentages of internet usage (64% and 70%, respectively), active mobile broadband subscribers, and a significant proportion of connected households. On the other hand, countries such as Niger and Guinea-Bissau show significant lags, with low levels of internet penetration (10% and 23%, respectively) and access to advanced technologies. These disparities underline the challenges Africa faces in terms of digital equity and technological development.

In the specific case of **Senegal**, the country shows outstanding performance on several key indicators. With 99% mobile coverage (both general and 3G) and 75% for 4G, Senegal is among the best positioned countries in terms of basic telecommunications infrastructure. However, only 43% of the population uses the internet, which, although higher than the average for many countries in the region, still shows a gap between infrastructure availability and effective adoption. The number of active mobile broadband subscribers (67 per 100 inhabitants) is remarkably competitive, ranking among the highest in the region and reflecting a relatively more widespread use of advanced services compared to countries such as Côte d'Ivoire (1) or Guinea-Bissau (40).
(40). However, challenges in digital equity remain, such as limited connectivity in rural areas and a low percentage of households equipped with computers or fixed internet access.

2.2. Senegal's economic situation

Focusing on the Republic of Senegal as the protagonist of this report, we must establish its geographical context as a West African country, on the coast of the Atlantic Ocean, bordered to the north by Mauritania, to the east by Mali, to the southeast by Guinea and to the southwest by Guinea-Bissau. Senegal almost surrounds The Gambia, which occupies a narrow strip of land along the Gambia River that separates the southern Senegalese region of Casamance from the rest of the country. Senegal also shares a maritime border with Cape Vert.

Figure 3: Location of Senegal on the African continent. Source: The World Factbook, CIA.

The following are the basic facts about the country according to the main sources:

Table 3: General information on Senegal. Sources: CIA World Factbook, Economic and Commercial Office of the Spanish Embassy in Senegal.

Capital	Dakar
Population (2023)	18,384,660 inhabitants
Total area	196,722 km2
Name and position of the head of government	Bassirou Diomaye Faye, President of the Republic of Senegal (from 2 April 2024)
Currency and denomination	West African CFA franc (XOF)
Equivalence in Euro	1 EUR = 655.957 XOF (fixing)
Religion	Islam (97.2%)
Official languages	French (official), Wolof, Pulaar, Jola, Mandinka, Serer, Soninke
Population growth (2023)	+2,52%
Life expectancy	70.3 years
Literacy rate	58%
Crude birth rate (per thousand)	30.8 births/1,000 population
Crude death rate (per thousand)	5 deaths/1,000 inhabitants

The Senegalese economy is well diversified, with the service sector being the largest contributor to GDP. The future exploitation of oil and gas from the Grand Tortue Ahmeyim field is expected to contribute to strengthening the extractive and industrial sector, thereby continuing economic diversification.

Although it has a diversified economy, poverty and immigration represent the country's main challenges, preventing access to decent jobs for skilled labour and undermining economic diversification through the brain drain.

The current political uncertainty will also have an impact on economic indicators, making foreign investment and the evolution of the Senegalese economy more difficult.

The basic data for Senegal are shown below, based on information from the Economic and Commercial Office of the Spanish Embassy in Senegal and the CIA World Fact Book:

Table 4 Main economic indicators for Senegal. Sources: World Bank, African Development Bank, ICEX, CIA World Fact Book, CESCE.

Main Economic Indicators of Senegal	
Currency	West African Franc (XOF)
GDP 2022 (at current prices)	27.68 billion dollars
Annual real GDP growth (2023)	4,1%
Inflation (2023)	5,94%
Unemployment rate (2023)	2,93%
GDP by sector (2023)	Agriculture: 17.4 Industry: 24.3 Services: 59.2% GDP per capita (2024)
GDP per capita (2024)	1,900 USD
External debt (% of GDP)	7,3%
Foreign direct investment, % of GDP (2022)	9,3%
Value of exports of goods (2022)	9.85 billion USD
Value of imports of goods (2022)	14.0 billion
Current account balance in relation to GDP (2024)	-8,9%

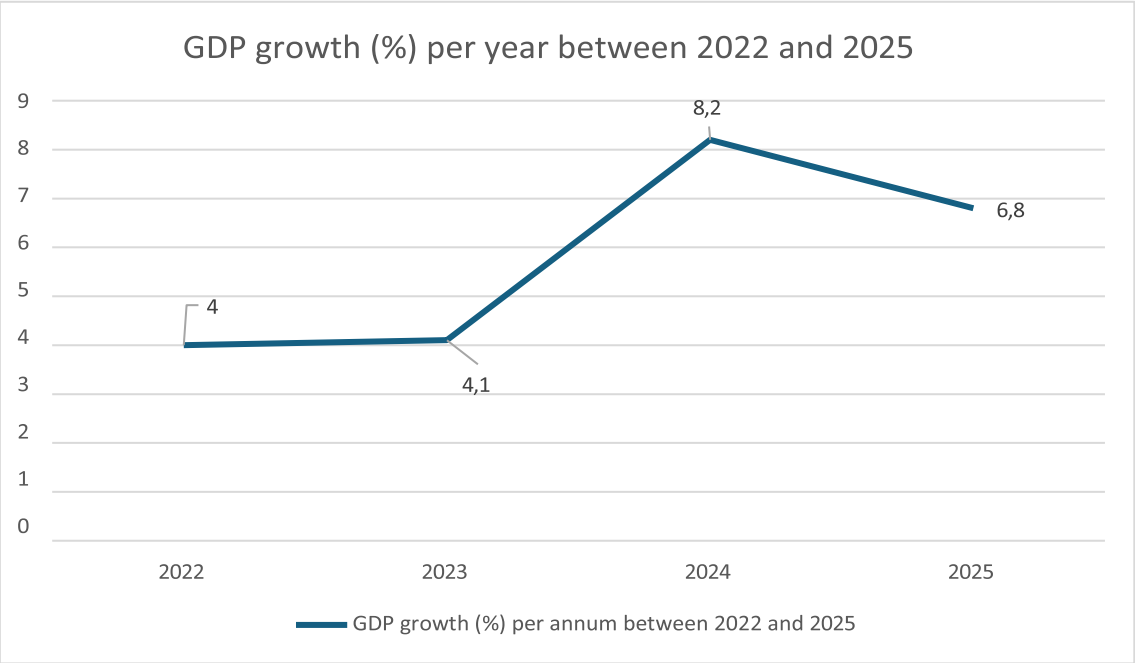
GDP growth

According to the African Development Bank, Senegal grew by 4.1% in 2023, similar to the growth the country experienced in 2022. The international situation marked by the impact of the conflict between Russia and Ukraine explains this slow growth as it affected local agricultural production.

For the years 2024 and 2025, the African Development Bank forecasts a remarkable GDP growth of 8.2% this year and 6.8% in 2025. The imminent development of the Grand Tortue Ahmeyim oil and gas field will contribute to this growth,

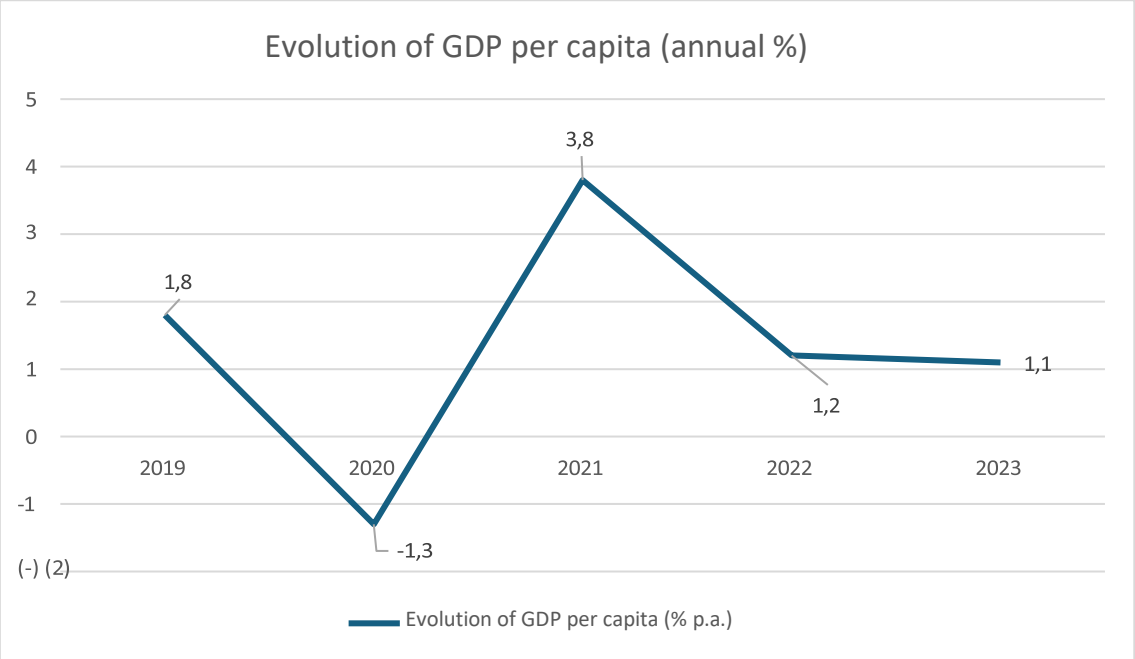
, with the possibility of an increase in forecasts for the years 2024-2025 if production starts during 2024.

Figure 4: Annual GDP growth between 2022 and 2022 (%) Source: African Development Bank.



GDP per capita experienced an increase of 1.5% in 2022 compared to 3.8% growth in 2021, although this increase was due to the exit from the crisis caused by the COVID- 19 pandemic.

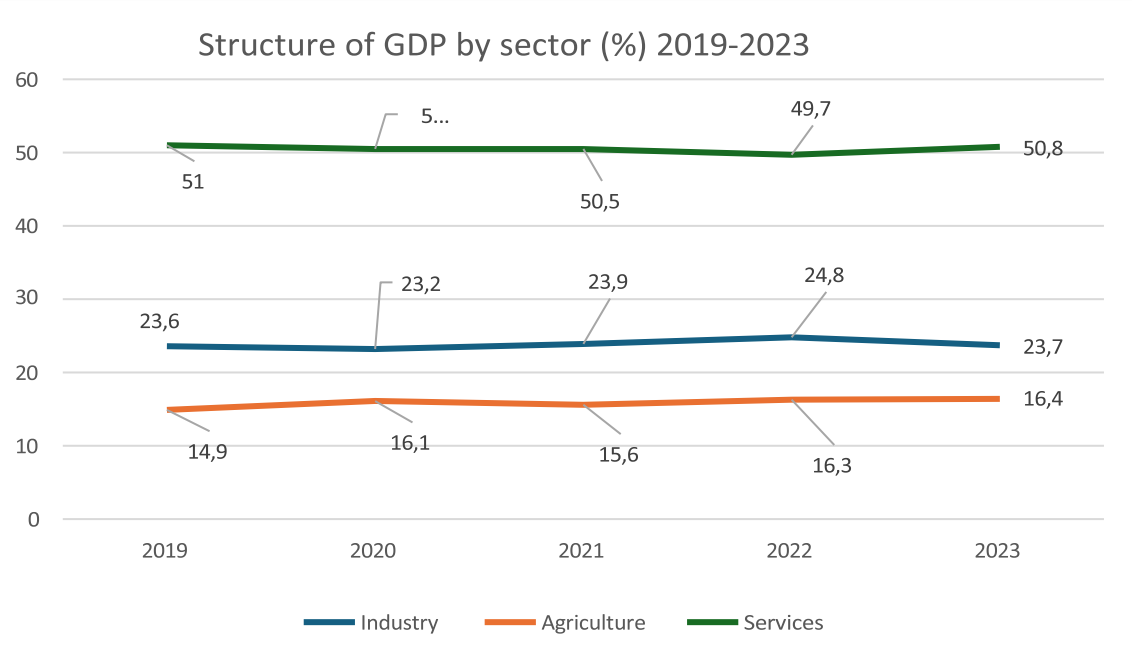
Figure 5: GDP per capita growth between 201S and 2022 (% p.a.) Source: World Bank



Regarding the structure of Senegal's GDP, if we focus first on the agricultural sector, its contribution has grown in the period between 2019 and 2023, where it represented 14.9% to 17.4% in 2024. Industry also saw a slight increase in its contribution to GDP, with a contribution of 24.3% in 2024 compared to 23.6% in 2019.

The services sector, however, remains the most significant sector of the Senegalese economy, contributing 59.2% of GDP in 2024.

Illustration c: GDP structure by sector 201S-2023. Source: World Bank.



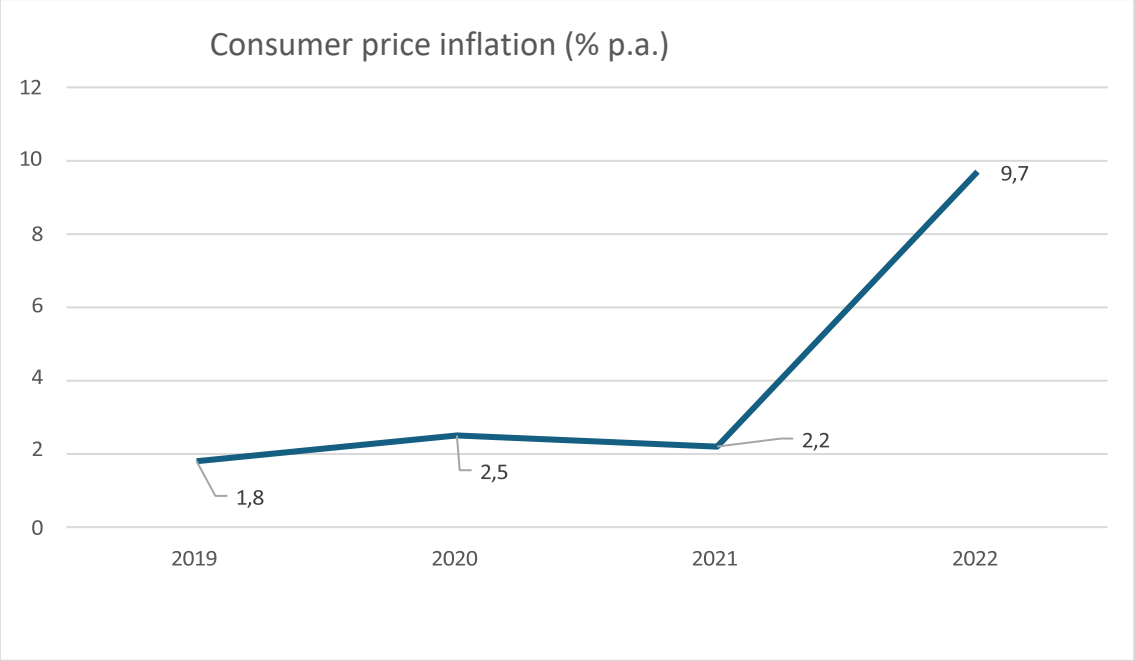
Inflation

Between 2019-2021 inflation in Senegal has been relatively stable, fluctuating between 1.8% (2019) and 2.5% (2020), but in 2022 inflation reached 9.7% due to inflationary pressures resulting from the effects of the international and local economic situation. The latest available figures for 2024 set investment at 5.94%.

- **Drought:** In 2019/2020, Senegal experienced a severe drought that impacted food security and agricultural production.

- **Russia-Ukraine war:** In February 2022, the war between Russia and Ukraine started and had a serious impact on the world economy. Senegal, which despite having a diversified economy compared to its neighbouring countries, remains dependent on foreign trade for agricultural and mineral exports and food imports. The impact of the conflict between Russia and Ukraine explains the rise in inflation in 2022.

Figure 7: Consumer price inflation. Source: World Bank: World Bank.



Labour market and unemployment

Senegal has experienced sustained economic growth over the last decade, driven mainly by the Emerging Senegal Plan (PSE), which has favoured infrastructure development, the expansion of the agricultural sector and the strengthening of the service sector. However, despite these advances, the labour market continues to face significant challenges in absorbing the growing youth population, which has resulted in high rates of unemployment and underemployment, especially among youth and women.

According to data from the United Nations International Labour Organisation[1], the country has a **working-age population of 58.2 per cent,** which represents an opportunity to take advantage of the demographic dividend. However, formal employment opportunities are limited, with approximately 200,000 new job seekers each year, compared to a supply of only 30,000 new formal jobs, reflecting a mismatch between labour demand and supply.

The Senegalese labour market is characterised by a significant segmentation between the formal and informal sectors. **The informal sector employs more than 75% of the labour force**, providing employment in vulnerable conditions, with low levels of remuneration, lack of social protection and little job stability. In contrast, the formal sector, dominated by services such as telecommunications, finance and public administration, represents a smaller fraction of total employment, but with better working conditions.

[1] https://www.ilo.org/senegal

In terms of economic sectors, **the service sector is the main driver of employment, accounting for 61% of total value added**, followed by the secondary sector (industry) with 22.6%, while agriculture continues to employ a large part of the population, but with low productivity and low wages.

One of the main challenges of the labour market in Senegal is the **precariousness of employment, especially among young people**. According to data from the International Labour Organisation (ILO), 39.9 per cent of the unemployed have no formal qualifications, and more than 83 per cent of the unemployed have not received technical or vocational training. This lack of qualifications contributes to the difficulty of accessing quality jobs, forcing many young people to take low-paid informal jobs.

In addition, there is a significant gender gap in access to employment, with a higher unemployment rate for women (22.6%) compared to men (9.8%), reflecting structural barriers in terms of access to job opportunities and persistent gender inequalities.

To address these challenges, the government has implemented a number of **employment support programmes**, such as the National State-Employer Convention (CNEE), which seeks to facilitate the integration of young people into the labour market through apprenticeships and internships in companies. These programmes have been shown to have a positive impact on the quality of employment of beneficiaries, increasing their chances of obtaining formal jobs with better working conditions.

The impact analysis of these programmes shows that young people who participated in apprenticeship programmes are significantly more likely to obtain formal jobs compared to those who did not participate. However, challenges remain related to the sustainability of these programmes, the lack of post-training follow-up and the need to expand their reach to rural areas.

Despite progress in employment policies, Senegal faces **a number of structural challenges** that limit the labour market's ability to generate quality jobs, including the following:

- Skills gap: there is a mismatch between the skills offered by the labour force and market needs, especially in emerging sectors such as digital technology and manufacturing.
- High informality rate: most of the jobs created are in the informal sector, with low levels of social protection and limited labour rights.
- Territorial inequalities: employment opportunities are concentrated in Dakar and other major cities, while rural areas have high rates of unemployment and underemployment.
- Limited access to finance: young entrepreneurs and small businesses face significant barriers to accessing finance.

- financing, which limits their capacity for growth and job creation.

On the other hand, there are important opportunities to improve the labour market through:

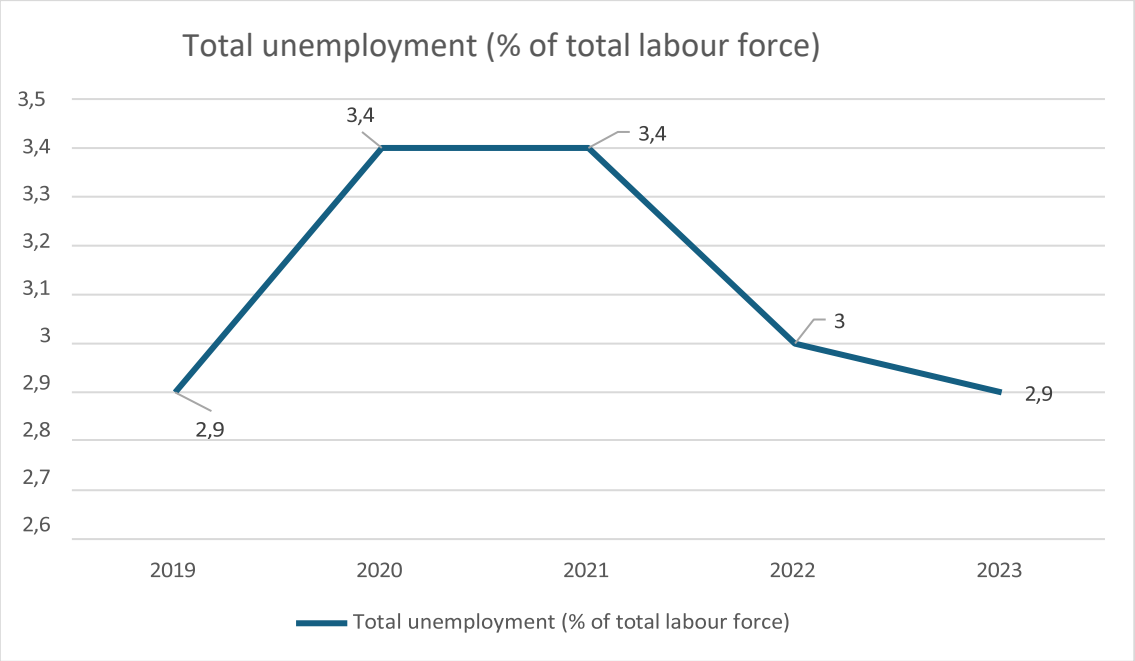
- Strengthening vocational and technical training, with a focus on strategic sectors such as the digital economy and agribusiness.
- Promoting the green economy and sustainable employment, taking advantage of the country's natural resources to generate jobs in sectors such as renewable energy and waste management.
- The promotion of youth entrepreneurship, through access to financing and the strengthening of business incubators.

According to the latest available data from the World Bank, unemployment in Senegal was 2.93% in 2023, a slight increase from 3.3% the previous year. However, these statistics do not include the unemployed who are not in the system, so the figures are not fully representative, warns the World Bank and the World Organization of Workers.

The under-reporting of the unemployed is a fundamental aspect to consider when analysing the labour dynamics of any country. In the case of Senegal, this could imply that a considerable part of the labour force is not being accounted for in the official metrics. This could be due to several factors, such as informality in the labour market, lack of access to labour registration or demotivation towards the formal job search system.

In addition, the slight variation in the unemployment rate, although it may not seem significant at first glance, may reflect structural changes in the Senegalese economy that merit further analysis. For example, it is possible that there is an increase in the labour force or that specific sectors of the economy are facing difficulties, which could be pushing more people into unemployment or informality.

Illustration 8: Total unemployment rate (% of total labour force) 201S-2022 Source: World Bank.

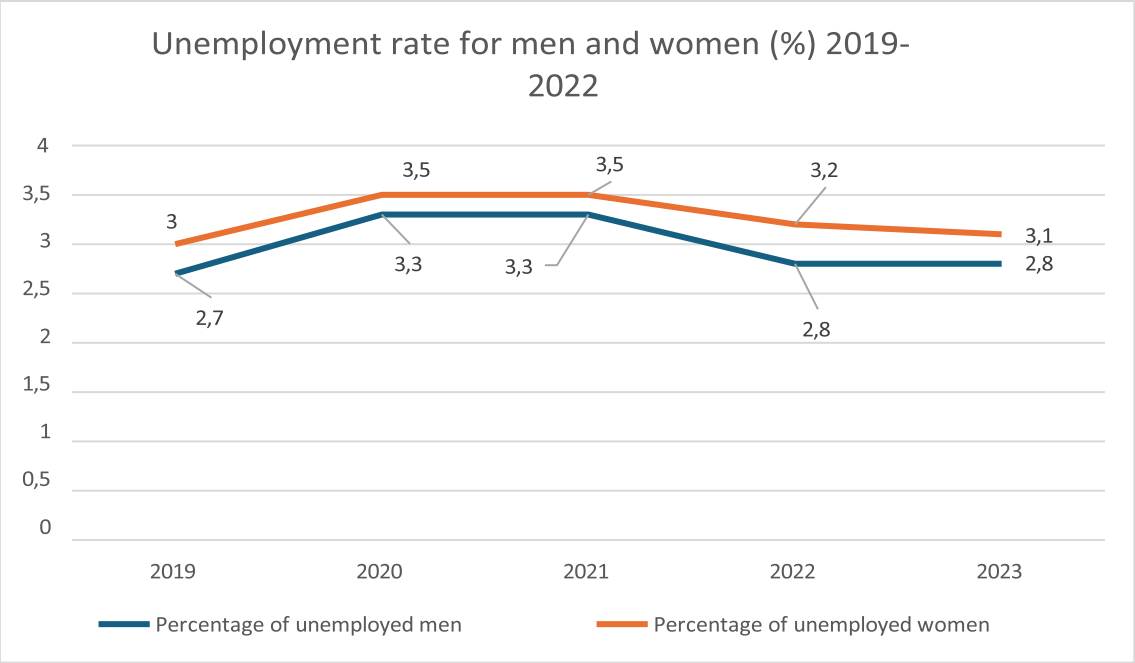


The data indicate that unemployment increased in 2020, due to the impact on the Senegalese economy of the COVID-19 pandemic on trade flows. We note that in 2022, unemployment fell by 0.3 points to 3%, indicating that the economy experienced an improvement in 2022.

From 2019 onwards, the female unemployment rate has shown some stability, fluctuating between 3% and 3.5%. Despite minimal variations, the female unemployment rate has continued to decline in 2022, reaching 3.2%. This indicates that women are strongly entering the labour market.

As of 2019, the male unemployment rate has shown some stability, fluctuating between 2.7% and 3.3%. The male unemployment rate has continued to decline in 2022, reaching 2.9%.

Illustration S Evolution of the male and female unemployment rate in Senegal 201S-2022. Source: World Bank.



2.3. African Digital Transformation Strategy 2020- 2030

The African Union (AU) Digital Transformation Strategy 2020-2030 is an ambitious framework designed to position Africa as a key player in the global digital economy, leveraging digital technologies to drive inclusive and sustainable development on the continent. This strategy is based on the premise that digitisation is a crucial driver for innovation, job creation and poverty eradication, with a particular focus on bridging the digital divide that has historically limited equitable access to technological opportunities. Africa has a young and rapidly growing population, with more than 60% of its people under the age of 25, representing a unique opportunity to harness the potential of digital transformation and foster a dynamic innovation ecosystem. However, the continent also faces significant challenges, such as a lack of adequate technology infrastructure, limited connectivity in rural areas, high internet access costs and a shortage of digital skills among the workforce.

Among the main **objectives of the 2030 strategy** is the creation of an **African Digital Single Market (DSM)** to facilitate the free movement of people, goods and services online, within the framework of the African Continental Free Trade Agreement (AfCFTA). The AU seeks to ensure that, by

The AU aims to ensure that by 2030, all Africans have secure and affordable access to the internet at a minimum speed of 6 Mbps and at a cost of no more than USD 0.01 per megabyte, and to promote the manufacture of smart devices on the continent at an affordable price of no more than USD 100. The strategy also aims to bridge the digital divide between urban and rural areas, foster innovation through the development of sustainable digital ecosystems, ensure digital sovereignty through harmonised regulatory frameworks, and strengthen cybersecurity to protect citizens' data and privacy.

The success of this strategy depends to a large extent on the ability of member countries to implement effective digital policies adapted to their national realities. In this regard, some African countries have managed to position themselves as leaders in digital transformation and serve as models for other nations. Rwanda, for example, has made significant progress with its "Smart Rwanda" strategy, which seeks to digitise key sectors such as health, education and e-government, achieving that more than 90% of government procedures are carried out online. Kenya, meanwhile, has consolidated its leadership in digital financial inclusion with the expansion of solutions such as M-Pesa, which has enabled millions of citizens to access mobile financial services, reducing the banking inclusion gap. South Africa, with its strong telecommunications infrastructure and technology investment incentive policies, has developed an enabling environment for innovation, attracting global technology companies and fostering local digital entrepreneurship. Other countries such as Ghana and Egypt have also implemented digitisation strategies with a focus on digital education and cybersecurity, respectively, strengthening their ability to compete in the global digital economy.

Despite these advances, common challenges facing the continent include a lack of investment in broadband infrastructure, a shortage of effective cybersecurity policies and the need for greater regulatory harmonisation between countries to facilitate cross-border e-commerce. In addition, the gender gap in digital access remains a significant challenge, with lower participation of women in the technology sector and in the use of digital services. The limited interoperability of national systems also represents a barrier to digital integration at the continental level, making it difficult to create a trusted environment for secure digital transactions.

Positioning Senegal in the digital strategy

Senegal has consolidated its position as a key player in the digital transformation of the African continent, aligning itself with the African Union (AU) **Digital Transformation Strategy 2020-2030.** This strategy seeks to accelerate digitalisation in Africa through the expansion of ICT infrastructures, the development of digital capabilities and the implementation of common regulatory policies. In this framework, Senegal has demonstrated a strong commitment through initiatives

The AU has also adopted national strategies such as **Sénégal Numérique 2025** [2]and the recent **New Technological Deal**, aimed at modernising its digital economy and strengthening its regional competitiveness.

One of the pillars of the AU's strategy is the improvement of connectivity across the continent, an objective on which Senegal has made significant progress. The implementation of the **Sénégal Émergent Plan (PSE)** and the **Sénégal Numérique 2025** programme have enabled an expansion of mobile internet coverage, reaching **80% in urban areas**. However, **access in rural areas remains limited**, with an estimated coverage of **35%**, which is evidence of a persistent digital divide that contrasts with the AU's goal of achieving universal connectivity. In this regard, Senegal has intensified its efforts in broadband expansion and fibre optic infrastructure development, in collaboration with international actors such as the International Telecommunication Union (ITU) and Smart Africa.

To reduce the cost of internet access, Senegal has promoted **public-private partnerships** that have led to a **30%** reduction **in broadband connection tariffs over the last five years**. However, the cost of access remains a challenge: despite reductions, internet prices in Senegal are still 25% higher than the continent's average, according to data from the Alliance for Affordable Internet (A4AI). To address this problem, the country is actively participating in the AU's initiative for cost reduction through shared infrastructure and regulation of the mobile data market.

The development of a secure digital environment is another key objective of the AU, and in this area, Senegal has made progress with the adoption of the Malabo Convention on Cybersecurity and Personal Data Protection. However, its implementation faces significant challenges. According to **Senegal**'s **Personal Data Protection Agency (CDP)**, more than **500 cybersecurity incidents** were recorded in 2022, highlighting the need to strengthen digital security infrastructure, train cybersecurity professionals and establish more efficient digital governance mechanisms.

In response, the Senegalese government has increased investment in the creation of a National Cybersecurity Centre, in addition to strengthening cooperation with international organisations such as the African Cybersecurity Association and the ITU, with the aim of developing a robust legal framework and improving capacity to respond to digital threats.

Senegal has been a **key player in the Smart Africa initiative**, promoted by the AU to establish a digital single market on the continent. Its participation has driven the development of digital identity solutions, with the deployment of the **national biometric identity system**, which has already enrolled more than **60% of the adult population**, facilitating access to financial and administrative services in a more efficient and secure manner. However, challenges remain

[2]https://www.newdealtechnologique.sn/

with privacy protection and the absence of a sound regulatory framework on the use of personal data on digital platforms.

In terms of digital trade, Senegal has benefited from its participation in the African Continental Free Trade Area (AfCFTA), which seeks to remove regulatory barriers and promote common e-commerce standards. However, the lack of a clear tax framework remains a barrier to the development of a smooth and competitive digital economy.

Technology adoption in the business sector

The use of digital technologies by small and medium-sized enterprises (SMEs) is crucial for economic growth. Currently, **45% of SMEs** in Senegal use basic digital tools such as **social media and e-commerce platforms**, but only **12% have adopted advanced technologies** such as cloud computing or ERP (Enterprise Resource Planning) systems. This is below the regional average, suggesting the need for more intensive and accessible digital training programmes.

In this regard, the Senegalese government has intensified its collaboration with the African Union for Development (AUDA-NEPAD), through the launch of digital training programmes targeting youth and women, with the goal **of training 1 million people in digital skills by 2030**. These efforts aim to close the digital talent gap, in line with the AU's goal of training **300 million Africans per year in digital skills by 2025**.

Senegal has reinforced its digital strategy with the launch of the **New Technological Deal** at the end of 2024, an evolution of its previous Sénégal Numérique 2025 plan. This new strategic framework, which runs until 2034, aims to position Senegal as a digital leader in Africa, boosting the economy through the integration of advanced technologies, innovation and the development of digital talent.

The Technology New Deal is based on three fundamental axes:

1. **Connectivity and digital infrastructure**, with the expansion of broadband and 5G, modernisation of networks and greater investment in fibre optics.
2. **Development of digital skills**, with the training of 1 million people in digital skills by 2030.
3. **Promotion of innovation and digital entrepreneurship**, with the creation of special economic zones and funding for technology start-ups.

Specific objectives include:

- Creation of 300,000 formal jobs in the digital sector by 2035**.**
- Increasing the contribution of the digital sector to 10% of GDP**.**
- Attraction of 300 billion CFA francs in private investment for the technology sector**.**

In contrast to the previous focus on infrastructure and connectivity, the Technology New Deal broadens its vision to include the digitisation of public administration, strengthening cybersecurity and boosting the digital transformation of businesses.

public administration, strengthening cybersecurity and boosting the digital transformation of businesses.

Senegal has demonstrated a strong commitment to the AU Digital Transformation Strategy, excelling in areas such as connectivity, cybersecurity and digital identity. However, challenges remain, such as the rural digital divide, lack of affordable internet access, and low adoption of advanced technologies by the private sector.

To consolidate its digital leadership in Africa, Senegal needs to:

- Accelerate the deployment of infrastructure in rural areas.
- Strengthen its cybersecurity and data protection framework.
- Expand technology adoption programmes for SMEs.

Seizing the opportunities offered by digitisation will require a coordinated approach with the African Union and its strategic partners, ensuring that the country positions itself as a key player in the African digital ecosystem.

3. Policies government policies y digitisation in Senegal

Senegal has demonstrated a strong commitment to digitisation and the development of information and communication technologies (ICT) as key pillars for its economic growth and government modernisation. In recent years, the Senegalese government has launched ambitious strategies to improve digital infrastructure, foster technological inclusion and position the country as a benchmark in the West African digital economy. This process has been marked by initiatives such as Sénégal Numérique 2025 and the recent New Deal Technologique proposal, which seek to consolidate progress in digitalisation and stimulate innovation in the technology sector.

The government structure in charge of ICT development in Senegal is composed of several key institutions, including the **Agence de l'Informatique de l'Etat (ADIE), now renamed Sénégal Numérique**, which is responsible for the digitisation of public administration, and the **Autorité de Régulation des Télécommunications et des Postes (ARTP)**, which oversees telecommunications infrastructure and competition in the digital sector. These entities work in coordination with the **Ministry of Digital Economy and Telecommunications**, which designs and implements policies for digital transformation and the strengthening of the country's technological ecosystem.

From a strategic perspective, Senegal is committed to expanding connectivity, bridging the digital divide and developing a robust technological infrastructure. According to the Government of Senegal, the country had set itself the goal of **ensuring broadband internet access to 70 % of the population by 2025**, in addition to strengthening fibre optic coverage throughout the country.

national territory. This strategy also envisaged the modernisation of government services through digital platforms, in order to improve administrative efficiency and reduce bureaucracy. Given the launch of the new plan, New Deal, in February 2025, the degree of implementation in the short and medium term will need to be assessed.

At the regulatory level, Senegal has made progress in creating a favourable legal environment for investment in the ICT sector. In this regard, the country has established regulatory frameworks for the development of e-commerce, cybersecurity and personal data protection. However, challenges remain in the effective implementation of these regulations, as well as in reducing internet access costs and improving the energy infrastructure needed to sustain the growth of the digital sector.

One of the key pillars of Senegal's digital strategy has been to boost the entrepreneurial ecosystem and innovation. Through funding programmes, technology incubators and the promotion of startups, the government has sought to position Senegal as a regional hub for technological innovation. Initiatives such as **CTIC Dakar**, an incubation centre for technology companies, have played a crucial role in supporting digital entrepreneurs by facilitating access to mentoring, funding and international collaboration networks, which we interviewed on-site and whose findings are reflected in this report.

In terms of digital inclusion, the government has implemented programmes aimed at reducing the technology gap in rural areas and improving digital literacy. Projects such as the deployment of public internet access centres and the digitisation of the education system have allowed for increased access to digital tools in communities with lower connectivity. However, according to the African Development Bank **(**African Economic Outlook**,** 2023), significant challenges remain in terms of digital equity, especially with regard to the participation of women and vulnerable groups in the technological ecosystem.

In conclusion, Senegal has made significant progress in its digitisation process, consolidating an institutional and policy framework geared towards ICT development. However, the success of these policies will depend on the government's ability to overcome remaining challenges, including bridging the digital divide, improving access to finance for technology start-ups and strengthening digital infrastructure. The implementation of the New Deal Technologique will represent a key opportunity to accelerate the country's digital transformation and consolidate its position as a technology leader in West Africa.

3.1. An ICT vision for Senegal's economic development

Senegal has demonstrated a sustained commitment to digital transformation as a driver of economic and social development. Since the early 2000s, the country has implemented various strategies to strengthen its digital ecosystem, with the aim of improving connectivity, boosting business competitiveness and fostering technological innovation. The government has articulated its policies around key strategic plans, starting with the **Information Society and Digital Economy Development Plan** and evolving towards more ambitious programmes such as **Sénégal Numérique 2025** and the recent **New Deal Technologique**. These plans reflect a long-term vision to turn Senegal into a digital hub in West Africa, attracting foreign investment and improving the quality of life of its citizens.

The first digital initiatives in Senegal emerged in the 2000s with the creation of the Agence de l'Informatique de l'Etat (ADIE), charged with digitising administrative processes and improving government efficiency. At the same time, the government promoted the development of telecommunications infrastructure, with the liberalisation of the sector and the entry of private operators that boosted access to the Internet and mobile telephony.

One of the most important milestones in this first phase was the formulation of the **Plan for the Development of the Information Society and the Digital Economy**, which laid the foundations for greater integration of ICTs in strategic sectors such as education, health and public administration. This plan enabled the deployment of the national fibre optic network, facilitating interconnection between regions and promoting broadband internet access.

In 2016, the government launched the **Sénégal Numérique 2025 (SN25)** plan, a comprehensive strategy designed to consolidate progress in digitisation and strengthen the country's technological ecosystem. This plan is structured around four key pillars:

1. **Development of digital infrastructure**: expansion of fibre optics, modernisation of the 4G network and preparation for the adoption of 5G.
2. **Digital transformation of public administration**: digitisation of government procedures and improved accessibility of online services.
3. **Fostering the entrepreneurial ecosystem and technology start-ups**: tax incentives, innovation incubators and financing for technology SMEs.
4. **Bridging the digital divide**: digital literacy programmes and improving access to ICT in rural areas.

This plan had a budget **of 136 billion CFA francs (approximately 200 million euros)**, financed through public-private partnerships and international organisations such as the African Development Bank (ADB) and the World Bank. Thanks to SN2025, Senegal managed to significantly improve its connectivity, increasing internet penetration from **46% in 2016 to 60% in 2023**, and positioning the country as one of the leaders in digitisation in West Africa.

The Senegalese government has identified the need for an even more ambitious strategy to consolidate the progress of **Sénégal Numérique 2025** and take digital transformation to the next level. In this context, it has announced the **New Deal Technologique**, a plan that aims to accelerate the digitalisation of the economy, boost innovation in emerging sectors such as artificial intelligence and cybersecurity, and attract greater foreign investment in technology.

Although its implementation has not yet begun, the **New Deal Technologique** envisages significant investments in digital infrastructure, with a focus on expanding 5G coverage, developing data centres and promoting the software and digital services industry. In addition, this plan is expected to strengthen **cybersecurity** capabilities, ensuring a secure digital environment for both businesses and citizens.

Senegal's digital strategies have had a positive impact on the modernisation of the country, facilitating job creation, improving digital education and increasing business competitiveness. However, there are still challenges that need to be addressed to ensure equitable and sustainable digital development:

- **Unequal access to ICT**: rural areas still face limitations in connectivity and access to technological devices.
- **Cost of internet access**: mobile data tariffs remain high compared to the average income of the population.
- **Digital skills training**: demand for technology talent outstrips the supply of skilled professionals.
- **Cyber security**: Data protection and cybercrime prevention require stronger regulation.
- **Coordination of the value chain:** a certain lack of coordination between public policies, SME needs and training has been detected that undermines the growth of the digital ecosystem at the SME level.

The ICT vision for economic development in Senegal has evolved from the creation of basic infrastructure to the consolidation of an integrated digital economy. Through initiatives such as Sénégal Numérique 2025 and the emerging New Deal Technologique, the government has demonstrated its determination to make Senegal a leader in technological innovation in Africa. However, the key to the success of these strategies lies in the country's ability to overcome the remaining challenges and ensure that the benefits of digitisation are accessible to all citizens, regardless of their geographical location or socio-economic status.

3.2. Government structure for digitisation

Senegal's government ecosystem for digitisation and Information and Communication Technologies (ICT) is made up of a number of ministries and public agencies that work in a coordinated manner to design and implement digital transformation strategies. Through initiatives focused on technological infrastructure, regulation of the digital sector and promotion of technological entrepreneurship, the government seeks to position the country as a benchmark in the West African digital economy.

Ministries responsible for digitalisation:

- ***Ministry of Digital Economy and Telecommunications (MENT):*** is the main government authority responsible for the formulation and implementation of policies related to ICT and digitisation in Senegal. Its mission is to ensure equitable access to the internet, encourage technological innovation and promote the digital modernisation of public and private services. This ministry oversees the regulation of the telecommunications sector and works closely with international agencies to fund digital infrastructure projects.

- ***Ministry of National Education (MEN):*** plays a key role in the digitisation of the education system, developing programmes that integrate technological tools in primary and secondary education. Initiatives include the provision of computer equipment in schools, teacher training in the use of digital technologies and the development of distance education platforms.

- ***Ministry of Vocational Training, Apprenticeship and Trades (MFPAA):*** is responsible for coordinating and supervising technical and vocational education and training (TVET) in Senegal. In the context of digitisation, this ministry is working to modernise curricula to include ICT training, with the aim of equipping young people with digital skills that will enable them to integrate into an increasingly technological labour market.

- ***Ministry of Higher Education, Research and Innovation (MESRI):*** promotes ICT research and the integration of emerging technologies in Senegal's universities and research centres. It also promotes the creation of innovation laboratories and collaboration with the private sector for the development of technological solutions applied to various industries.

Agencies and public bodies linked to digitisation:

- ***Sénégal Numérique (formerly Agence de l'Informatique de l'Etat-ADIE-.) under the MENT:*** the agency in charge of the digitisation of public administration in Senegal. Its main objective is to implement technological solutions that optimise government efficiency and facilitate the population's access to public services. Its projects include the creation of e-government platforms, the digitisation of administrative records and the strengthening of cybersecurity in the public sector.

- ***Autorité de Régulation des Télécommunications et des Postes (ARTP) - under the MENT:*** oversees the telecommunications sector in Senegal, ensuring fair competition between operators and protecting consumer rights. The ARTP regulates the radio spectrum, promotes the expansion of mobile coverage and encourages the reduction of internet access tariffs to facilitate digital inclusion.

- ***Agency for the Development and Promotion of Small and Medium Enterprises (ADEPME) - under the MENT:*** aims to support the growth and competitiveness of SMEs in Senegal. In the field of digitalisation, this agency offers ICT training to entrepreneurs, facilitates access to financing for technological projects and promotes the adoption of digital tools in the private sector.

- ***National Agency for Statistics and Demography (ANSD) - under the MESRI:*** it is responsible for collecting and analysing statistical and demographic data essential for the formulation of public policies. Its role in digitisation includes the implementation of open data systems and the modernisation of information management platforms that facilitate access to statistics on the evolution of the ICT sector in Senegal.

- ***National Agency for Agricultural and Rural Advice (ANCAR) - under the Ministry of Agriculture:*** although not directly part of the ICT sector, it plays a key role in the digitisation of the agricultural sector. Through projects such as the use of smart sensors in agriculture and the creation of digital information platforms for farmers, ANCAR promotes the adoption of technologies that optimise productivity and improve the resilience of the agricultural sector to climate change.

Agency for the Development and Promotion of Industrial Sites (APROSI) - under the Ministry of Industry and Trade: manages and promotes the establishment of industrial parks in Senegal, including special economic zones oriented towards technology and digital innovation. Its work contributes to attracting foreign investment in the technology sector and facilitates the development of industrial infrastructure with advanced digital components.

3.3. Promoting startups and supporting innovation

Senegal has emerged as a dynamic ecosystem for startups and technological innovation in West Africa, driven by government policies, foreign investment and the growth of the digital sector. Through strategic programmes such as Sénégal Numérique 2025 and the recent New Deal Technologique, the government has reinforced its commitment to promoting startups and supporting innovation in key sectors such as fintech, artificial intelligence, e-commerce and digital health.

The country's digital transformation has been driven by the increasing adoption of information and communication technologies, the expansion of connectivity and the development of digital infrastructures. In this context, the government has launched multiple initiatives to strengthen the entrepreneurial ecosystem, provide access to finance and facilitate the creation of startups with high growth potential.

The development of the startup ecosystem in Senegal is supported by a number of policies and regulatory frameworks designed to facilitate innovation and entrepreneurial growth. One of the most important initiatives is the **Startup Law**, which provides tax incentives, access to finance and technical support to startups. This law has been implemented by the Ministry of Digital Economy and Telecommunications (MENT) in collaboration with the private sector and international organisations.

Within Sénégal Numérique 2025, the government has identified the promotion of innovation as a strategic axis to improve the country's competitiveness in the digital domain. This policy translates into the creation of technology incubators, the implementation of business acceleration programmes and the facilitation of access to international markets for Senegalese startups.

Senegal has a robust ecosystem of incubators and innovation hubs that support entrepreneurs at various stages of development. Among the main incubators are

- **CTIC Dakar**: Senegal's first technology incubator, specialising in digital and ICT startups. It offers mentoring programmes, access to investors and business training.

- **DER/FJ (Délégation Générale à l'Entrepreneuriat Rapide des Femmes et des Jeunes)**: government initiative that provides funding and advice to young entrepreneurs and women in technology and innovation sectors.

- **Jokkolabs**: network of coworking and innovation spaces with a presence in Dakar, which promotes digital entrepreneurship and collaboration between startups.

- **Impact Hub Dakar**: support platform for social and technological entrepreneurs, offering training, networking and access to seed capital.

These incubators have played a key role in creating a vibrant entrepreneurial ecosystem, connecting startups with investors and facilitating access to international markets.

Access to finance remains a key challenge for startups in Senegal. To address this issue, the government and the private sector have launched several investment funds and financial support mechanisms, among them:

- **Fonds de Développement du Numérique (FDN)**: public fund aimed at financing early-stage and growing digital startups.
- **Fonds Souverain d'Investissements Stratégiques (FONSIS)**: Senegal's sovereign wealth fund that invests in strategic sectors, including technology startups.
- **Fonds d'Amorçage, de Garantie et de Capital Risque (FOGAR)**: guarantee and venture capital fund for innovative ventures.
- **Foreign investment and venture capital**: Senegal has attracted the interest of international investors in technology, with investment funds such as Partech Africa and Orange Digital Ventures actively participating in the ecosystem.

Startup support policies have had a positive impact on job creation, the growth of the digital sector and the diversification of the Senegalese economy. According to the African Development Bank (African Economic Outlook**,** 2023), **the number of startups in Senegal has increased by 35% in the last five years**, with significant growth in fintech, digital education and e-commerce. According to the consulting firm Tracxn, **the country is home to 677 startups**[3], of which 144 have raised funding, accumulating a total of USD 439 million in venture capital and private equity. In addition, eight of these companies have reached the Series A funding stage or higher.

The drive for innovation has enabled the internationalisation of several Senegalese start-ups, which have succeeded in expanding to other African markets and attracting foreign investment. However, challenges remain, such as bureaucracy in start-ups, a shortage of specialised talent and the need to improve access to late-stage funding.

Despite the progress made, the startup ecosystem in Senegal faces several challenges that need to be addressed to consolidate its growth:

- **Access to late-stage funding**: many startups find it difficult to scale due to a lack of growth capital.

[3]Tracxn data, updated 29 January 2025.

- **Regulation and bureaucracy**: Simplifying administrative processes and reducing regulatory barriers are essential to attract more investment.

- **Digital talent development**: training in technology skills and talent retention are key to the sustainability of the entrepreneurial ecosystem.

With the implementation of the **New Deal Technologique**, the government is expected to reinforce policies supporting innovation, increasing investment in digital infrastructure and promoting public-private collaboration to strengthen the startup ecosystem in Senegal.

Senegal has managed to build a dynamic and growing startup ecosystem, supported by government policies, technology incubators and access to finance. The country has established itself as a benchmark for digital innovation in West Africa, with sustained growth in key sectors such as fintech and digital education. However, long-term success will depend on the ability to address existing challenges and strengthen investment and talent development strategies.

The combination of government support programmes, private funding and an enabling regulatory environment will be crucial to ensure that Senegalese startups continue to innovate and contribute to the country's economic development in the digital era.

3.4. Other relevant initiatives of the Government of Senegal

The Government of Senegal has launched several initiatives complementary to its digitisation strategy, with the aim of strengthening the private sector, boosting access to finance, developing key infrastructure and modernising strategic sectors such as agriculture. These initiatives are part of a comprehensive vision to diversify the economy, generate employment and improve the country's competitiveness in the regional and international context.

Private sector initiatives

Strengthening the private sector is one of the priorities of the Senegalese government to foster sustainable economic growth. Within this framework, programmes and policies have been implemented to improve the business climate, facilitate business start-ups and support entrepreneurs in key sectors.

One of the most important programmes is **the Délégation Générale à l'Entrepreneuriat Rapide des Femmes et des Jeunes (DER/FJ)**, a government initiative that provides financing, training and technical support to small and medium-sized enterprises (SMEs), especially those led by women and young people. Since its creation, DER/FJ has allocated more than **50 billion CFA francs (more than 76 million euros)** in funding to innovative projects in sectors such as technology, commerce and manufacturing.

Another relevant initiative is the **Plan Sénégal Émergent (PSE)**, which includes specific measures to improve the competitiveness of the private sector through tax incentives, reducing red tape and strengthening access to international markets. In this context, the government has created digital platforms to facilitate business registration processes and improve transparency in public management.

In addition, Senegal has promoted the **formalisation of informal businesses**, offering incentives for small entrepreneurs to access bank financing and benefit from business support policies. This measure aims to reduce **the high rate of informality**, **which still represents approximately 75% of employment in the country**, according to the African Development Bank (African Economic Outlook, 2023)**.**

Economic support funds

Access to finance remains a challenge for many businesses and entrepreneurs in Senegal. To address this issue, the government has established several economic support funds aimed at boosting investment in strategic sectors.

One of the most relevant is the **Fonds Souverain d'Investissements Stratégiques (FONSIS)**, a sovereign wealth fund that aims to mobilise resources for development projects in areas such as infrastructure, energy, telecommunications and agribusiness. Through public-private partnerships, FONSIS has contributed to the financing of technology start-ups and the modernisation of traditional companies.

Another key mechanism is the **Fonds de Développement du Numérique (FDN)**, which financially supports companies in the technology and digital sector. This fund has enabled the expansion of e-commerce platforms, fintech solutions and cybersecurity projects, consolidating Senegal as an emerging player in West Africa's digital economy.

In addition, the government has launched microfinance programmes aimed at small entrepreneurs, with preferential interest rates and guarantee schemes to facilitate access to credit. These programmes have been instrumental in the expansion of businesses in sectors such as manufacturing, tourism and digital services.

Other strategic and infrastructure development projects

Infrastructure development is a central pillar of the government's strategy to improve Senegal's competitiveness. In recent years, significant investments have been made in key projects aimed at modernising telecommunications, improving logistics and strengthening connectivity throughout the country.

One of the most ambitious projects is the **expansion of the national fibre optic network**, which aims to ensure high-speed internet access in all regions of the country. Through partnerships with private operators, the government has managed to increase fibre optic coverage throughout the country.

Government has managed to increase fibre optic coverage **by 45% between 2018 and 2023**, enabling the digitisation of public services and the adoption of advanced technologies in the private sector.

In the area of transport and logistics, Senegal has invested in the modernisation of the Port of Dakar, with the construction of new terminals to facilitate international trade and the transit of goods. Land transport corridors have also been developed to improve connectivity with neighbouring countries, such as Mali and Guinea.

In addition, the country has promoted renewable energy projects, with the installation of solar and wind farms aimed at reducing dependence on fossil fuels and guaranteeing a sustainable energy supply for businesses and households. These projects have been key to reducing

4. Digital skills analysis

4.1. Mapping digital skills needs in Senegal

The development of the digital economy in Senegal is rapidly transforming the country's employment landscape, generating new demands for digital skills that span both the formal and informal sectors. As the country moves forward with its digitisation strategy, driven by the Emerging Senegal Plan (PSE) and in alignment with the African Union's Digital Transformation Strategy (2020-2030), the need for a workforce trained in essential digital skills to meet the challenges and seize the opportunities of the digital environment is becoming increasingly evident. Despite these challenges, social media usage is significant, with 3,071,000 active users in 2023, representing 17.4% of the population. This figure suggests a basic level of familiarity with digital tools that could be leveraged in training programmes.

The Senegalese labour market demands digital skills that can be grouped into three main categories: basic skills, intermediate skills and advanced skills, all of which are necessary for the digital transformation of key sectors such as commerce, agriculture, health and public administration.

1. **Basic digital competences:** these include skills in the use of office automation tools (word processing, spreadsheets and presentations), safe internet browsing, email management and the use of social networks for professional purposes.

2. **Intermediate digital skills:** these include the ability to use specialised digital tools, such as business management software (ERP), e-commerce systems, basic data analysis and online collaboration tools. According to the World Bank,

about 40% of formal enterprises in Senegal are looking for employees with skills in digital enterprise resource management and process automation.

3. **Advanced digital skills:** these include skills in software development, big data analytics, cybersecurity, artificial intelligence and cloud computing. Despite growing demand, only 5% of the Senegalese workforce possesses advanced ICT skills, which represents a significant challenge for the development of the technology sector.

Sectoral analysis reveals that digital skills are critical in several sectors of the Senegalese economy:

- **Agricultural sector:** the digitisation of agriculture, through technologies such as precision agriculture and agricultural trading platforms, requires skills in the use of mobile applications, geographic information systems (GIS) and climate data analysis tools. However, **only 15% of farmers have access to digital training programmes**.

- **Financial sector:** The expansion of digital banking and fintech services requires professionals with skills in developing and managing digital payment platforms, financial data analytics and cybersecurity. **The sector is projected to grow at an annual rate of 12% until 2025**, driven by the adoption of digital technologies.

- **Health sector:** The implementation of telemedicine systems and the digitisation of medical records require skills in health data management, use of telehealth platforms and information security. Currently, **only 25% of healthcare workers have received training in healthcare-specific digital tools**.

To ensure the relevance of digital skills in the global context, Senegal has adopted international benchmarks such as the African Union's Digital Skills Framework and the World Bank's Digital Skills Framework, which segment digital skills into levels of digital literacy, technical skills and digital leadership skills. However, effective implementation of these frameworks faces challenges due to the lack of adequate infrastructure and the disparity in the quality of digital education in urban and rural areas.

Despite government and private sector efforts to strengthen digital skills, there are significant challenges that limit the acquisition of adequate skills:

- **Urban-rural digital divide:** rural areas have limited access to digital training infrastructure, which restricts skills development in agricultural and remote communities.

- **Lack of market-tailored training:** there is a disconnect between available training programmes and the skills actually demanded by companies, leading to a mismatch in the labour market.

- **Shortage of qualified trainers:** the lack of trainers specialised in digital training limits the ability of educational institutions to deliver quality programmes on a large scale.

In order to address these challenges, initiatives such as the following would be advisable:

1. **Promoting technical vocational education and training (TVET):** promoting programmes such as those promoted by the government and agencies such as the African Union aim to increase the participation of young people in digital training applied to strategic sectors, but adapting them to the real needs of SMEs:
2. **Public-private partnerships:** joint initiatives with technology companies to provide hands-on training in real working environments can help bridge the skills gap and get training tailored.
3. **Use of e-learning technologies:** the promotion of accessible digital learning platforms can expand the reach of training and provide access to quality educational resources for a wider population, provided that internet access continues to improve, particularly in rural areas.

4.2. Skills gaps in the technology sector

According to the World Bank's 2019 Digital Economy Report, in Senegal, the gap between the supply of digital skills and labour market demand represented a significant challenge for the development of the technology sector and the consolidation of a competitive digital economy. Despite advances in digital infrastructure and the growing adoption of information and communication technologies (ICTs), companies face difficulties in finding qualified talent to meet the needs of the evolving digital environment.

This gap is due to a combination of structural, educational and economic factors that limit access to adequate and up-to-date training, which negatively impacts productivity, innovation and the country's competitiveness in the regional and international market.

One of the main obstacles contributing to this gap is the misalignment between academic training programmes and the real needs of technology companies. Many educational institutions in Senegal still operate under traditional frameworks that do not fully incorporate emerging digital skills, such as advanced software development, data analytics, artificial intelligence or cybersecurity. As a result, graduates often lack the practical skills and specialised certifications that would enable them to integrate effectively into the labour market. This lack of updated curricula is compounded by an insufficient connection between the education and business sectors, which prevents an accurate diagnosis of the most in-demand skills and an agile response to global trends.

The areas where the greatest shortage of digital talent is observed in Senegal cover a range of disciplines critical for digital transformation. In **software development**, for example, companies report a significant lack of professionals with expertise in modern programming languages such as Python, JavaScript and advanced frameworks such as React and Angular, which are essential for the development of web and mobile solutions. Likewise, **data analytics and data science** have become high-demand areas, but the lack of professionals trained in tools such as SQL, R, or machine learning techniques limits companies' ability to make data-driven decisions.

Another sector particularly affected is **cyber security**, where increasing digitisation has led to greater vulnerability to cyber attacks, but the number of cyber security specialists remains very low, leaving many companies exposed to significant risks.

The impact of these gaps on the development of the technology sector is profound and multifaceted. First, the lack of skilled talent restricts companies' ability to implement effective digitisation strategies, slowing innovation and the expansion of digital business models.

Similarly, the absence of professionals with the right skills also increases reliance on foreign talent or outsourcing of technology services, which increases operating costs and hinders local job creation. This, in turn, has a negative effect on the digital economy, as it limits the attraction of foreign direct investment in the technology sector, a key factor for sustained economic growth.

Without a strong base of skilled professionals, Senegal's digital ecosystem risks falling behind other West African countries that have made faster progress in adapting their education systems and training programmes.

In addition to the economic repercussions, digital skills gaps also have a significant social impact. Lack of access to technology training opportunities and the resulting difficulty in accessing well-paid jobs in the digital sector deepen socio-economic inequality, especially among young people and women, who face greater barriers to entry into the digital sector.

The lack of access to technology training opportunities and the consequent difficulty in accessing well-paying jobs in the digital sector deepen socio-economic inequality, especially among young people and women, who face greater barriers to entering quality training programmes. The urban-rural divide is another critical aspect, as training and employment opportunities in the technology sector are predominantly concentrated in large cities such as Dakar, while rural regions face greater challenges in terms of connectivity and access to educational resources.

To address these skills gaps, it is crucial to implement coordinated strategies involving the public sector, the private sector and educational institutions. Among the most relevant initiatives demanded by the private sector, after interviewing the value chain, are:

- The updating of educational curricula in universities and vocational training centres adapted to the needs of the country's SMEs.
- The creation of specialised technical training programmes in collaboration with technology companies and the promotion of continuous training for active workers.
- The adoption of e-learning models and the creation of innovation and technological training hubs in rural areas, in order to ensure a more equitable distribution of training and employment opportunities across the country.

In conclusion, the digital skills gap in Senegal represents one of the main challenges for the consolidation of a sustainable and competitive digital economy. The lack of talent in key areas such as software development, cybersecurity and data analytics limits the ability of companies to grow and compete in the global market, affecting the country's economic development. Closing this gap requires a comprehensive approach that includes modernising education systems, strengthening collaboration between academia and business, and implementing public policies that foster inclusive and accessible digital skills training for all segments of the population.

4.3. Mismatch between the demand and supply of skills.

The technology sector in Senegal has experienced remarkable growth in recent years, driven by the progressive digitalisation of the economy and the adoption of emerging technologies. However, this growth faces a critical structural challenge: the gap between the supply of skills available in the labour market and the actual needs of the technology sector. This disconnect affects both large companies and small and medium-sized enterprises (SMEs), making it difficult to implement effective digital strategies and limiting the country's competitiveness at regional and international level.

One of the main obstacles to the expansion of the technology sector in Senegal is the lack of professionals with advanced digital skills.

Although the government has implemented initiatives to promote ICT training, companies still struggle to find qualified talent in key areas such as software development, artificial intelligence, data analytics and cybersecurity.

The problem is largely due to a lack of updated training programmes. Many universities and vocational training centres in Senegal still operate traditional curricula that do not fully incorporate emerging digital skills. As a result, graduates often lack the practical skills and certifications needed to integrate effectively into the labour market. According to a report by the Ministry of Higher Education, only **23% of students enrolled in computer engineering and telecommunications programmes at Senegalese universities are women**, revealing an additional **gender gap** in access to technology education.

At the business level, the lack of specialised talent constrains companies' ability to adopt new technologies and expand digitally. **Seventy-five percent of companies in Senegal consider the shortage of professionals with digital skills to be a major obstacle to their development**, and more than **60% of SMEs** report difficulties in recruiting employees with ICT skills, according to several respondents.

The Senegalese education system is not aligned with the needs of the digital labour market. There are major shortcomings in training provision, as educational programmes are not designed to respond to the evolution of technology and the demands of the business sector.

According to a report by the Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME), **80% of technology companies in Senegal report that recent graduates lack essential practical skills**, making it difficult for them to enter the labour market. Moreover, **70% of job offers in the technology sector require skills that are currently not taught in most academic programmes**.

The disconnect between training and demand is exacerbated by a shortage of specialised trainers. Many trainers do not have experience in the technology industry, which limits their ability to deliver training that is up-to-date and aligned with market needs.

Access to digital training remains concentrated in Dakar and other large cities, while rural regions face serious constraints in terms of connectivity, educational infrastructure and access to training programmes.

In rural areas, only **35% of the population has access to broadband internet**, compared to **80% in urban areas**, limiting the possibility for youth and workers to access online training opportunities. This digital divide translates into lower employability rates and limited opportunities for digital skills development outside urban centres.

The lack of a skilled workforce in the technology sector has a significant impact on Senegal's productivity and competitiveness. Companies that cannot hire staff with digital skills resort to outsourcing technology services or rely on foreign talent, which increases operating costs and reduces local employment generation.

In addition, the lack of skilled professionals limits the country's ability to attract foreign investment in the digital sector. Investors and technology companies seek environments with a strong talent ecosystem, and the shortage of ICT specialists in Senegal poses a challenge to the country's development as a technology hub in West Africa.

To address this mismatch, coordinated actions between the public sector, the private sector and educational institutions are required. Some key strategies include:

- **Updating training programmes** in universities and technical centres, especially public ones, to include advanced digital skills and practical methodologies that are adapted to the needs of SMEs.

- **Promoting online education and hybrid training**, using digital learning platforms to expand access to training in rural areas, although internet access in rural areas needs to be improved.

- **Increased collaboration between companies and universities** to develop training programmes tailored to the needs of the labour market.

- **Incentives for the continuous training** of active workers, promoting the updating of skills in high-demand areas such as cybersecurity and data analysis.

- **Expansion of technical and vocational training (TVET) initiatives**, with a focus on strategic sectors such as digital industry, automation and artificial intelligence.

With a comprehensive strategy involving all actors in the digital ecosystem, Senegal will be able to reduce the gap between skills demand and supply, strengthening its competitiveness in the global market and ensuring that more citizens can access quality jobs in the digital economy of the future.

4.4. Current training programmes and future needs

To address skills gaps in the technology sector, there are a number of training programmes in Senegal, both in formal education and in specific training initiatives. These programmes aim to improve the quality of the workforce and adapt it to the demands of the digital economy and priority sectors. Increased mobile connectivity has boosted access to informal digital training. For example, 72% of web traffic in Senegal is via Android devices, indicating significant potential for mobile-friendly e-learning programmes.

The most relevant programmes identified during the analysis are detailed below.

Vocational and Technical Training (VTT) programmes:

The **Ministry of Employment, Vocational Training, Apprenticeship and Insertion (MEFPAI)** is the main body in charge of the development of vocational and technical training in Senegal. Through its strategic framework, it coordinates various initiatives aimed at improving the employability of young people in key sectors.

- **Sectoral Vocational Training Centres (CSFP) and vocational training clusters:** since 2012, several specialised centres have been created such as the CSFPIAA (Sectoral Training Centre for Agro-Food Industries), the CFMPL (Training Centre for Port and Logistics Trades) and the CSFPBTP (Sectoral Training Centre for BTP Trades - Construction and Public Works). These initiatives are largely financed by the **Financing Fund for Vocational and Technical Training (3FPT)**, which acts as a funding mechanism for training in strategic sectors such as agribusiness, tourism and construction.
- **Programmes to develop vocational and technical training offers:** to diversify training opportunities and adapt them to the needs of the labour market, the government, through the **3FPT** and the **National Vocational Training Office (ONFP)**, finances initiatives to modernise and update curricula in priority sectors.
- **Training in technical secondary schools (lycées techniques): MEFPAI**, in coordination with the **Ministry of National Education (MEN)**, promotes the integration of technical training in lycées through certification programmes in key trades.
- **Apprenticeship training programmes:** these programmes, supported by the **ONFP**, combine teaching in schools with practical work in companies, facilitating the labour market integration of young people.

- **Development of training benchmarks: MEFPAI** leads the updating and diversification of the training offer with a competency-based approach, promoting standards aligned with the needs of the local economy.

Training programmes in Information and Communication Technologies (ICT):

The Ministry of Communication, Telecommunications, Posts and Digital Economy (MCTPEN) is the body responsible for the digitisation of the country and for training in digital skills.

- **PADTICE (ICT Development Support Project for Capacity Building):** financed by the MCTPEN and implemented with the support of the State Informatics Agency (ADIE), this programme promotes digital transformation in higher education, especially in the implementation of the LMD (Bachelor-Master-Doctorate) reform.
- **Digital skills training programmes:** focused on areas such as cloud, big data, blockchain and artificial intelligence, these programmes are promoted by the MCTPEN, with additional funding from the 3FPT for specialised courses.
- **E-learning and FOAD (Open and Distance Learning) projects:** distance learning modernisation initiatives developed by the Virtual University of Senegal (UVS**) with support from the MEFPAI and the AUF (Agence Universitaire de la Francophonie).

The role of the Virtual University of Senegal (UVS), founded in 2013 to offer distance education, deserves a special mention, aimed at democratising access to higher education by providing students with the digital skills needed to adapt to the modern labour market. In addition, UVS contributes to the training of professionals in technologically advanced areas and collaborates in the realisation of the objectives of the Emerging Senegal Plan and the National Digital Development Strategy. On 18 January 2023, the Virtual University of Senegal was renamed **Université Digitale Cheikh Hamidou KANE (UNCHK).[4]

The university focuses its programmes on areas of high demand in the digital labour market and aligns with national initiatives to strengthen connectivity, promote the digital economy and modernise public administration.

Through its efforts, UNCHK helps to ensure that all citizens, regardless of their location or socio-economic status, have access to the opportunities offered by technology, aligning with the Sustainable Development Goals and the African Union's Agenda 2063.

[4] https://www.unchk.sn/

By 2024, the number of students at the university exceeded 73,000, making it the second largest university in Senegal after Cheikh Anta Diop University (UCAD) in terms of enrolment:

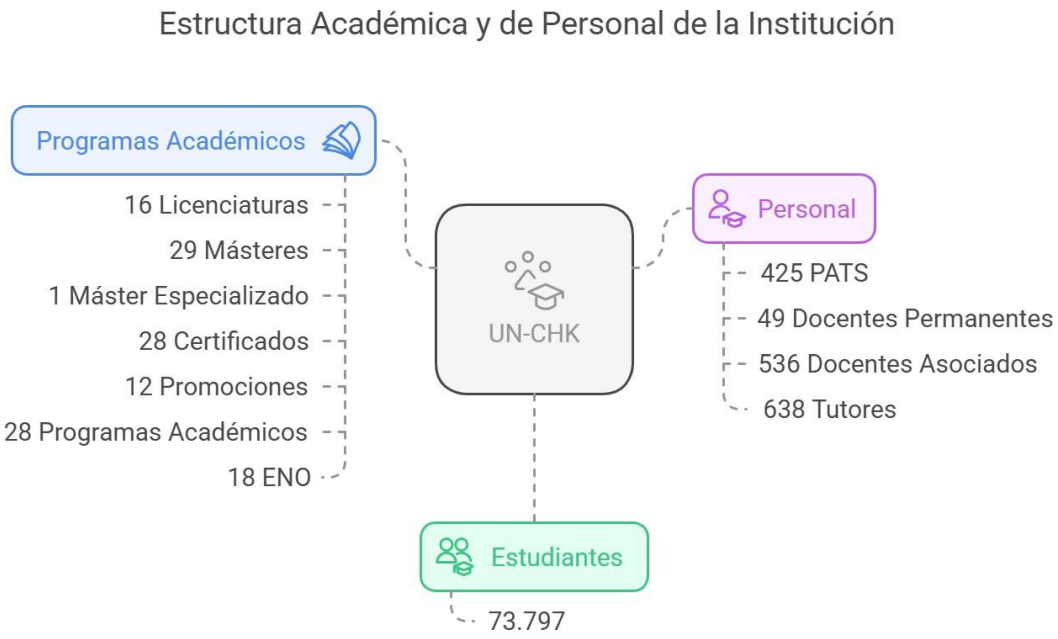


Illustration 10. UN-CHK in figures. Source: UN-CHK. Source: UN-CHK.

Digital entrepreneurship support programmes:

Senegal's digital ecosystem has grown significantly in recent years, driven by government policies such as Sénégal Numérique 2025 (SN2025) and by the proliferation of tech startups. To consolidate this growth, several initiatives have been developed to support digital entrepreneurs.

- **Financial support and training programmes for startups:** one of the most prominent programmes is the one led by the Délégation Générale à l'Entreprenariat Rapide des Femmes et des Jeunes (DER/FJ). Created in 2018, this entity provides funding, training and mentoring to young and female entrepreneurs, with a special focus on projects in strategic sectors such as fintech, e-commerce and digital economy. Through the Fonds de Financement de la Formation Professionnelle et Technique (3FPT), it facilitates access to resources for training in business and digital skills.

- **Incubation and business acceleration programmes:** to strengthen the startup ecosystem, incubators such as CTIC Dakar play a key role. CTIC Dakar, with support from the Ministère de la Communication, des Télécommunications, des Postes et de l'Économie Numérique (MCTPEN) and the Agence de l'Informatique de l'État (ADIE), offers coworking spaces, advice and access to networks of national and international investors. There are also specific initiatives within the Sénégal Émergent Plan that seek to promote the digitisation of small and medium-sized enterprises (SMEs), providing them with digital tools to improve their competitiveness.

Companies such as Orange, Mastercard and Microsoft also play an active role in the ecosystem. Orange has developed digital platforms to facilitate financial services and digital commerce, while Microsoft has implemented the E-Daral application, which connects farmers and buyers through mobile technology.

In addition, private initiatives through venture capital firms such as FasterCapital provide comprehensive support to startups, offering technical co-founding, market analysis, marketing strategies and fundraising assistance. In the agricultural sector, the *Mlouma* platform facilitates the digital buying and selling of agricultural products, optimising marketing and reducing post-harvest losses.

The Femmes d'Avenir programme, promoted by Eramet, supports women entrepreneurs through training, financing and mentoring in the technological field. The Santander BEST Africa initiative provides financial and technical resources to projects led by women, contributing to digital inclusion and sustainable development.

Education modernisation programmes

The government of Senegal has recognised the importance of digitalisation in education and has implemented multiple programmes aimed at integrating technology into learning.

- **PAQUET (Programme for the Improvement of Quality, Equity and Transparency):** this programme, developed in collaboration with UNESCO and other international organisations (including the World Bank and **Spain**), has as its main objective the modernisation of the education system through digitalisation. PAQUET promotes the creation of online learning platforms, the training of teachers in digital tools and the provision of technological infrastructure in schools and universities.
- **Connected Classrooms" programme:** led by the Ministère de l'Éducation Nationale (MEN), this initiative seeks to digitally connect schools to ensure access to online educational resources. Fibre optic networks have been installed in several institutions and virtual courses have been promoted in collaboration with the Université de l'Éducation Nationale (MEN).

virtual courses have been promoted in collaboration with the Université Numérique Cheikh Hamidou Kane (UNCHK).

Sector-specific skills development programmes

To strengthen key sectors of the economy, the Senegalese government has boosted training in strategic industries, aligning training with labour market demands.

- **Renewable energy training:** in response to the growing demand for clean energy technicians, the Ministère de l'Emploi, de la Formation Professionnelle, de l'Apprentissage et de l'Insertion (MEFPAI) has developed specialised programmes in installation and maintenance of solar panels and wind systems, with funding from the 3FPT.
- **Training in the agri-food sector:** the use of advanced technologies in agriculture is a priority to improve productivity and food security. The Ministère de l'Agriculture et de l'Équipement Rural has implemented training programmes in the use of agricultural drones, soil sensors and smart irrigation techniques.
- **ICT and digital economy programmes:** The information and communication technology (ICT) sector has grown exponentially, prompting the creation of training programmes in cybersecurity, software development and data analysis. The Université Numérique Cheikh Hamidou Kane (UNCHK) plays a crucial role in training professionals in these areas, offering distance and face-to-face courses.

International cooperation programmes

The support of international organisations has been key to the development of vocational education and training in Senegal. These include, among others, the following:

The World Bank

The World Bank implements several key programmes in Senegal to improve technical and vocational education and training:

- **Project to Improve the Performance of the Education System (PAPSE)**: Funded with approximately $100 million, this project seeks to improve the quality, equity and access to basic education through teacher training, promotion of bilingualism (Wolof-French) and strengthening of school management.

  ESPOIR-Jeunes Project: Funded with USD 150 million plus an additional grant of USD 1.9 million, this project aims to expand technical and vocational higher education by creating eight Institutes of Higher Vocational Studies (ISEP) in different regions. It is expected to benefit more than 16,000 students and reduce regional gaps in technical skills.

African Development Bank (AfDB)

The AfDB significantly supports technical training and youth employability through:

- **PDCEJ Project**: This programme is funded at approximately US$20 million. It aims to train more than
  40,000 young people in strategic sectors such as hydrocarbons, solar energy and agribusiness, boosting entrepreneurship and facilitating the creation of 700 startups and more than 1,000 jobs.
- Funding was provided for the creation of specialised training centres, including a centre for oil trades, and public-private partnerships are actively encouraged to ensure that training is aligned with labour market needs.

European Union (EU)

The EU is actively involved in the development of vocational training in Senegal with:

- **Youth Employment Programme**: With an investment of approximately 70 million euros, it seeks to implement structural reforms in technical and vocational training, emphasising youth labour insertion and gender equity.
- It supports specific initiatives such as dual training and the Single Training Financing Fund (**3FPT**), in close collaboration with the Senegalese government and European agencies such as GIZ and Lux-Dev.

German Cooperation (GIZ and KfW)

Germany, through GIZ and KfW, has promoted several initiatives:

- **FIT! Initiative Senegal**: Supports the reform of vocational training with a focus on accessibility, gender equality and training in emerging professions linked to the labour market.
- KfW invested EUR 7 million in the construction of a new Higher Vocational Training Institute specialising in Energy and Environment, ensuring training relevant to the renewable energy sector.

Luxembourg Cooperation Agency (Lux-Dev)

Lux-Dev finances several relevant projects:

- **SEN/032 Programme**: aimed at improving youth employability and increasing female participation in technical careers through the creation of the Centre de Référence des Métiers du Digital (CRMN) in Diamniadio, which will train around 3,000 young people in digital and technological skills.

Other relevant agencies

- **UNESCO**: Promotes innovative bilingual vocational training programmes for out-of-school youth, facilitating instruction in local languages (Wolof) and French.
- **Agence Française de Développement (AFD)**: Together with the World Bank, it supports reforms in technical education by financing the 3FPT fund, modernising training centres and promoting the dual company-centre training model.
- **Global Partnership for Education (GPE)**: Has allocated more than $250 million to support basic education, improve early literacy and strengthen education management.
- **AUF (Agence Universitaire de la Francophonie) programmes:** AUF funds ICT training courses, offering learning modules in programming, network administration and digital transformation. It has also facilitated the expansion of distance education through partnerships with universities and technical centres.
- **UN initiatives:** Agencies such as UNESCO and the ILO have collaborated with the Senegalese government in training trainers and providing technological resources in vocational training centres. These programmes have contributed to improving the quality of technical education and reducing the digital divide in the country.
- **Cooperación Española (AECID):** has developed projects to strengthen food security and digital education in Senegal.
- **CERAI (Centre for Rural Studies and International Agriculture):** implements social and solidarity economy projects, integrating digital technologies in agricultural production.
- **World Food Programme (WFP):** supports the strengthening of the food value chain through training and the use of digital technologies in food production and distribution.

These programmes, financed by multilateral or bilateral organisations and awarded by tender, represent an excellent **opportunity for private sector companies specialised in training**, both in the delivery and in the design and conceptualisation of training itineraries adapted to the most demanded areas of knowledge.

4.5. System at training at Senegal vocational training system and ICT training

Senegal, like many developing countries, faces the challenge of preparing its young population for a constantly evolving labour market. In this context, vocational and technical education and training (TVET) plays a crucial role in equipping young people with the skills needed to access decent jobs and contribute to the country's economic growth. This report analyses the TVET system in Senegal, with a particular focus on technical training linked to Information and Communication Technologies (ICTs). It will examine aspects such as the structure of the system, the types of training available, the involvement of the private sector, the geographical distribution of training centres, the level of employability of graduates and the challenges facing the system.

The VET system in Senegal is characterised by a duality between the formal and the informal sector. The formal sector includes public and private vocational training centres, such as technical lycées, vocational education and training centres, and private TVET institutes. On the other hand, the informal sector is based on traditional apprenticeships in craft workshops. While the Senegalese government has implemented reforms to strengthen the formal system, with initiatives such as the "Support to Vocational Training Reform in Senegal" (RéFoP) project to improve the general conditions of formal vocational training, the informal sector still plays an important role in the training of young people, especially in rural areas.

The target population of the vocational training system is young people aged 15-24, with a special focus on girls. VET in Senegal is offered at secondary and tertiary levels. At the secondary level, students can opt for vocational training in technical lycées or in vocational education and training centres. These programmes, which usually last three years, prepare students for entry into the labour market or for further studies in FPT. To be eligible for these programmes, students must be at least 15 years old and have completed primary school. At the tertiary level, vocational schools offer more specialised programmes leading to higher technical or engineering diplomas. Access to this higher level usually requires a baccalaureate or equivalent qualification.

There are two qualifications frameworks in Senegal: the higher education qualifications framework associated with the Licence-Maitrise-Doctorat (LMD) system and the National Vocational Qualifications Framework (NQF). The NQF comprises qualifications at five levels, covering work in industry and the tertiary labour market:

- **CAP:** skilled worker certificate.
- **BEP:** vocational education certificate.
- **BT:** technician certificate
- **BTS/DUT:** higher technician certificate/University Diploma in Technology.

- **Licence Professionnelle in ICT:** offered by universities and technical colleges, it allows students to specialise in areas such as artificial intelligence, big data and business information systems.

In Senegal, VET provision covers a wide range of sectors, from agriculture and crafts to industry and services. Senegal is moving towards a dual system of vocational training, where young people spend part of their training in a company and part in an educational institution. This approach aims to provide more practical experience and better prepare students for the workplace. Some of the most common training programmes include:

- **Crafts:** including traditional trades such as tailoring, hairdressing and cooking.
- **Industry:** training in mechanics, electricity, construction and other technical areas.
- **Agriculture:** training programmes in agriculture, animal husbandry and fishing.
- **Tourism and hospitality:** training in hotel, catering and tourism services.
- **ICTs:** training programmes in computer science, web development, networking and telecommunications.

The ICT sector in Senegal is experiencing significant growth, driven by the expansion of mobile telephony, internet access and the digitalisation of the economy. To meet the demand for skilled professionals in this sector, a number of ICT training programmes have been developed in both the formal and informal sectors.

The development of ICT training in Senegal is a key component of the country's modernisation strategy and its integration into the global digital economy. Through public policies and private sector participation, efforts have been made to strengthen technical and vocational ICT training in order to respond to the growing demand of the labour market. However, the training system still faces significant challenges in terms of coverage, adaptation to the needs of the productive sector and equitable access for all segments of the population.

The vocational training system in Senegal is composed of a network of **388 training centres**, 73% **of** which **are run by the private sector**, while the rest are public institutions under the aegis of the Ministry of Vocational Training, Apprenticeship and Trades (MEFPT). These institutions offer a wide range of programmes, from basic technical training to advanced certifications in key sectors such as ICT.

According to recent data, the number of students enrolled in vocational and technical training has grown significantly, reaching **54,318 students** in 2021, of which approximately **30% are enrolled in ICT-related programmes**. Despite this growth, the transition rate from general education to technical training remains low, at around **6.8% in 2020**, indicating the need for greater awareness and accessibility of ICT training.

Public entities

The government of Senegal has implemented a number of initiatives to promote ICT training, including:

- **Vocational and Technical Training Financing Fund (3FPT):** has financed more than **10,000 training programmes** since its creation in 2014, with a growing emphasis on ICT and digital entrepreneurship courses.

- **Office National de Formation Professionnelle (ONFP):** oversees the quality of training programmes, certification and accreditation of ICT training centres.

- **Université Numérique Cheikh Hamidou Kane (UNCHK):** with more than **20,000 students enrolled**, this university offers distance programmes in software development, data analysis and network management.

- **Public vocational training centres:** institutions such as the **Sectoral Centre for ICT Training (CSFTIC)** in Dakar, which specialises in cybersecurity and web development training, train approximately **1,500 students annually**.

Private entities

The private sector plays a crucial role in ICT training, with technology companies, specialised academies and sectoral associations offering highly specialised programmes. Among the most important initiatives are:

- **Sonatel Academy:** the training academy of Senegal's leading telecommunications company has trained more than **3,000 young people** in ICT skills since its founding in 2017, with a job placement rate of **80%**.

- **Simplon Senegal:** offers intensive bootcamps in web development, artificial intelligence and data analytics, with an average of **500 graduates per year**, mostly young people without access to traditional education.

- **Ecoles de Code:** a network of private academies offering certifications in key programming languages such as Python, Java and C++, as well as training in agile methodologies and DevOps.

The private sector plays an important role in the technical vocational education and training (TVET) system in Senegal. Many companies offer internships and apprenticeship programmes to TVET students, allowing them to gain practical experience and improve their employability. In addition, some companies collaborate with training centres to develop

In addition, some companies collaborate with training centres to develop training programmes tailored to their specific needs. An example of private sector involvement is the 3FPT (Fonds de financement de la formation professionnelle et technique), which, through the disbursement of training vouchers, has enabled more than 10,000 young Senegalese to access vocational training in order to facilitate their economic inclusion.

Most TVET centres in Senegal are concentrated in the Dakar region, the country's capital. This creates an imbalance in access to vocational training, as young people in rural areas have fewer opportunities to access quality programmes. This concentration of training provision in the capital is one of the challenges facing the TVET system in Senegal. To address this problem, there are initiatives to decentralise TVET and bring training to rural areas, such as Huawei's DigiTruck programme, which provides digital literacy training to young people in rural communities.

The employability of FPT graduates in Senegal varies according to the sector and type of training. In general, graduates of technical programmes in areas such as ICT, industry and tourism have greater employment opportunities. However, youth unemployment remains a major problem in Senegal, and many young people face difficulties in finding work after graduation. A major challenge for the vocational training system in Senegal is the mismatch between the skills acquired in training and the needs of the labour market. This disparity contributes to the high unemployment rate among young people.

Despite the progress made, ICT training in Senegal faces several challenges that limit its effectiveness:

- **Urban-rural divide:** more than **80% of training centres are concentrated in Dakar**, while rural regions face difficulties in accessing quality programmes.
- **Gender gap:** women represent only **25%** of students in ICT training, reflecting a lack of inclusion in a sector with high employability potential.
- **Lack of infrastructure and equipment:** Many schools lack adequate equipment, up-to-date software and quality internet access to deliver effective training.
- **Disconnect with the labour market:** companies are demanding skills in emerging technologies such as blockchain, cloud computing and cybersecurity, but training programmes do not yet fully cover these areas.

University education

The higher education system in Senegal is represented by 16 universities offering a total of 386 study programmes. These universities offer 203 bachelor's degree programmes, 147 master's degree programmes and 36 doctoral programmes. The Senegalese university system is characterised by the coexistence of public and private universities. Among the public universities, the Cheikh Anta Diop University of Dakar (UCAD), one of the largest and most prestigious in West Africa, and the Gaston Berger University of Saint Louis (UGB) stand out. Both universities offer a wide range of study programmes in various fields of knowledge, including ICTs. The Senegalese education system follows the French model, with the exception of the American school.

Senegalese universities offer a variety of ICT degrees at both undergraduate and postgraduate level. Some of the most common degrees include:

- **Bachelor's degree in Computer Science:** this degree provides a solid foundation in the fundamentals of computer science, including programming, software development, databases and networking.

- **Bachelor in Telecommunications Engineering:** this programme focuses on the study of communication technologies, including telecommunication networks, wireless communication systems and signal processing.

- **Master in Computer Science:** Master's programmes in computer science offer specialisations in areas such as artificial intelligence, cybersecurity, data analytics and web development.

- **Master's in Telecommunications Engineering:** Master's programmes in telecommunications engineering offer in-depth studies in areas such as next-generation networks, telecommunications security and network management.

Public and private universities co-exist in Senegal. Public universities, such as UCAD and UGB, receive government funding and tend to have a larger number of students. Private universities, on the other hand, are funded by student fees and tend to offer more specialised programmes. Some of the best known private universities in Senegal are Amadou Hampaté Bâ University, Dakar Bourguiba University and L'Université de l'Entreprise, all located in Dakar.

In terms of the size of the student body, the Cheikh Anta Diop University of Dakar (UCAD) has more than 60,000 students, making it one of the largest universities in West Africa. Overall, the number of university students in Senegal has been increasing in recent years, reflecting the growing demand for higher education in the country.

Most universities in Senegal are concentrated in Dakar, the country's capital. Dakar is home to 12 universities offering 262 study programmes. Other cities with universities are Ziguinchor, Saint Louis and Thies, each with one university. This concentration of universities in the capital creates an imbalance in access to higher education, as students in rural areas have fewer opportunities to access quality programmes.

The employability of university graduates in Senegal varies according to the area of study and the type of institution. In general, graduates in technical fields, such as ICT and engineering, have greater employment opportunities. However, youth unemployment remains a major problem in Senegal, and many university graduates face difficulties in finding jobs after graduation.

The university system in Senegal faces several challenges, among them:

- **Lack of resources:** many universities lack the financial, material and human resources to offer quality programmes.
- **Quality of education: There** is a need to improve the quality of university education, especially in technical areas such as ICT.
- **Relevance of training:** some curricula are not up to date and do not respond to the needs of the labour market.
- **Gender equity:** women face barriers to access higher education, especially in technical areas.
- **Brain drain:** many Senegalese university graduates migrate to other countries in search of better job opportunities.

4.6. Sectors driving the demand for digital training in Senegal

The advance of digitalisation in Senegal has generated a growing demand for digital skills training, driven by key sectors seeking to improve their competitiveness and efficiency. The sectors leading this demand not only require workers with basic skills in the use of digital technologies, but are also investing in training in advanced areas such as data analytics, cybersecurity and artificial intelligence.

Information and Communication Technologies (ICT)

The ICT sector has been one of the most important drivers of digital transformation in Senegal. Telecommunications companies, software developers and digital service providers are constantly on the lookout for talent skilled in programming, network administration and IT systems management. According to the Rapport sur la Digitalisation et l'Innovation au Sénégal, **80% of ICT companies have expressed difficulties in finding local talent with training** in programming, network administration and IT systems management.

difficulties in finding local talent with training in cybersecurity and software development.

Trade and financial services

The fintech and e-commerce sector is rapidly expanding in Senegal. The adoption of digital payment solutions and online commerce platforms has generated high demand for specialists in digital marketing, data analytics and payment platform management. By 2023, **more than 45% of commerce companies in Senegal were using digital tools to sell their products, but only 18% had structured e-commerce platforms**. The lack of training in the use of these tools represents a barrier to the growth of the sector.

Agribusiness and digital agriculture

The agricultural sector, which employs more than 50% of the labour force in Senegal, is undergoing a process of digitalisation thanks to satellite monitoring tools, crop management systems and agricultural trading platforms. However, **less than 10% of farmers have been trained in the use of digital technologies** to optimise their production. This highlights the need for specific training programmes for this sector.

Industry and manufacturing

Industrial companies are adopting advanced technologies such as automation and robotics, requiring staff with skills in mechatronics, Internet of Things (IoT) and digital industrial process management. Currently, **32% of manufacturing companies have digitised part of their processes, but the adoption of advanced technologies remains low**.

Health and telemedicine

The health sector has started to integrate digital solutions such as electronic medical records and teleconsultation. The COVID-19 pandemic accelerated this transformation, but **more than 60% of health facilities in Senegal lack staff trained in the use of digital tools for patient data management**. This has led to a growing need for training in digital health and medical cybersecurity.

4.7. Evolution and future of digital training in Senegal

The digital training landscape in Senegal has evolved significantly over the last decade, driven by government policies, private sector investment and the growth of the digital economy. However, despite this progress, there are still structural challenges that limit access to and quality of digital skills education.

The number of students enrolled in vocational and technical education represents **30% are enrolled in ICT-related programmes**, however, the transition rate from general education to technical education remains low at **6.8% in 2020**, reflecting the need for greater awareness and accessibility of ICT training.

Future trends and prospects for digital literacy

As Senegal moves towards a more digitised economy, future trends in digital training focus on expanding specialised training programmes and improving access to technology education.

1. **Increased integration of digital skills training in formal education:** by 2030, at **least 50% of vocational training programmes** are expected **to include modules in digital technology**, in response to growing market demand.
2. **Expansion of online learning and e-learning platforms:** Online education is gaining prominence as an accessible and flexible alternative. Programmes such as Senegal Digital Academy aim to **train 100,000 young people in programming and data analytics over the next five years**.
3. **Increasing public-private partnerships:** international technology companies such as Google, Microsoft and Huawei have started to invest in digital skills in Senegal, providing training programmes in cloud computing, artificial intelligence and data analytics.
4. **Emphasis on cybersecurity and data protection training:** As digitisation increases, cybersecurity has become a priority area. In 2023, the Senegalese government launched a **national programme to train 5,000 cybersecurity experts** to protect the country's digital infrastructure.
5. **Bridging the digital divide in rural areas:** the expansion of internet infrastructure and the development of digital training centres in rural areas will be key to ensuring greater equity in access to technology education.

5. Level of digitisation of the companies in Senegal

The digitisation of enterprises in Senegal has advanced significantly in the last decade, driven by government initiatives such as Sénégal Numérique 2025 and the New Deal Technologique. However, challenges remain in the adoption of advanced digital technologies, especially among small and medium-sized enterprises (SMEs), which represent approximately 90% of the country's business fabric.

Senegal is currently at a turning point: although digital infrastructure has improved and regulations have been harmonised with international standards, access to finance, digital skills and the low adoption rate of advanced digital tools continue to limit the growth of the digital business ecosystem.

5.1. Digital maturity by dimension

The digital maturity of companies in Senegal can be assessed across **five key dimensions**:

1. **Digital infrastructure and connectivity.**
2. **Adoption of digital tools.**
3. **Digital skills and training.**
4. **Digital security and regulation.**
5. **Use of data and market analysis.**

According to the Rapport sur la Digitalisation et l'Innovation au Sénégal, by 2024:

- **78% of large companies** in Senegal **have digitised administrative and financial processes**, while **in SMEs the rate is 45%**.

- **Only 12% of companies have implemented advanced technologies, such as artificial intelligence (AI), big data**
  such as artificial intelligence (AI), big data or automation.

- **30% of SMEs** report difficulties in integrating digital payment platforms, which limits their participation in e-commerce.

In terms of skills, **less than 40% of entrepreneurs have training in digital commerce or advanced technological tools**, which hinders the efficient adoption of new technologies.

5.2. Digital maturity by sector of activity

Digitalisation varies considerably by sector of activity. The sectors most advanced in digitisation in Senegal are:

- **Fintech and digital banking**: this sector has experienced exponential growth, with **more than 80% of banks offering digital services** and strong adoption of fintechs such as Wave and Orange Money.
- **Commerce and retail**: although 45% of companies in this sector use social media to sell products, **only 18% have implemented e-commerce platforms**.
- **Agriculture**: Adoption of digital technologies in agribusiness remains low, with **less than 10% of companies using advanced digital solutions** to optimise production.
- **Manufacturing and industry**: **32% of industrial companies have digitised part of their production chain**, but automation remains limited.

This data reflects a clear imbalance in technology adoption, with sectors such as banking and fintech leading the way in digitisation, while agriculture and manufacturing still require substantial investments.

5.3. Challenges and obstacles to digitisation

Despite progress, the digital transformation of businesses in Senegal faces several structural challenges:

1. **Limited access to finance:**
    - Only 30% of SMEs have access to bank loans for technology investment.
    - The lack of public-private investment funds limits the growth of digital startups and the modernisation of traditional companies.
2. **Lack of digital training:**
    - Less than 40% of entrepreneurs have received training in advanced digital tools, mainly concentrated i n Dakar and other large cities.
    - The shortage of technical staff trained in areas such as cybersecurity, data analytics and software development limits the expansion of tech companies.
3. **Low confidence in digital platforms**
    - 58% of SMEs do not trust e-payment systems, which delays the adoption of e-commerce.

4. **Evolving regulatory framework**
    - The lack of clear regulation around e-commerce taxation remains an obstacle to the expansion of digital platforms.

5.4. Digital infrastructure and connectivity

The development of digital infrastructure in Senegal has been a government priority. Currently, **4G coverage reaches 80% in urban areas, but only 35% in rural areas**, limiting equitable access to digital tools.

To improve connectivity, the government has implemented initiatives such as:

- **Fibre optic expansion**: Senegal has built more than 6,000 km of fibre optics in the last five years.
- **Subsidies for internet access**: connection costs have been reduced **by** 30% through agreements with private operators.

However, **lack of access in rural areas remains a key barrier**, hindering the adoption of digital tools by businesses in less urbanised areas.

5.5. Opportunities for improvement and recommendations

To accelerate business digitisation in Senegal, it is critical to address current challenges with concrete strategies such as:

1. **Expanding access to digital finance:**
    - Creation of public-private investment funds to support technology adoption.
    - Expansion of lines of microcredit digital with preferential rates.
2. **Massive digital training:**
    - Development of free training programmes in digital marketing, e-commerce and data management.
    - Creation of an online training portal with digital certifications for entrepreneurs.
3. **Tax incentives for digitalisation:**
    - Tax reduction for SMEs that adopt advanced digital tools.
    - Creation of a digital quality seal for companies certified in good technological practices.

4. **Expansion of digital infrastructure:**
    - Implementation of more free connectivity zones in markets and industrial centres.

These actions will enable Senegal to strengthen its digital ecosystem and position itself as a benchmark in digital transformation in West Africa.

6. Employability in the technology sector

Employability in the technology sector in Senegal has become strategically important, especially following the implementation of the national strategy Sénégal Numérique 2025. This policy aims not only to accelerate the country's digital transformation, but also to respond to the growing demand for professionals with advanced digital skills. The government's push for innovation and the development of a robust technology ecosystem has started to bear fruit, as evidenced by the expansion of sectors such as fintech, telecommunications and software development.

However, despite this progress, significant challenges remain in training talent in line with market needs. Gaps in critical skills such as cybersecurity, data analytics and process automation need to be addressed through stronger vocational and technical training programmes aligned with industry demands. Collaboration between educational institutions and private sector companies is crucial to ensure an education offer that improves employability and fosters a culture of continuous innovation.

The current context also reveals a disparity in access to technological opportunities, particularly marked between urban and rural areas and between genders. Policies to promote broader inclusion in technology training and employment should prioritise the removal of these barriers, with a particular focus on empowering young people and women, who are essential to the country's technological future.

This section of the report delves into the analysis of emerging job opportunities in the Senegalese technology sector, exploring the current profile of the workforce, medium- and long-term employment trends and the participation of women in innovation and digitisation processes. It also makes strategic recommendations aimed at strengthening the technology ecosystem, improving competitiveness and fostering equitable and sustainable development in Senegal's technology sector.

6.1. The Senegalese business fabric

Senegal has consolidated a dynamic business ecosystem in recent years, driven by a strong entrepreneurial spirit, an expanding services sector and an industrial base that continues to grow. The country is in a phase of modernisation of its productive structure, supported by government initiatives to strengthen competitiveness, improve access to finance and promote digitalisation. However, challenges remain, such as high informality, business concentration in Dakar and the need to diversify investment sources to promote more balanced development across the territory.

The evolution of the business fabric shows an increase in the creation of companies, reflecting the dynamism of the private sector and the impact of economic reforms aimed at simplifying administrative procedures and attracting foreign investment.

According to the Agence Nationale de la Statistique et de la Démographie (ANSD), the **total number of active enterprises in Senegal exceeds 450,000 economic units**, with a predominance of **small and medium-sized enterprises (SMEs)**, which represent more than **G0 % of the country's business fabric**. Most of these enterprises operate in the services, commerce and light manufacturing sectors, according to the report "Situation économique et sociale du Sénégal 2022-2023" (ANSD, 2024).

In the fourth quarter of 2024, 26,970 new businesses were registered, a growth of 13.7% compared to the previous quarter, but with a slight contraction of 2.5% compared to the same period in 2023. This trend shows a constantly evolving business environment, albeit subject to macroeconomic and regulatory variations.

In terms of sectoral distribution, the trade sector remains the most representative in business start-ups:

- **Trade**, which accounts for **31.G %** of new companies by legal entities and **68.3 %** of sole proprietorships.
- **Business and personal services**, accounting for **14.1%**.
- **Industry and manufacturing**, which accounts for **7.2 %**.
- **Construction and public works**, accounting for **3.2%**.
- **Information and Communication Technologies (ICT)**, accounting for 2.5%. **2,5 %.**

In terms of geographical distribution, new businesses are not evenly distributed across the country. **Dakar continues to account for more than 50%** of entrepreneurial activity, with **51.75%** of new registrations. Other regions with high entrepreneurial dynamics include:

- **Thiès (13.8%)**: benefiting from its proximity to Dakar and its activity in industry and construction.

- **Kaolack (7.8%)**: with a strong focus on trade and agro-industry.
- **Tambacounda (5.28 %)** and **Ziguinchor (4.G %)**: moderate but sustained growth.

In contrast, regions such as **Kédougou (1.0%), Kaffrine (1.0%) and Sédhiou (1.1%)** show less entrepreneurial activity, highlighting the need for incentives for economic development in these areas.

The informal sector has a significant presence in the Senegalese economy, especially in Dakar, where there are approximately **281,600 informal production units**. Although many of these entities are not formally registered, their contribution to the economy and employment is considerable (Étude sur le Secteur Informel au Sénégal, Direction de la Prévision et de la Statistique, 2022).

The government has launched initiatives to promote formalisation, such as funding programmes through the Délégation Générale à l'Entreprenariat Rapide des Femmes et des Jeunes (DER/FJ) and digital platforms for rapid business registration.

Senegal has seen how digitalisation is transforming business operations, driving innovation and improving access to markets. Currently, **G0% of businesses** in Senegal are connected to the internet, with **ADSL being the predominant connection technology** (according to data from the report Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024).

The exact number of companies in the ICT sector in Senegal is difficult to determine. However, according to estimates by the National Agency for Statistics and Demography (ANSD)**,** there are around 90 companies involved in IT services and technology consulting. These companies operate in key sectors such as audiovisual systems, fintech, internet of things, artificial intelligence, IT outsourcing and big data analytics**,** according to the Étude sur le Secteur des TIC au Sénégal (ANSD, 2023).

Government policies to support entrepreneurship

The government of Senegal has put in place a number of policies and programmes to strengthen the entrepreneurial ecosystem and foster business creation and growth, especially in the small and medium-sized enterprise (SME) sector and the digital economy. These initiatives are part of broader strategies, which aim to transform the national economy through innovation, digitalisation and private sector development.

Despite the dynamism of the entrepreneurial sector in Senegal, challenges remain, such as limited access to finance, labour skills mismatch, high borrowing costs and administrative bureaucracy (State of Skills in Senegal, International Labour Organisation, 2023). To address these problems, the government has developed a series of programmes aimed at improving the competitiveness of enterprises, facilitating financing and strengthening vocational training.

vocational training. The main initiatives in place in 2024 are detailed below.

1. General Delegation for Rapid Entrepreneurship of Women and Youth (DER/FJ)

- **Start:** 2018 - **Ongoing**
- **Objective: to** facilitate access to finance and strengthen the business skills of women and young entrepreneurs.
- **Responsible entity:** Ministry of Economy, Plan and Cooperation through the DER/FJ.
- **Funding:** In 2023, more than **100 billion FCFA** (approximately €150 million) in accessible credit lines (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).
- **Results:** to date, DER/FJ has financed more than **200,000 entrepreneurs**, with a special focus on strategic sectors such as agribusiness, technology and digital commerce.

2. Technical and Vocational Training Financing Fund (3FPT)

- **Start:** 2014 - **Ongoing**
- **Objective: To** improve the employability of young people and workers through vocational training aligned with the needs of the labour market.
- **Responsible entity:** Ministry of Employment, Vocational Training and Apprenticeship.
- **Funding:** 3FPT manages approximately **41 billion FCFA per year** (€62.5 million), with support from international agencies such as the **French Development Agency (AFD)** and the **African Development Bank (ADB)** (La Formation Professionnelle et Technique et l'Emploi au Sénégal, LISER, 2023).
- **Results:** between 2014 and 2023, the programme has enabled the training of more than **500,000 young people**, including in emerging technological sectors.

3. XËYU NDAW ÑI Programme - Employment and Training for Young People

- **Start:** 2021 - **Ongoing**
- **Objective: to** create employment and vocational training opportunities for young Senegalese, reducing the youth unemployment rate.
- **Responsible entity:** Ministry of Employment, Vocational Training and Apprenticeship.
- **Funding: 450 billion FCFA** (approximately 685 million euros) earmarked between 2021 and 2024 (Lettre de Politique Sectorielle de Développement du MEFPAI 2022-2026, Government of Senegal, 2022).
- **Results:** more than **65,000 formal jobs** have been created and **250,000 training scholarships** have been offered to young people in high-demand sectors, including digital and renewable energy.

4. Senegal Digital Strategy 2025 (SN2025)

- **Start:** 2016 - **End (replaced by the New Deal Technologique strategy).**
- **Objective: to** boost the digitalisation of the Senegalese economy and encourage entrepreneurship in the technology sector.
- **Responsible entity:** Ministry of Communication, Telecommunications and Digital Economy.
- **Funding:** government support and funding from the World Bank, the European Union and the AFD.
- **Expected results:**
  - Expansion of digital infrastructure with **technology hubs** in Dakar and other cities.
  - Creation of more than **10,000 technology start-ups** through incubators and accelerators (Stratégie Numérique SN2025 - Plan d'Actions Actualisé, Government of Senegal, 2023).

5. Support Programme for SMEs and Local Entrepreneurship

- **Start:** 2020 - **Ongoing**
- **Objective: to** improve the competitiveness of SMEs and facilitate their access to international markets.
- **Responsible Entity: Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME)**.
- **Funding:** More than **50 billion FCFA** invested since 2020.
- **Results:** More than **30,000 SMEs** have been provided with technical advice and financing, improving their formalisation and access to finance (Skills Development Program in Senegal, World Bank, 2021).

c. Fiscal and Financial Incentives for Startups and Innovative Enterprises

- **Start:** 2019 - **Ongoing**
- **Objective:** promote investment in innovative companies through tax incentives and access to finance.
- **Responsible entity:** Ministry of Finance and Budget.
- **Measures:**
  - Tax exemption for startups in their first five years.
  - Creation of the **National Innovation Fund**, with more than **20 billion FCFA** in seed capital for startups.
- **Expected results:** Facilitate the growth of startups in strategic sectors such as fintech, digital health and e-commerce (Stratégie Nationale de Cybersécurité du Sénégal, Government of Senegal, 2022).

Government policies to support entrepreneurship in Senegal have evolved significantly over the last decade, with a strong emphasis on digitisation, technical training and access to finance. However, challenges

remain, such as lack of coordination between programmes, bureaucracy and difficulties in accessing credit (State of Skills in Senegal, International Labour Organisation, 2023). To maximise the impact of these initiatives, it is essential to strengthen the articulation between the public and private sectors, expand training in digital skills and ensure a more favourable regulatory environment for entrepreneurship.

6.2. Technology and digital job opportunities

The technology sector in Senegal has experienced significant growth in recent years, consolidating the country as an emerging technology hub in West Africa. The Senegalese government, through its Senegal Digital 2025 (SN2025) strategy, has prioritised digitalisation as one of the fundamental levers of economic development and job creation (Stratégie Numérique SN2025 - Plan d'Actions Actualisé, Government of Senegal, 2023).

According to the Agence de l'Informatique de l'État (ADIE), it is estimated that **10,000 jobs** will be created **in the technology sector by 2024**, in line with the objective of reaching **150,000 technology professionals by 2025** (Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023). This growth responds to the increasing demand for digital talent in areas such as software engineering, data science, cybersecurity and artificial intelligence.

Areas with the highest demand for employment

The technology boom has boosted the demand for skilled profiles in different segments of the digital industry. The following are the main areas with the highest employment prospects in Senegal:

1. Software engineering

- **Job demand:** Software engineering is one of the most sought-after disciplines in the country. It is estimated that **between 5% and 10% of the economically active population** is composed of software engineers (Emplois Tech au Sénégal en 2023, ADIE, 2023).
- **Salaries:**
  - 1-3 years of experience: **350,000 - 400,000 FCFA.**
  - 4-7 years of experience: **500,000 - 800,000 FCFA**
  - More than 7 years of experience: **1.500.000 - 3.000.000 FCFA**

2. Data science and big data analysis

- **Job demand:** The need for data science professionals has grown with the digitisation of the financial, telecommunications and health sectors. However, the sector is still nascent, with **an employment rate between 0.5% and 1%** of the labour force (Emplois Tech au Sénégal en 2023, ADIE, 2023).

- **Salaries:**
  - 1-3 years of experience: **400,000 - 500,000 FCFA**.
  - 4-7 years of experience: **600,000 - 800,000 FCFA**
  - More than 7 years of experience: **G50,000 - 1,500,000 FCFA**

3. Cybersecurity

- **Job demand:** as businesses and government move towards digitisation, cybersecurity has become a priority. Currently, it is estimated that **1% to 2% of the workforce** works in this sector (Stratégie Nationale de Cybersécurité du Sénégal, Government of Senegal, 2022).
- **Salaries:**
  - 1-3 years of experience: **300,000 - 700,000 FCFA**
  - 4-7 years of experience: **700.000 - 1.000.000 FCFA**
  - 7+ years of experience: **2,000,000 - 5,000,000 FCFA**

4. Fintech and digital banking

The fintech sector in Senegal has seen remarkable expansion, driven by high mobile penetration and the growing adoption of digital payments. Start-ups are exploring solutions in financial inclusion, mobile payments and digital lending (Rapport sur l'Économie Sénégalaise, Ministry of Economy, Finance and Planning, 2023).

- **Job opportunities:**
  - Fintech solution developers
  - Blockchain specialists
  - Digital financial regulation experts

5. Technology infrastructure and telecommunications

Investment in digital infrastructure, such as the deployment of fibre optic and 5G networks, is creating jobs in the telecommunications, networking and connectivity sectors. In 2023, the government announced investments to improve connectivity in rural areas, boosting demand for network technicians and telecommunications infrastructure specialists (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).

Working conditions in the technology sector

Employment in the technology sector in Senegal is characterised by diverse hiring patterns and emerging trends:

- **Time to hire:** it is estimated that the average time for a technology graduate to find employment ranges from **3 to 6 months**, depending on the specialisation (Emplois Tech au Sénégal en 2023, ADIE, 2023).
- **Type of employment:**
  - 60% of technology professionals are employed **full-time**.
  - 25% work under **temporary or project-based contracts**.
  - 15% work as **freelancers**.
- **Remote work:** the hybrid model is predominant, with **50% of tech employees** working in this mode, while **36% work face-to-face and 14% work completely remotely** (Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

Despite the growth of the digital sector, Senegal faces challenges in terms of training and access to skilled talent. The lack of specific training programmes in areas such as artificial intelligence and cybersecurity limits the supply of skilled professionals (State of Skills in Senegal, International Labour Organisation, 2023).

To maximise the impact of the technology sector on employment, the following strategies are recommended:

1. **Expand training in digital skills:** training in advanced technological skills needs to be strengthened to improve employability.
2. **Incentivise investment in technology start-ups:** create financing mechanisms and tax incentives to boost the creation and scaling up of technology companies.
3. **Strengthen cooperation between the private sector and universities:** develop training programmes adapted to the needs of the labour market.
4. **Improve regulation of remote work and freelancing:** adapt the legal framework to new labour trends to attract global talent and improve conditions for tech workers.

6.3. Profile of today's tech workers

The technology sector in Senegal has experienced sustained growth over the last decade, driven by digitisation, the expansion of ICT infrastructure and the development of new opportunities in sectors such as fintech, cybersecurity and data science. In this context, tech workers represent a constantly evolving group, with specific characteristics in terms of training, work experience and employment conditions (Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

Currently, technology professionals in Senegal present a diverse composition in terms of level of experience, type of contract and sector of specialisation. According to recent estimates, it is expected that
10,000 new employees in the technology sector by 2024, reflecting a dynamic growth of labour demand in this industry (Emplois Tech au Sénégal en 2023, ADIE, 2023).

Distribution by level of experience

The level of experience of technology workers in Senegal varies according to the field of specialisation, with a strong presence of young and early career professionals. The current distribution is as follows:

- **50%** of tech workers occupy **entry-level positions**, indicating a high rate of incorporation of young talent into the sector.
- **30% are mid-level** professionals, with between 3 and 7 years of experience.
- **20%** of employees belong to **senior or managerial** levels, with more than 7 years of experience in the sector (Emplois Tech au Sénégal en 2023, ADIE, 2023).

These data highlight the need to strengthen training and talent development in specialised and higher level positions, in order to ensure sustainable career progression in the sector.

Type of employment and working conditions

Technology professionals in Senegal work under different contractual arrangements, with a growing trend towards flexible contracting and remote working. The distribution of employment in the sector is as follows:

- **60%** of workers are employed **full** time in technology companies or IT departments in various industries.
- **25%** work on **short-term or project-based** contracts, reflecting a trend towards more flexible working in the sector.
- **15%** operate as **freelancers**, providing independent services in software development, data analysis and technology consulting (Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

In terms of working models, there is a preference for hybrid schemes combining face-to-face and teleworking:

- **50%** of professionals work in a **hybrid model**.
- **36%** work **entirely face-to-face**.
- **14%** operate a **full telework scheme** (Perspectives de l'Emploi dans le Secteur l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

Salaries according to specialisation and experience

The salary level of technology professionals in Senegal varies according to specialisation and experience. Below are estimated salary ranges for the main areas of the technology sector:

1. Software engineering

- 1-3 years of experience: 350,000 - 400,000 CFAF
- 4-7 years of experience: 500,000 - 800,000 FCFA
- More than 7 years of experience: 1,500,000 - 3,000,000 FCFA

2. Data Science

- 1-3 years of experience: 400.000 - 500.000 FCFA
- 4-7 years of experience: 600.000 - 800.000 FCFA
- More than 7 years of experience: 950,000 - 1,500,000 FCFA

3. Cybersecurity

- 1-3 years of experience: 300,000 - 700,000 FCFA
- 4-7 years of experience: 700.000 - 1.000.000 FCFA
- More than 7 years experience: 2.000.000 - 5.000.000 FCFA

Average time to entry into the labour market

The time needed for a technology graduate to find employment in Senegal varies according to his or her previous experience and level of preparation:

- **Graduates with no experience:** between **3 and 6 months** to find their first job.
- **Graduates with previous internship or project experience: 2 to 3 months**.
- **Graduates with a strong academic record and advanced skills:** between **1 and 2 months** (Emplois Tech au Sénégal en 2023, ADIE, 2023).

The profile of technology workers in Senegal reflects an expanding industry, with a high level of young talent coming on board and a growing demand for professionals specialising in strategic areas such as software, data science and cybersecurity. As the sector continues to evolve, it will be critical to strengthen training programmes and promote career development opportunities to consolidate the sector.

6.4. Employment prospects and sector growth

The technology sector in Senegal is in a period of accelerated expansion, driven by the growth of the digital ecosystem, the digital transformation of companies and increasing investment in technology infrastructure. According to the Agence de l'Informatique de l'État (ADIE), the country forecast the creation of

10,000 new technology jobs by 2024, with the objective of reaching **150,000 technology professionals by 2025** (Perspectives de l'Emploi dans le Secteur **Technologique au Sénégal,** ADIE, **2023)**.
le Secteur Technologique au Sénégal, ADIE, 2023).

The growth of the sector has been supported by government initiatives, such as the Sénégal Numérique 2025 Strategy (Senegal Digital, SN2025), which seeks to improve digital connectivity, foster technological innovation and develop ICT skills at the national level (Stratégie Numérique SN2025 - Plan d'Actions Actualisé, Government of Senegal, 2023).

The boom in employment in the digital sector is driven by multiple structural and economic factors, including:

1. **Expansion of digital infrastructure:**
    - Senegal has invested in fibre optic networks and the deployment of 4G and 5G technologies.
    - Technology hubs and innovation centres have been established in Dakar and other key regions (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).
2. **Increasing business digitalisation:**
    - More than **G0% of companies in Senegal are connected to the internet**, with a growing adoption of digital solutions in the financial, commercial and government sectors (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024).
3. **Growing demand for talent in strategic sectors:**
    - **Software engineering, data science and cybersecurity** lead the demand for tech jobs, with competitive salaries and ample growth opportunities (Emplois Tech au Sénégal en 2023, ADIE, 2023).
4. **Boom in digital entrepreneurship and fintech:**

    Senegal has established itself as a **fintech hub** in West Africa, with an increase in the number of startups dedicated to digital financial services and e-commerce (Rapport sur l'Économie Sénégalaise, Ministry of Economy, Finance and Planning, 2023).

The growth and employment prospects in key technology areas are outlined below:

- **Software engineering and application development**: the number of software developers in Senegal is expected to increase **by 25% between 2024 and 2026**, due to the digitisation of companies and the expansion of e-commerce (Emplois Tech au Sénégal en 2023, ADIE, 2023).

- **Data science and big data analytics:** demand for data specialists will grow **by 30% over the next three years**, driven by the adoption of data analytics in key sectors such as finance, telecommunications and health (Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

- **Cybersecurity and digital protection:** The number of cybersecurity professionals is estimated to increase by **40% by 2026**, due to the increasing digitisation of the financial sector and public administration (Stratégie Nationale de Cybersécurité du Sénégal, Government of Senegal, 2022).

Employment prospects in the technology sector in Senegal are promising, with growing demand for talent in key areas such as software development, data science and cybersecurity. However, it is essential to address existing challenges and strengthen training and funding initiatives to ensure sustainable growth of the sector. With the right strategies, Senegal can establish itself as a leading technology hub in West Africa in the coming years.

6.5. Gender gap in the digital labour market

The role of women in the technology and digital sector in Senegal has grown in recent years, but they still face significant structural barriers that limit their full integration into the digital economy. Although the country has made progress in expanding access to education and information and communication technologies (ICT), female representation in STEM (science, technology, engineering and mathematics) and digital jobs remains low. Disparities are particularly notable in computer engineering and telecommunications training, as well as in access to employment opportunities in the technology sector (Rapport sur l'Intégration du Genre dans l'Enseignement Supérieur et la Recherche Scientifique au Sénégal, Ministère de l'Éducation Supérieur et de la Recherche Scientifique au Sénégal, Ministère de l'Éducation Supérieur et de la Recherche, 2022).

At the cultural level, Senegal remains a society where gender stereotypes influence women's career choices and participation in high-innovation sectors. Despite various government and private initiatives to promote women's inclusion in the digital economy, figures show that significant inequalities persist in access to education and employment in technology. This section analyses the situation of women in digitalisation in Senegal, their participation in technology education and in the labour market, the challenges they face and the strategies implemented to promote their inclusion.

Access to education is a key factor for women's inclusion in the digital sector. However, in Senegal, enrolment of women in STEM careers remains low compared to that of men. According to data from the Ministry of Higher Education, **only 23% of students in computer engineering and telecommunications programmes in Senegalese universities are women** (Rapport sur l'Intégration du Genre dans l'Enseignement Supérieur et la Recherche Scientifique au Sénégal, Ministère de l'Éducation Supérieur et de la Recherche Scientifique au Sénégal, Ministère de l'Éducation Supérieur et de la Recherche, 2022).

The reasons behind this under-representation include:

- **Socio-cultural factors:** gender stereotypes persist which discourage women from opting for technological careers, promoting instead studies in more traditional areas such as education or social sciences.

- **Lack of female role models in the sector:** the scarcity of female role models in the technology industry limits the aspiration of many young women to enter this field.

- **Gaps in access to technology:** In rural areas, women have less access to digital devices and internet connection, which reduces their opportunities for digital literacy (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).

Women's participation in digital employment

The digital sector in Senegal is still dominated by men. **It is estimated that only 15% of technology professionals in the country are women**, which is lower than the West African average (Emplois Tech au Sénégal en 2023, ADIE, 2023).

Distribution by technology sector:

- **Software engineering:** only **8% of software developers in Senegal are women**.
- **Data science:** Female participation in this field is less than 5%, due to a shortage of accessible training programmes.
  5%, due to the scarcity of accessible training programmes.

- **Cybersecurity:** represents one of the sectors with the lowest female presence, with only **3% of women in IT security roles (**Perspectives de l'Emploi dans le Secteur Technologique au Sénégal, ADIE, 2023).

This low participation has direct consequences on the representativeness of women in leadership positions and their access to advancement opportunities within the digital ecosystem.

Challenges to women's inclusion in the technology sector

Women in Senegal face multiple barriers to entering and thriving in the digital sector. Among the most relevant challenges are:

1. **Gender discrimination in the workplace.**
    - Many women in technology face bias in hiring and promotion.
    - The gender pay gap remains significant, with women in tech positions earning on average **25% less than their male colleagues in similar roles** (Votresalaire.org, 2023).
2. **Lack of accessible training programmes**
    - The supply of gender-sensitive ICT training is still limited, with few programmes designed specifically for women.
    - The lack of professional support networks and mentoring reduces women's opportunities for development in technology (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024).
3. **Difficulties in technology entrepreneurship**
    - Although the digital entrepreneurship sector is growing, women face more difficulties in accessing funding and investment networks.
    - **Only 10% of technology start-ups in Senegal have been founded by women**, and many of them operate in sectors with less access to venture capital (Rapport sur l'Économie Sénégalaise, Ministry of Economy, Finance and Planning, 2023).

Strategies and initiatives to reduce the gender gap

Despite the challenges, several initiatives are working to strengthen the presence of women in the technology sector:

- **Femmes Numériques" programme:** Launched by the Ministry of Communication and Digital Economy, this programme offers training in ICT and digital entrepreneurship to young women. It has trained more than **5,000 women in digital literacy and programming** since its creation in 2019.

- **General Delegation for Rapid Entrepreneurship for Women and Youth (DER/FJ):** provides funding to women-led startups in technology and digital sectors. Until 2023, it has granted more than **10,000 microcredits to women entrepreneurs in the digital field** (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).

- **Hackathons and technological competitions with a gender focus:** events such as the **Dakar Women in Tech Summit** seek to raise the profile of female talent in the technology industry. Mentoring programmes have been set up to connect young people with successful professionals in the sector.

Women's participation in innovation and digitisation in Senegal has increased in recent years, but structural challenges persist that limit their access to technology education and digital employment. It is crucial to continue promoting initiatives that reduce the gender gap in the technology sector, promoting ICT training, facilitating access to finance for women entrepreneurs, and generating support and mentoring networks. With the right policies and sustained commitment, Senegal can move towards greater equity in the digital economy, enabling more women to actively contribute to the country's technological transformation.

6.6. Prospects for employment and growth in the technology sector in Senegal

The technology sector in Senegal is undergoing a period of accelerated expansion, driven by increasing digitisation of the economy, modernisation of the technology infrastructure and an enabling environment for innovation. Government policies, such as the **Senegal Digital 2025 Plan** (SN2025) and the **Plan Sénégal Émergent** (PSE), have laid the groundwork for a digital transformation that not only modernises public and private services, but also opens up new employment opportunities in the digital sector. As the country's economy goes digital, the demand for talent in information and communication technologies has been growing steadily, creating the need to train and attract highly skilled professionals in key areas such as software engineering, software development, and software engineering.

in key areas such as software engineering, data science, cybersecurity and fintech.

Forecasts indicate that the technology sector could generate around **10,000 new jobs in 2024**, with the goal of reaching **150,000 technology professionals by 2025**, according to data from the Agence de l'Informatique de l'État (ADIE)**.** This growth is directly related to the expansion of connectivity and the adoption of digital solutions in different economic sectors. The deployment of fibre optics and the adoption of advanced mobile technologies such as 4G and the emerging 5G are transforming the country's digital infrastructure, enabling greater internet penetration and the proliferation of technology companies. Investments in technology hubs and innovation centres in Dakar and other key cities have spurred the creation of startups and the development of digital solutions for sectors such as commerce, education and health.

Business digitalisation is another key driver of employment growth in the sector. Today, more than **G0% of businesses in Senegal are connected to the internet**, and a growing number are integrating digital solutions into their daily operations. The adoption of digital payment platforms, the automation of administrative processes and the use of data analytics tools are redefining the business landscape, generating a high demand for specialists in emerging technologies. In this context, companies are increasingly looking for profiles with backgrounds in programming, artificial intelligence, big data analytics and IT security. It is estimated that the demand for software developers in the country will increase by **25% between 2024 and 2026**, while the number of data science specialists will grow by **30% in the next three years**. Cybersecurity is another growing sector, with **demand for professionals** expected to **increase** by **40%** by 2026, driven by the increasing digitisation of the financial sector and public administration.

The rise of digital entrepreneurship is also contributing to job creation in the technology sector. Senegal has established itself as a fintech hub in West Africa, with a growing number of startups focused on digital financial services and e-commerce. The digitisation of the banking sector and the increased use of digital payment platforms have accelerated the transformation of the financial ecosystem, which has increased the need for specialists in blockchain, digital financial regulation and fintech solutions. However, despite this dynamism, access to finance remains an obstacle for many tech startups, limiting their ability to grow and scale.

Despite the optimism around the sector, Senegal faces several challenges that could slow tech job growth if not effectively addressed. Lack of specialised talent remains a recurring problem, with a notable shortage of professionals trained in artificial intelligence, cybersecurity and process automation. While the country has made efforts to improve training in digital skills, training programmes still do not meet the growing demand for these skills.

programmes still fall short of the growing labour market demand. Access to technical and vocational digital education remains concentrated in Dakar and other urban areas, creating a significant gap with rural areas, where digitalisation is still incipient.

Access to finance for tech start-ups is another factor limiting the growth of the sector. Although Senegal has developed financial support programmes, such as public-private investment funds and microcredit lines for digital ventures, many start-ups still face difficulties in accessing venture capital and scalable finance. The lack of a robust investment ecosystem hinders the development of innovative technology solutions that can compete in the global market.

The digital divide in rural areas also represents a challenge for the development of the technology sector. While internet coverage has improved in recent years, with **80% connectivity in urban areas**, internet penetration in rural regions remains low at just **35%**. This inequality limits digital training and employment opportunities in these areas, which could hinder the equitable expansion of the technology sector across the country.

To maximise the employment impact of the technology sector and ensure sustained growth, it is crucial that Senegal implements concrete strategies to overcome these challenges. Expanding digital skills training programmes should be a priority, ensuring that young people and working professionals have access to training programmes tailored to market needs. It is also necessary to strengthen cooperation between the private sector and universities to develop curricula that prepare students for the demands of the technology sector.

Boosting investment in technology start-ups is another key aspect for the development of the sector. The creation of tax incentives for technology start-ups, together with the expansion of innovation investment funds, would enable the development of more advanced and competitive digital solutions. In addition, the regulation of remote work and digital freelancing could generate new employment opportunities in the technology sector, facilitating the integration of professionals into the global labour market.

The technology sector in Senegal is at a crucial moment for its consolidation as a driver of economic development and job creation. If effective policies are implemented to strengthen digital training, facilitate access to finance and reduce the digital divide, the country can consolidate itself as a technology leader in West Africa in the next decade. With a coordinated and sustained strategy, Senegal has the potential to become a benchmark for innovation and digitisation on the African continent, ensuring inclusive and sustainable growth in the digital sector.

7. Strategies and recommendations

The development of the digital and technological ecosystem in Senegal requires structured strategies to address the challenges in digital skills, employability and digitisation of enterprises. This section presents a comprehensive plan with concrete measures to strengthen the training of digital talent, improve the competitiveness of SMEs and foster technological innovation in the country.

7.1. Strategic plan for digital skills and employability

One of the main challenges of the technology sector in Senegal is the gap between academic training and the needs of the labour market. According to the Ministry of Employment, Vocational Training and Apprenticeship, less than **30% of technology graduates** are employed in the digital sector within six months of completing their studies, due to a lack of alignment between training and the demands of the private sector (Lettre de Politique Sectorielle de Développement du MEFPAI 2022-2026, Government of Senegal, 2022).

The Plan Senegal Digital 2025 establishes digitalisation and ICT training as strategic priorities for the country's development (Stratégie Numérique SN2025 - Plan d'Actions Actualisé, Government of Senegal, 2023). To ensure the success of these policies, a structured approach based on four key pillars is needed:

1. Creation of a National Digital Skills Framework (NDQF) Currently, digital skills training in Senegal is fragmented and there is no unified framework defining the skills needed to access technology jobs. The Agence Nationale de la Statistique et de la Démographie (ANSD) indicates that **only** 23% of the working population **possesses basic digital skills**, which limits their employability in the digital sector.
(Rapport sur l'Emploi et les Compétences au Sénégal, ANSD, 2023).

Proposed actions:

- Development of the **MNCD** in partnership with the private sector, universities and government agencies.
- Integration of the **NQF** into vocational training and higher education programmes.
- Regular evaluations of the **NQTF** to adjust it to labour market developments.

2. Strengthening technical and vocational education and training in ICTs

Access to technical training in technology remains limited, especially in rural areas. To improve the employability of youth and adults in the digital sector, the Fonds de Financement de la Formation Professionnelle et Technique (3FPT) has financed ICT training programmes, but these need to be expanded to cover more sectors and beneficiaries (La Formation Professionnelle et Technique et l'Emploi au Sénégal, LISER, 2023).

Proposed actions:

- Expansion of technical ICT training in universities and vocational training centres.
- Creation of programmes of **certification** at **skills** **digital** adapted to the needs of the sector.
- Specific training programmes for women and rural communities, reducing the digital divide.

3. Public-private partnerships for training and employability.

Technology companies in Senegal have expressed the need to strengthen collaboration with the education sector to improve the skills of graduates. According to the International Labour Organisation (ILO), **youth unemployment in Senegal is 15.7%**, one of the highest in West Africa (State of Skills in Senegal, ILO, 2023).

Proposed actions:

- Creation of **sectoral consortia** between companies, universities and public bodies.
- Implementation of dual **dual training programmes** that combine classroom learning with work experience in technology companies.
- Tax incentives for companies that invest in ICT training for their employees and young people.

4. Expanding access to funding for digital skills training

The high costs of technology training make it difficult to access quality programmes, especially for low-income youth. Initiatives such as DER/FJ have provided funding for women and youth, but more scale is needed to meet the growing demand for ICT training (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).

Proposed actions:

- Creation of **scholarship funds** for digital training.
- **Micro-credit** programmes for ICT training.
- Expansion of free training programmes in emerging technologies (AI, cybersecurity, blockchain).

As part of its long-term vision for the development of the digital sector, the Government of Senegal has announced the implementation of the New Deal Technologique strategy, an initiative that aims to accelerate the digital transformation and strengthen the technological skills of the population. This strategy will focus on creating jobs in the digital sector, expanding access to ICT training and consolidating Senegal as a technology hub in West Africa. (Stratégie Nationale de Cybersécurité du Sénégal, Government of Senegal, 2022).

One of the key axes of this strategy will be the **creation of a National Fund for Technological Innovation**, aimed at financing digital training programmes, supporting technological start-ups and developing digital infrastructure in rural areas. It also envisages the implementation of **accelerated training programmes in advanced digital skills**, such as artificial intelligence, data analysis and cybersecurity, in order to reduce the gap between the supply and demand of talent in the technology sector.

7.2. Policies to support digitisation of SMEs

Over the last few years, Senegal has developed a policy framework and specific programmes to support the digitisation of enterprises. Some of the most relevant initiatives include:

1. National Digital Economy Strategy 2025 (SN2025)

- **Start:** 2016 - **Ongoing**
- **Objective: to** turn Senegal into a regional centre of digital transformation through the modernisation of technological infrastructure and the digitisation of companies.
- **Responsible entity:** Ministry of Communication, Telecommunications and Digital Economy.
- **Main actions:**
  - Development of digital platforms for trade and financial services for SMEs.
  - Creation of digital economic zones with tax incentives for technology companies.
  - Expansion of high-speed Internet access in urban and rural areas.
- **Expected results:** incorporation of more than **100,000 SMEs in the digital ecosystem** by 2025 (Stratégie Numérique SN2025 - Plan d'Actions Actualisé, Government of Senegal, 2023).

2. Senegalese Startup Law (2020-01)

- **Start:** 2020 - **In force**
- **Objective: to** create a legal framework that facilitates the creation and growth of technology startups in Senegal.
- **Responsible entity:** Ministry of Economy, Finance and Planning.
- **Key measures:**
  - Reduced taxes and administrative fees for registered startups.
  - Access to mentoring and business acceleration programmes.
  - Creation of an investment fund for technology startups.
- **Impact:** since its implementation, more than **500 startups have been registered** under this legal framework, benefiting from tax incentives and access to funding (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024).

3. DER/FJ - General Delegation for Rapid Entrepreneurship for Women and Young People

- **Start:** 2018 - **Ongoing**
- **Objective: to** support the financial and digital inclusion of women and young entrepreneurs.

- **Responsible entity:** Ministry of Economy, Plan and Cooperation.
- **Budget: CFAF 30 billion** allocated annually.
- **Programmes highlighted:**
  - Funding for the adoption of digital solutions in youth- and women-led enterprises.
  - Training in digital commerce and online marketing tools.
  - Mentoring and networking programmes for technology entrepreneurs.
- **Impact:** more than **200,000 entrepreneurs** have received financial and technical support through this initiative (Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028, Government of Senegal, 2023).

4. Programme to Support the Competitiveness and Growth of SMEs (PCC-SMEs)

- **Start:** 2021 - **Ongoing**
- **Objective: to** improve the competitiveness of Senegalese SMEs through digitalisation and the adoption of new technologies.
- **Responsible entity:** Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME).
- **Key measures:**
  - Free digital diagnosis for SMEs.
  - Subsidies and credit lines with preferential rates for the adoption of business software.
  - Creation of a **digital advice centre for SMEs**.
- **Expected results:** Incorporate **at least 50,000 SMEs in digital ecosystems** by 2026 (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024).

Despite progress in digitisation policies, there are obstacles that hinder the full digital transformation of SMEs in Senegal:

1. **Limited access to finance:**
   - Only **30% of SMEs** have access to bank loans for technology investment.
   - Alternative financing mechanisms such as venture capital and public-private investment funds are required (State of Skills in Senegal, ILO, 2023).
2. **Lack of digital skills:**
   - Less than **40% of SME owners** have training in digital commerce and advanced technology tools.
   - ICT training for entrepreneurs remains insufficient and concentrated in Dakar and other large cities.

3. **Low adoption of e-commerce:**
    - Only **18% of SMEs** use e-commerce platforms to sell their products or services.
    - Distrust of digital payments and the lack of trusted local platforms are limiting factors.

To improve the digital transformation of SMEs in Senegal, the following strategies are proposed:

1. **Expanding access to digital finance:**
    - Creation of **public-private investment funds** for the adoption of technology in SMEs.
    - Expansion of microcredit lines with reduced rates for companies that digitalise their operations.
2. **Expansion of ICT training for SMEs:**
    - Development of training programmes **in digital marketing, e-commerce and data management**.
    - Creation of an **online training portal** with free courses for entrepreneurs.
3. **Incentives for the adoption of digital platforms:**
    - Tax reduction for SMEs that adopt digital solutions in their business processes.
    - Creation of a digital quality seal for companies certified in good technological practices.

SME digitisation policies in Senegal have advanced significantly in recent years, with initiatives aimed at improving business competitiveness through technology. However, to ensure the success of these efforts, it is crucial to strengthen access to finance, expand digital training for entrepreneurs and generate incentives for the adoption of technological solutions. With these measures, Senegal can consolidate its position as a benchmark for digital transformation in West Africa, ensuring that SMEs are key players in the new digital economy.

7.3. Recommendations for the improvement of the digital ecosystem

Senegal's digital ecosystem has experienced significant growth in recent years, driven by government initiatives such as the Senegal Digital 2025 Plan (SN2025) and funding programmes for tech startups and SMEs. However, there remain structural challenges that limit the full development of the digital sector, including the digital skills gap, the lack of infrastructure in certain regions and the limited digitisation of SMEs.

To strengthen the digital ecosystem and ensure inclusive and sustainable growth, a series of strategic recommendations are proposed to address the main challenges identified. These recommendations are based on international best practices and the reality of the Senegalese market, with a focus on digital skills, strengthening the business sector and promoting technological innovation.

1. Creation of a National Digital Skills Framework (NDSF)

One of the main obstacles to the growth of the digital sector in Senegal is the lack of a standardised digital skills framework. According to the **Agence Nationale de la Statistique et de la Démographie (ANSD)**, only **23% of the workforce** possesses basic digital skills, which limits their employability in emerging technology sectors (Rapport sur l'Emploi et les Compétences au Sénégal, ANSD, 2023).

A **National Digital Skills Framework (NDSF)** would allow defining and structuring essential digital skills at different levels, from basic to advanced skills, ensuring alignment with labour market needs and economic development policies.

Proposed actions

1. **Development of the NDCF** in collaboration with the private sector, universities and government agencies to define digital training standards.
2. **Integration of the NQF** into formal education and vocational training programmes, ensuring its implementation at all levels of the education system.
3. **Regular evaluation and updating of the NQTF**, adapting it to the evolution of the digital market and the global technological transformation.

2. Strengthening public-private partnerships for training and employability.

Youth unemployment in Senegal remains a critical challenge, with a rate of **15.7%**, one of the highest in West Africa, according to the **International Labour Organization (ILO)** (State of Skills in Senegal, ILO, 2023). Despite government efforts, many educational institutions are not adequately aligned with the demands of the private sector, leading to a gap between training and employability.

Public-private partnerships (PPPs) make it possible to connect the education system with the real needs of the labour market, ensuring that graduates have the skills demanded in technological and digital sectors.

Proposed actions

1. **Creation of sectoral consortia** bringing together companies, training institutions and public bodies to design curricula aligned with the needs of the sector.
2. **Implementation of dual training programmes**, combining theoretical learning with practical experience in technology companies.
3. **Fiscal and financial incentives for companies** that invest in training and youth employability, encouraging their active participation in the development of digital talent.

3. Boosting the digitisation of SMEs as a driver of economic transformation

SMEs represent approximately **G0% of the business fabric in Senegal**, but only a fraction of them have adopted digital tools to improve their competitiveness (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024). Digitalisation not only improves the operational efficiency of SMEs, but also enables them to access new markets, optimise their value chains and generate jobs in high-growth sectors.

Proposed actions

1. **Establishment of SME digitalisation support centres**, offering technical advice, training and consultancy services to facilitate the adoption of digital tools.
2. **Creation of subsidy and soft credit programmes** for the acquisition of business software, e-commerce and fintech solutions adapted to local needs.
3. **Promotion of e-commerce and digital platforms**, ensuring the integration of SMEs into the digital ecosystem and facilitating their access to local and international consumers.

4. Promoting digital inclusion and reducing the gender gap in the technology sector.

There is a marked gender gap in access to and use of digital tools in Senegal. Only **36% of social network users in the country are women**, reflecting an inequality in digital access (Rapport sur la Digitalisation et l'Innovation au Sénégal, Ministry of Communication and Digital Economy, 2024). This gap limits women's participation in the digital ecosystem, reducing their educational and employment opportunities.

Proposed actions

1. **Design specific programmes to train women in advanced digital skills**, including artificial intelligence, software development and cybersecurity.

2. **Implementation of affordable connectivity initiatives in rural and marginalised communities**, ensuring that more women can access digital tools.
3. **Awareness-raising and mentoring campaigns** to foster interest in STEM careers among girls and young women, raising the profile of women in the technology sector.

5. Development of an ecosystem of innovation and technological entrepreneurship.

For Senegal to consolidate its position as a **technology hub in West Africa**, it is necessary to create a favourable environment for innovation and entrepreneurship. Currently, only **5% of technology start-ups in Senegal make it beyond the first three years of activity**, due to a lack of financial support, adequate infrastructure and collaboration networks (Rapport sur l'Économie Sénégalaise, Ministry of Economy, Finance and Planning, 2023).

Proposed actions

1. **Establishment of incubators and accelerators for technology start-ups**, offering access to mentoring, funding and international collaboration networks.
2. **Creation of investment funds to support digital entrepreneurs**, ensuring that startups have the necessary capital to scale their operations.
3. **Promotion of networking events, hackathons and innovation competitions**, connecting talent, investors and technology companies to foster collaboration and the generation of digital solutions.

The recommendations presented seek to strengthen Senegal's digital ecosystem through a combination of strategies focused on skills, employability and business digitisation. The creation of a **National Digital Skills Framework**, the strengthening of **public-private partnerships**, the promotion of **digitisation of SMEs**, the **reduction of the gender gap in the digital sector** and the development of an **innovation ecosystem** are key pillars to ensure sustainable and inclusive growth of the technology sector in the country.

With the implementation of these measures, Senegal will be able to consolidate itself as a benchmark in the African digital economy, generating quality jobs, strengthening its private sector and promoting technological innovation at national and international level.

6. Creation of a technology cluster

It is proposed to create a technology cluster that brings together the private sector, the public sector and educational and vocational training institutions. This cluster would act as an authoritative voice in the design and implementation of digital laws, projects and policies, promoting effective coordination and dynamisation of the digital ecosystem. It would serve as a platform for strategic and facilitate the joint identification and resolution of technological, educational and business challenges, consolidating a favourable environment for innovation, investment and sustainable growth of the technology sector.

Proposed actions for the technology cluster:

1. Creation of a cluster management body with balanced representation from the private sector, educational institutions and public bodies to ensure inclusive and effective governance.
2. Regular organisation of forums and roundtables to discuss technological trends, regulatory challenges and innovation opportunities, ensuring that public policies reflect the needs of the digital ecosystem.
3. Implementation of joint initiatives to promote digital skills training and technological entrepreneurship, ensuring the alignment of educational programmes with real market needs.
4. Active promotion of the cluster at regional and international level to attract investment, talent and technical cooperation, positioning Senegal as a leading technology hub in West Africa.

These actions will allow the technology cluster to consolidate itself as a key catalyst for digital development, generating synergies between all the actors involved and strengthening Senegal's position as a benchmark in the African digital economy.

7.4. Principles of Collaboration Public-Private Partnership between Senegal and the Canary Islands

The implementation of these recommendations presents a strategic opportunity to foster knowledge transfer and collaboration between Senegal and public and private actors in the Canary Islands. Given its geographical proximity and historical and economic ties, the Canary Islands can play a key role in providing expertise, technological resources and best practice models in the field of digital transformation and innovation. Cooperation between the two territories would not only facilitate the exchange of know-how and expertise, but also strengthen the institutional and entrepreneurial capacities necessary for Senegal's sustainable development.

The collaboration framework should be based on principles of reciprocity, sustainability and social impact. Reciprocity ensures that both parties obtain tangible benefits, allowing Canary Islands institutions to expand their influence and experiences in the African context, while Senegal can access management models and technologies adapted to its needs. Sustainability implies that joint projects are not isolated initiatives, but are integrated into long-term development strategies, ensuring their continuity and evolution over time. Finally, social impact must be a cross-cutting issue, ensuring that the benefits of collaboration reach broad sectors of the population, especially young people and women, who represent a fundamental part of human capital in Senegal.

Within this strategic approach, the transfer of knowledge and skills emerges as an essential pillar. Canarian universities, such as the University of La Laguna (ULL) and the University of Las Palmas de Gran Canaria (ULPGC), have an established track record in international cooperation programmes and could play a crucial role in the design and implementation of technical and academic training programmes. These programmes should not only focus on the development of digital skills, but also on innovation management, technological entrepreneurship and the governance of digital ecosystems. In addition, academic cooperation can be extended through student and faculty exchanges, co-creation of curricula and joint research in areas of common interest.

The development of joint innovation projects is another key component of this collaboration. The Canary Islands has proven to be a laboratory for innovative solutions in strategic sectors such as renewable energy, water management, sustainable tourism and the digitalisation of public services. These experiences can be adapted and transferred to Senegal, contributing to the development of resilient and sustainable technological infrastructures. The creation of shared innovation spaces, such as technology hubs or think tanks, would facilitate the continuous exchange of knowledge and the development of solutions adapted to local challenges.

Strengthening the entrepreneurial ecosystem is also a priority objective. The business fabric of the Canary Islands, characterised by a network of dynamic SMEs and technological start-ups, can serve as an inspiration for the development of similar initiatives in Senegal. The creation of business networks between the two territories, mentoring programmes and access to joint financing are some of the actions that could be implemented to support the growth of new companies in the digital sector. In addition, the involvement of financial institutions and investment funds from the Canary Islands could facilitate access to the capital needed to boost innovative technology projects in Senegal.

In order to effectively articulate these efforts, it is essential to establish solid cooperation mechanisms. Bilateral agreements between regional governments, universities and business organisations should clearly define common objectives, the roles of each party and monitoring and evaluation mechanisms. The implementation of mobility programmes for students, researchers and professionals will foster mutual learning and international networking, essential for the sustainability of the initiatives. Likewise, the creation of joint investment funds aimed at technology projects and entrepreneurship initiatives will facilitate the financing of projects with a high potential economic and social impact.

These synergies will not only benefit the development of the digital ecosystem in Senegal, but will also strengthen economic and cultural ties between the two regions. The cooperation will create opportunities for joint growth, boost the competitiveness of both territories in the international context and contribute to the development of an inclusive and sustainable digital economy in the Mid-Atlantic.

8. Interviews with key Senegalese stakeholders

Between 24 and 28 February 2025, a series of meetings were held in Dakar with various key players in the field of digitisation, vocational training and employability in the technology sector. These meetings were part of a comprehensive effort to gain an in-depth understanding of the current state of digitalisation in the country, identify existing challenges and explore opportunities for collaboration with local entities.

With a growing economy and a clear commitment to digital modernisation, Senegal faces a number of challenges that need to be addressed in a coordinated manner between the public and private sector. The growing importance of digitalisation in all economic and educational fields has made these meetings extremely relevant to define future strategies.

Full details of each of the meetings, including the topics discussed and the conclusions drawn, are presented below:

1. Centre for Vocational and Technical Training Senegal-Japan (CFPT-SJ)

Web: https://cfptsj.sn/

Participants:

- Amadou MASSAR SARR, Acting Chair of the Board of Directors of the CFPT-SJ
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with CFPT-SJ focused on exploring various aspects related to vocational training, its alignment with the labour market and the impact of digitalisation on teaching methodologies. During the meeting, Amadou MASSAR SARR provided a detailed explanation on the organisational structure of the CFPT-SJ, highlighting the significant financial support received from Japan to ensure the optimal functioning of the centre.

A central theme of the discussion was the pressing need to adapt educational programmes to the changing demands of the technology sector. The possibility of implementing online training platforms as part of the centre's modernisation strategy was discussed. In addition, the challenges faced by the institution in terms of integrating pedagogical innovation and digital methodologies in the teaching-learning process were discussed in depth.

CFPT-SJ has several branches specialising in key industrial areas, including electromechanics, IT and network systems, machinery maintenance and industrial refrigeration, demonstrating its commitment to technical training in strategic sectors for the Senegalese economy.

Key facts:

- The centre has experienced a steady growth in its student body over the past few years:
    - Period 2020-2021: 1,048 students assisted by 50 trainers.
    - Period 2021-2022: 1,191 students supported by 50 trainers.
    - Period 2022-2023: 1,315 students served by 43 trainers.
- School success rates show positive results:
    - BTI 2020-2021: 73.88% success rate.
    - BTS 2021-2022: 95.47% success rate.
    - BTS 2022-2023: 94.40% success rate.
- During the 2022-2023 academic year, the centre organised visits to 55 companies as part of its strategy of linking with the productive sector.
- The Board of Directors of the CFPT-SJ is composed of 17 members, including representatives from various government entities and the private sector, such as the Presidency of the Republic, the Ministry of Finance, the Ministry of Employment, the Ministry of National Education, the Chamber of Commerce, employers' organisations and trade unions, reflecting a participatory governance approach.

Conclusions:

The meeting with the CFPT-SJ made it possible to identify the importance of this centre as one of the main actors in technical and vocational training in Senegal. Its multi-sectoral governance structure, which includes representatives from both the public and private sectors, facilitates a holistic view of training needs.

Data show a positive trend in terms of student growth and high success rates, indicating a good acceptance and effectiveness of training programmes. However, the need to modernise pedagogical methodologies to incorporate digital tools and adapt them to contemporary labour market demands is identified as a challenge.

International collaboration, exemplified by Japanese support, emerges as a key factor for the sustainable development of this type of educational institutions in Senegal.

2. Conseil National du Patronat du Sénégal (CNP) Web:

https://www.cnp.sn/

Participants:

- Alioune Ba, Executive Director of the CNP in Senegal
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with the Senegalese NPC focused on exploring the state of digitalisation of the confederation's member companies, the obstacles faced by SMEs in this process and the initiatives being undertaken to promote digital transformation.

Alioune Ba, Executive Director of the CNP, explained that the degree of digitalisation of formal companies in Senegal is high compared to other countries in the sub-region, but there are still significant gaps between large companies and SMEs. The most advanced sectors in terms of digitisation include financial services, telecommunications and large industries, while agriculture and retail face greater challenges.

The NPC has offered digitalisation training to its members in the past, but rapid technological progress has forced companies to adapt themselves. Currently, the confederation is looking to boost training in new technologies such as artificial intelligence, blockchain and cybersecurity.

Key data:

- The main obstacle to the digitisation of SMEs is access to finance.
- Lack of knowledge about the impact of digitalisation and resistance to change are also major challenges.
- E-commerce has experienced considerable growth, driven by platforms such as Jumia.
- Fintech services have enabled many businesses to accept digital payments, even in informal sectors.
- The NPC has promoted initiatives such as the 'Tech for Work' programme, developed in collaboration with the ILO and Microsoft.
- Cyber security is a growing concern, especially for SMEs that have not yet adopted adequate protection measures.

Conclusions:

The meeting with the CNP made it possible to identify progress and challenges in the digitisation of businesses in Senegal. The importance of improving access to finance for SMEs, strengthening training in new technologies and promoting cyber security was highlighted. The CNP is seen as a key player in the country's digital transformation, with an important role in training, the promotion of good practices and collaboration with the public sector.

3. Directorate General for Foreign Trade (DCE)

Web: https://industriecommerce.gouv.sn/direction-du-commerce-exterieur/

Participants:

- Ahmed Tidiane Dia, Technical Counsellor and Acting Director
- Farah Diop, Head of E-Commerce
- Consultant AFRICANTECH

Meeting notes:

The meeting with the Directorate General of Foreign Trade focused on analysing the digitalisation of Senegalese SMEs in foreign trade and assessing the policies for the promotion of e-commerce in the country.

Ahmed Tidiane Dia explained that the Directorate General of Foreign Trade is the entity responsible for designing and implementing the national foreign trade policy in Senegal. Farah Diop detailed that the Directorate has been working on the creation of digital platforms to facilitate the digitalisation of local traders and producers.

Key facts:

- From 2022 to 2023, a strategy was implemented that included training more than 1,000 economic operators on digitisation and e-commerce, development of a platform for SMEs to sell online and regulations on electronic transactions.
- Several challenges in the implementation of digitalisation in foreign trade were identified: access to finance, bureaucracy, limited digital infrastructure and poorly digitised administrative processes.
- The need to improve interoperability between state platforms and the streamlining of parallel initiatives was discussed.
- How artificial intelligence (AI) can optimise export and foreign trade processes was presented.
- Cybersecurity was addressed, considering the increasing risks of cyber attacks.

Conclusions:

The meeting identified key opportunities and challenges in the digitisation of foreign trade in Senegal. The importance of improving inter-agency collaboration and exploring new technologies such as AI was highlighted. It was agreed to explore actions such as the integration of AI tools, the reinforcement of collaboration between the Directorate of Foreign Trade and ADEPME, the coordination with the Dakar Chamber of Commerce and the analysis of financial support policies.

4. Directorate General of SMEs of Senegal (DPME)

Web: https://industriecommerce.gouv.sn/direction-des-petites-et-moyennes-entreprises/

Participants:

- Farr Carvalho, Director General of SMEs of Senegal
- Salimata Badji, Head of the Resource Centre of the Directorate General for SMEs
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with the General Directorate of SMEs of Senegal focused on presenting the AFRICANTECH programme, funded by the European MAC programme, and discussing digitisation strategies for SMEs in Senegal.

The difference between the Directorate General for SMEs, which is responsible for the elaboration of policies and development strategies, and the ADPME, which is the implementing arm, was clarified. The National Digital Development Strategy was mentioned, with strategic axes such as access to finance, facilitation of access to markets, formalisation of SMEs and creation of tax incentives.

Key data:

- 97% of the business fabric is informal, so measures have been designed to encourage formalisation.
- The creation of a Digitalisation Cluster involving the public, private and academic sectors is proposed.
- Programmes such as PACAO and fiscal measures to incentivise the digitalisation of companies are mentioned.
- Initiatives such as Trade Point Senegal, Ikom Kom and Boutique 221 are presented to improve the digital presence of companies.
- There are specific funds for startups, regulated by the Startups Law.
- The Delegation for Rapid Entrepreneurship, targeting young people and women, is mentioned.

Conclusions:

The meeting provided insight into digitisation strategies for SMEs in Senegal and initiatives to foster formalisation and digital entrepreneurship. Possibilities for collaboration to share good practices and promote funding opportunities were explored. It was agreed to request a meeting with the Directorate of Foreign Trade, to send a detailed report and to define mechanisms for structuring the

detailed report and define mechanisms to structure a dialogue table.

5. Digital Sénégal

Web: https://digitalsenegal.org/

Participants:

- Mohsen Chirara, President of Digital Sénégal
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with Digital Sénégal focused on discussing the level of digitisation of SMEs in Senegal, the diagnosis of needs in employability and digital training, and the development of the Label Smart C Safe Sénégal.

Mohsen Chirara explained that Digital Sénégal is a cooperative society driven by employers' organisations such as OPTIC, start-ups and support structures such as Jecolab. The initiative seeks to bring together companies to tackle major state and private sector projects in order to strengthen the competitiveness of the digital ecosystem in Senegal.

Key facts:

- The need for greater access to finance for the digitisation of businesses was discussed, as well as the importance of better alignment between training and the needs of the digital sector.
- The Label Smart C Safe Sénégal is a certification designed to guarantee the quality of the country's technology companies.
- This initiative stems from the work of the ITBPO Sénégal Committee and aims to facilitate the access of Senegalese companies to national and international markets.

Conclusions:

The meeting identified opportunities for collaboration between the Senegalese digital ecosystem and technology companies in the Canary Islands. The importance of strengthening training in artificial intelligence and cybersecurity was highlighted, in addition to fostering international cooperation in digital projects.

6. Organisation des Professionnels des TIC du Sénégal (OPTIC) Web:

http://www.optic.sn/

Participants:

- Secretary General of OPTIC Sénégal
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with OPTIC Sénégal aimed to learn in detail about the role of the organisation in the development of the digital sector in Senegal, as well as the main challenges faced by companies in the sector.

OPTIC Sénégal is the umbrella organisation for ICT companies and professionals in Senegal. Its main mission is to represent and defend the interests of digital businesses, promoting a favourable environment for their development and collaborating with the public sector in the formulation of digital policies and strategies.

Key facts:

- OPTIC has 134 members, including startups, SMEs and large companies in the sector.
- It is actively involved in the formulation of public policies related to digitalisation.
- Key challenges for the digital sector in Senegal include market access, access to finance, talent drain and professional training.
- OPTIC implements various strategies to strengthen the sector, including international promotion, sectoral events, promotion of cybersecurity, development of artificial intelligence and creation of the Label Smart C Safe Sénégal.

Conclusions:

OPTIC showed interest in strengthening international cooperation, especially with Spanish entities. It was proposed to explore opportunities with Spanish cooperation and to share the final reports of the AFRICANTECH project to identify areas of synergy. The need to improve coordination between the private and public sector to ensure that digital strategies are inclusive and effective was highlighted.

7. Agence des Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME) Web:

https://adepme.sn/

Participants:

- Jean Marie MBAYE DIOUF, Secretary General of ADEPME
- Mariane Ndiaye, Technical Director of ADEPME
- Arona Ndiaye, ICT manager at the Dakar Chamber of Commerce
- Navin Khemlani, IBC Spain

Notes of the meeting:

The meeting with ADEPME aimed to discuss the level of digitisation of SMEs in Senegal, the role of ADEPME in digital transformation and opportunities for improvement in training, financing and integration of the private sector in government initiatives.

ADEPME offers training and funding programmes, with grants of up to 75% for the adoption of digital technologies. Programmes such as Ether and Eter have been developed, managing to support more than 5000 SMEs in digitalisation.

Key data:

- The level of technology adoption is measured before and after each programme, with a current adoption rate of 15%.
- Challenges for SMEs' digital transformation include lack of digital culture, low adoption of advanced technologies, financial constraints, disconnection between different actors and lack of trust in e-commerce.
- ADEPME was not involved in the structuring of the Technology New Deal, which points to a lack of consultation with the private sector.
- An investment of USD 20 million is estimated to boost digitalisation and the ICT sector.
- Further integration of SMEs in the strategy is required to ensure its real impact.

Conclusions:

The meeting allowed to identify progress and challenges in the digitisation of SMEs in Senegal. The need to strengthen coordination with the private sector and to integrate SMEs more actively in the New Technology Deal was emphasised. It was agreed to remain in contact to share key information and assess new funding and training opportunities.

8. Dakar Chamber of Commerce

Web: https://cciad.sn/

Participants:

- Mbaye Chimére Ndiaye, secretary general of the Dakar Chamber of Commerce
- Awa Gueye, Project Manager at the Dakar Chamber of Commerce
- Arona Ndiaye, ICT Manager at the Dakar Chamber of Commerce
- Navin Khemlani, IBC Spain

Notes from the meeting:

The meeting with the Dakar Chamber of Commerce aimed to gather information on the digitisation and modernisation of SMEs in Senegal, in the framework of the AFRICANTECH report. Issues related to capacity building, public-private partnerships and opportunities to improve the adoption of digital technologies were discussed.

The Chamber of Commerce has 114 members in its General Assembly and membership is voluntary. Its funding sources include business formalisation services, training programmes and space rental.

Key facts:

- Digitalisation in Senegal is at a regular level, with several companies implementing digital solutions, but significant gaps still exist, especially in key sectors such as agriculture, industry and agribusiness.
- Digitisation in the financial and telecommunications sectors is more advanced compared to other sectors.

- The Chamber of Commerce is in the process of digitising its own services and has initiated actions to promote digitisation among businesses.
- It participates in various digital e-commerce platforms.
- They have not participated in the New Technology Deal process of the Government of Senegal because they were not invited.

Conclusions:

The meeting made it possible to identify progress and challenges in the digitisation of enterprises in Senegal. While initiatives are underway, there are critical areas that require intervention, especially in industry and agribusiness. Opportunities for collaboration with international entities have been raised and it has been agreed to follow up through surveys and direct coordination with the Chamber of Commerce.

G. Confédération Nationale des Employeurs du Senegal (CNES) Web:

https://cnes.sn/

Participants:

- Yousoupha Diop, Executive Director, CNES Senegal
- Arona Ndiaye, ICT Manager at the Dakar Chamber of Commerce
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with CNES Senegal aimed to discuss the state of digitisation of SMEs in Senegal, CNES initiatives to support digital transformation and possible synergies with the Dakar Chamber of Commerce and AFRICANTECH programme partners.

CNES has approximately 800 members, of which the majority are SMEs. It represents a broad spectrum of the Senegalese business sector and its main role is to serve as the private sector's interlocutor with the government.

Key facts:

- Digitalisation in Senegal remains uneven across economic sectors.

- The sectors most advanced in digitisation are services, finance and telecommunications, while those lagging behind include agriculture, industry and agribusiness.
- There is awareness of the importance of digitisation, but the adoption of technologies varies according to the financial capacity and size of the company.
- CNES does not have its own training programmes in digitisation, but is interested in developing this capacity in the future.
- They have not been called to participate in the Government of Senegal's Technology New Deal.

Conclusions:

The meeting identified the main challenges and opportunities in the digitisation of enterprises in Senegal. The need for greater coordination between CNES, the Chamber of Commerce and the public sector to develop effective digital transformation strategies was highlighted. It was agreed to follow up to strengthen existing initiatives and seek solutions to the structural problems identified.

10. CTIC (Centre des Technologies de l'Information et de la Communication)

Web: https://www.cticdakar.com/

Participants:

- Antoine Ngong, President, CTIC
- Navin Khemlani, IBC Spain

Meeting notes:

The meeting with CTIC aimed to understand the role of the institution in the Senegalese digital ecosystem, as well as its role in promoting technology startups in key sectors such as fintech, e-commerce, agritech, logistics and digital health. Antoine Ngong detailed the three main stages of support offered by CTIC: initial formulation, incubation and acceleration, with special emphasis on the fintech sector, identified as a priority due to its high potential.

CTIC's current financial situation, as expressed by Ngong, has been affected by the reduction of state support, which has led the centre to rely increasingly on its own income-generating activities and international collaborations (European Union, GIZ, OIF, AFD, among others). Despite this, there are still financial constraints that condition the centre's ability to implement training programmes.

centre's ability to implement broader training programmes and offer more comprehensive services to startups.

Key facts:

- CTIC prioritises the alignment of its training programmes with the real needs of the technology labour market.
- The main difficulties identified by CTIC include lack of funding, limited access to markets, and poor inter-institutional coordination.
- CTIC makes active efforts in training, coaching and support in finding funding and commercial opportunities for startups.
- There is a considerable lack of coordination between the different actors in the digital ecosystem, including the public, private and education sectors.
- Government programmes such as the "Tech New Deal" have been criticised for not having sufficiently involved private and technology sector actors in their development.
- There are insufficient statistics and studies on the survival rate and impact of programmes targeting startups in Senegal, an aspect identified as a critical weakness.

Conclusions:

The meeting with CTIC provides additional key information that confirms and deepens previously identified findings. In particular, it highlights the importance of improving cross-sectoral coordination, the urgent need for more dedicated financial resources for startups and training programmes aligned with the demands of the digital labour market, and the importance of having reliable statistics on the impact and sustainability of technology initiatives. It also underlines the importance of promoting initiatives such as the Digital Sénégal cooperative to boost access to markets and strengthen the competitiveness of the Senegalese digital ecosystem. The information obtained in this meeting reinforces the findings already identified, especially emphasising the need for coordination, funding and specific training as critical elements for the effective development of the technological ecosystem in Senegal.

The ten interviews conducted provide a rich and nuanced picture of the state of digitisation of companies and institutions in Senegal, their capacity building needs and the challenges and opportunities facing the country's business and technology ecosystem. These interactions have enabled the collection of diverse perspectives from government actors, private associations and training institutions, revealing both progress made and persistent barriers.

Detailed conclusions are presented below, organised into key themes, with a comprehensive analysis reflecting the learning gained:

1. **Disparity in digital adoption:** The findings show heterogeneous digital adoption in Senegal. Sectors such as finance, telecommunications and services lead thanks to the presence of large companies and the implementation of digital payments and platforms such as Jumia and Boutique 221. However, agriculture, industry and agribusiness are notably lagging behind, constrained by a lack of access to technology, finance and training. This disparity, noted by the CNP, CNES and the Chamber of Commerce, suggests that digitisation strategies should be sector-specific and prioritise SMEs, which, although in the majority, lack the means to move forward. Informality, which affects 97% of enterprises according to the SME Directorate General, exacerbates this gap by excluding many from formal support.

2. **Recurrent structural barriers:** the most frequently mentioned challenges include limited access to finance, identified by virtually all stakeholders as the main barrier to technological adoption; insufficient digital infrastructure, especially in rural areas (Directorate of Foreign Trade); and lack of training aligned with market demands (OPTIC, CFPT-SJ). Bureaucracy and lack of coordination between the public and private sectors, highlighted by CNES and the Chamber of Commerce, generate duplication and dilute the impact of initiatives. In addition, the low uptake of emerging technologies such as AI, blockchain and cybersecurity outside the ICT sector (ADEPME, CNP) reflects a knowledge and resource gap that requires urgent attention.

3. **Institutional fragmentation:** government entities (SME Directorate General, Foreign Trade, ADEPME) and private associations (CNP, CNES, OPTIC, Digital Sénégal) have defined roles, but the lack of inter-institutional coordination limits their effectiveness. The exclusion of key actors such as CNES, the Chamber of Commerce and ADEPME from the New Technology Deal, mentioned in several meetings, is evidence of government planning that does not sufficiently integrate the private sector. Initiatives such as the Digitalisation Cluster (General Directorate for SMEs) and the Label Smart C Safe (Digital Sénégal, OPTIC) could be innovative solutions to align efforts, but their success will depend on concerted implementation.

4. **Potential of emerging technologies:** Artificial intelligence and cybersecurity emerged as areas of great potential. The Directorate of Foreign Trade saw AI as a tool to optimise exports (chatbots, machine translation), while OPTIC and Digital Sénégal emphasised its role in data management and quality certification. However, its adoption requires investment in training and financing, areas where international collaboration with the Canary Islands could be decisive. Cybersecurity, underlined by the CNP and the Directorate of Foreign Trade, is critical in the face of increasing risks in e-commerce.

5. **Training and talent:** current training does not meet the needs of the digital market. CFPT-SJ reports high success rates in higher programmes, but its lack of digital platforms and reduction of trainers limit its reach. OPTIC highlighted the talent drain to foreign companies, while NPC and ADEPME pointed to the need for training in AI, blockchain and cybersecurity. This education gap requires urgent reform to prepare the workforce and retain specialists in Senegal.

6. **International collaboration:** all actors showed interest in collaborating with the Canary Islands, seeing in this alliance an opportunity to import good practices, finance projects and develop joint solutions. The cases of Tunisia and Singapore, presented by Digital Sénégal, offer replicable models that could be adapted with external support, strengthening initiatives such as the Label Smart C Safe or the ADEPME programmes.

7. **E-commerce and formalisation:** E-commerce is growing with platforms such as Jumia and 221A, but faces challenges such as consumer distrust and lack of digital payment culture (CNES, ADEPME). Formalisation, incentivised by fiscal and financial measures (Directorate General for SMEs), is essential to integrate more SMEs into this ecosystem and maximise its economic impact.

In conclusion, Senegal is at a turning point towards digitisation, with remarkable progress but fragmented by structural and coordination barriers. The AFRICANTECH project has the potential to act as a catalyst, promoting public-private collaboration, the adoption of emerging technologies and the modernisation of training. Next steps should include the implementation of agreed actions (questionnaires, dialogue tables, AI integration) and a comprehensive strategy to leverage international support,

close the identified gaps and position Senegal as a digital leader in West Africa.

Overall, the meetings provided a comprehensive picture of the state of digitalisation in Senegal, identifying the main challenges and opportunities for the development of an inclusive and sustainable digital ecosystem.

8.1. Surveys conducted

In order to gain an accurate and up-to-date understanding of digital skills and employability needs in the technology sector in Senegal, a questionnaire was designed and distributed to key stakeholders, including educational institutions, sectoral organisations and entities related to technology employability. The questionnaire, composed of questions aimed at identifying gaps and opportunities in digital and technology training, was completed by representatives of educational institutions, startup incubators, public entities and business associations between 28 January and 8 March 2025.

Details of the questionnaire are included in the annexes, while the results obtained are analysed below:

Question 2: Type of organisation

The majority of responses clearly come from the private sector (73%), showing a strong interest of companies in digital issues and technological training. Professional organisations represent around 15%, showing moderate interest, while NGOs and public entities have a significantly lower representation. This indicates a growing awareness and involvement of the private sector, while limited participation of the public sector and non-profit entities is observed, which may affect the ability to generate broad synergies in future projects.

Question 3: Size of organisation (number of employees)

Responses from small enterprises with less than 10 employees predominate, reflecting the Senegalese economic structure characterised by small organisations. Medium and large enterprises are less represented. This composition highlights a reality where the majority of the business fabric is small, which implies particular challenges for technological adoption related to limited resources, financing difficulties and low technological absorption capacity.

Question 4: Main sector of activity

The majority of responses came from traditional sectors such as commerce, manufacturing and services, with a smaller representation from the technology sector. This reflects that the concern for digitisation has significantly permeated non-traditional technology sectors, demonstrating its cross-cutting relevance and highlighting that technology needs broadly affect diverse economic sectors in the country.

Question 5: Digital technologies currently used by the organisation

Most organisations use basic technologies such as office tools, e-commerce and digital marketing. However, the use of advanced technologies such as artificial intelligence, big data or cloud computing is low, which shows the urgent need to raise awareness and encourage the adoption of more sophisticated technological tools to improve competitiveness.

Question 6: Current level of technological adoption

Most participants rated the level of technology adoption in their organisations as low or medium, using mainly basic technologies. This clearly shows that there is ample room for growth in terms of advanced technology uptake, which should be considered as a priority for future support initiatives.

Question 7: Main barriers to digitisation

The most frequently identified barriers are the lack of adequate technological infrastructure, the high costs associated with technological adoption, and the shortage of skilled personnel. These barriers represent major structural challenges, especially for small businesses and those located outside Dakar, limiting the country's ability to achieve effective digitisation.

Question 8: Priority digital tools in the next two years

Organisations identify tools related to e-commerce, automation and artificial intelligence as priorities. This suggests a clear awareness of the strategic importance of these technologies to improve efficiency and competitiveness in the near future.

Question G: Employees' current level of digital skills

The predominant level is basic to intermediate, revealing a considerable deficit in advanced skills needed to cope with the digital transformation. This implies an urgent need to invest in specialised training to adequately prepare workers for increasing technological sophistication.

Question 10 and 11: Digital skills training (last 12 months) and type of training offered

Many organisations have not provided recent training, indicating a clear skills gap. Those that have done so focused mainly on digital marketing, cybersecurity and basic automation. This suggests that training provision is limited and not necessarily aligned with advanced skills that will be crucial in the near future.

Question 12: Priority digital skills in the next two years

The skills identified as the highest priority include automation, artificial intelligence, e-commerce and advanced data management. The identification of these areas reflects a clear business perception of impending technological challenges and the urgent need for specialised skills and training in these areas.

Question 13: Preferred training modality

Although the preference for face-to-face training predominates, there is a growing interest in blended or fully digital modes. This trend indicates an opportunity to offer flexible programmes that can reach a larger number of employees and companies, especially in remote areas.

Question 14: Difficulties in training employees in digital competences

The most frequently mentioned difficulties are the high cost of training, the lack of adequate infrastructure and the shortage of qualified training providers. These elements point to significant obstacles that need to be addressed in order to substantially improve the level of technological skills of Senegalese human capital.

Question 15: Technological skills most in demand today

The majority identify technology project management, programming and software development, advanced data analysis and cybersecurity as critical. These skills clearly reflect current trends in the technology market and the urgent need to adapt the educational offer to these specific areas.

Question 16: Perception of the adequacy of current technological training in Senegal

The majority perception is negative; current training is insufficient for the technological demands of the market. This implies an urgent call to reform and reinforce the current educational programmes, aligning them better with the real needs of the technological and productive sector.

Question 17: Existence of significant skills gaps

There is a general consensus that there are significant gaps in advanced technological skills such as software development, artificial intelligence and data management, which represent a clear obstacle to the country's business and economic growth.

Question 18: Most difficult technology profiles to recruit for

Organisations mainly report difficulties in recruiting highly specialised profiles in programming, advanced software development, artificial intelligence and cybersecurity experts. The difficulty in recruiting these profiles indicates a clear need to improve the specialised training available in the country.

Question 1G: Actions needed to improve technological employability

Four essential actions stand out: improving the supply of specific training in technology, strengthening collaboration between educational institutions and companies, increasing government incentives for technological training, and facilitating access to appropriate technological resources. These measures are considered essential to reduce the current gap between labour supply and demand.

Question 20: Support received for technological skills

The majority indicate that they have not received any specific support, which reflects a weakness in the articulation of effective public policies and government programmes for the private sector.

Question 21: Type of support received (where applicable)

Among the few that have received support, mainly financial grants or specific training programmes stand out. This indicates that there is potential to expand and strengthen these lines of support, making them more accessible and effective.

Question 22: Types of support programmes most needed

Combined programmes of specific technical training, agile financing, technical assistance and improvement in technological infrastructures are highlighted. The demand clearly points to a comprehensive and well-structured intervention to substantially improve technological capacity and employability.

Question 23: Recommendations for improving digital literacy

The most common recommendations include the reduction of training costs, training in local languages, direct involvement of companies in training processes and substantial improvement of technological equipment in educational institutions and companies.

Question 24: Measures to improve technological employability

Finally, the measures suggested point towards strong state support for specialised training, economic incentives for companies that adopt advanced technologies, continuous support in digitisation processes and a joint public-private effort to link education with the real demands of the technological labour market.

Below is a summary of the **10 main findings**, obtained through the analysis of the questionnaire applied. These findings provide a clear and illustrative picture of the current state of digitalisation, technology education and employability in Senegal:

1. Leadership and active involvement of the private sector in digital skills: private companies have expressed a clear interest and commitment in strengthening their digital skills. They represent more than 70% of the participants, thus highlighting the crucial role played by the private sector in identifying training needs and promoting concrete actions to improve technological employability in Senegal.

2. Specific challenges at the training digital for SMEs: most of the responses came from small companies (less than 10 employees), representative of the Senegalese economic fabric. These small structures face specific challenges in accessing advanced digital training, mainly due to financial constraints and lack of adequate infrastructure, which requires priority attention in future training actions.

3. Incipient level of adoption of advanced technologies: although many companies use basic digital technologies such as office automation tools or e-commerce, there is very limited adoption of advanced technologies such as artificial intelligence, cloud computing or advanced data analysis, which clearly reveals the urgent need for specialised training in these areas.

4. Low level of digital skills of current human capital: A significant proportion of respondents rate the current digital skills of workers as basic or intermediate. This implies a critical need to reinforce specialised technical training to develop skills that will enable companies to successfully face the digital transformation process.

5. Critical gaps in highly specialised technological profiles: there is considerable difficulty in finding and retaining specific technical profiles, particularly experts in advanced programming, digital project management, data analytics and cybersecurity. These gaps clearly indicate an urgent need to design training programmes aligned with the current demands of the technology market.

Immediate need for technological infrastructures for training: Insufficient infrastructure for digital training represents one of the main obstacles identified by respondents. Limited connectivity, lack of adequate equipment and high operating costs restrict the equipment, and high operating costs significantly restrict digital training possibilities, especially in less urbanised areas of the country.

5. Insufficient alignment of the educational offer with real needs: there is a widespread perception that the current technological training offer in Senegal is not sufficiently aligned with the real needs of the digital labour market. This requires a thorough review and greater public-private collaboration to adapt training content to specific business demands.

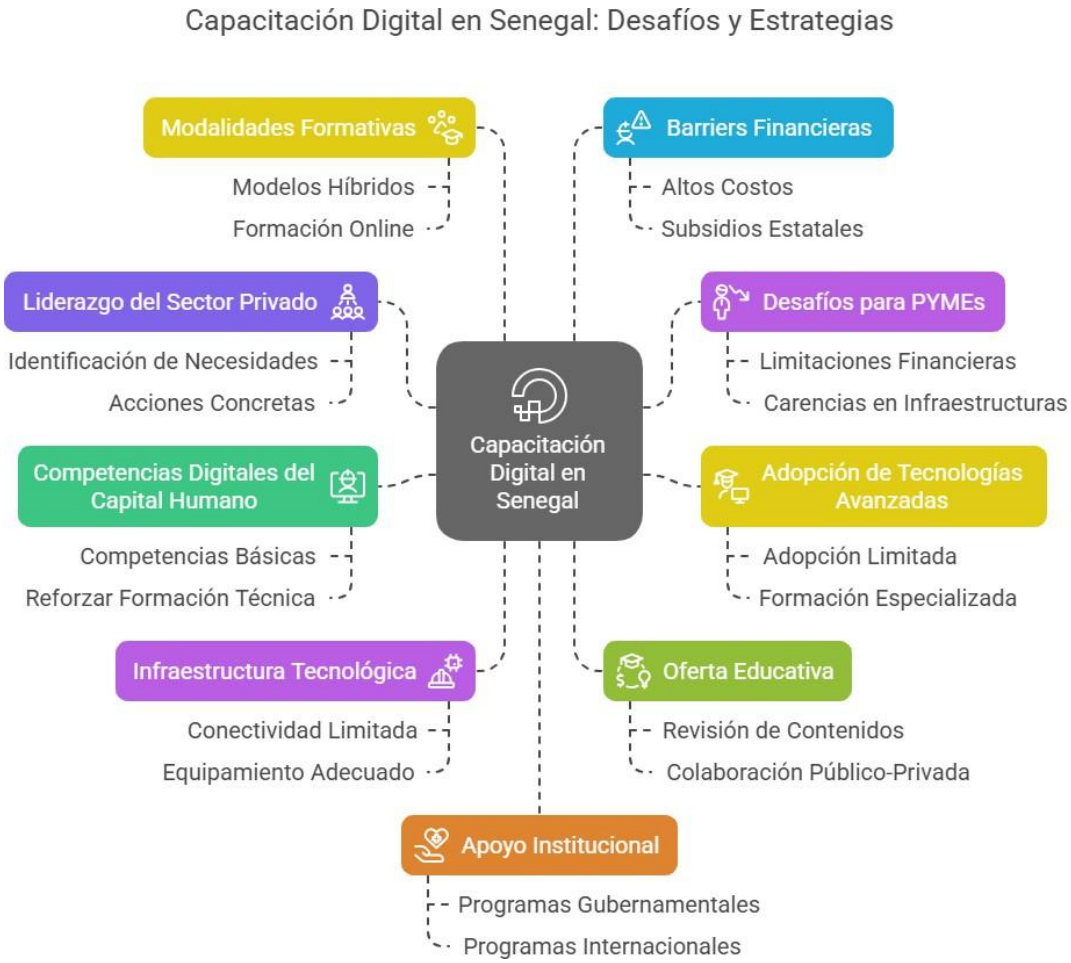
6. Flexible training modalities to facilitate participation: While face-to-face training is still the preferred mode, there is a growing interest in hybrid and online models. This offers the opportunity to implement blended learning modalities that facilitate broader and more equitable access to specialised training in emerging technologies, particularly useful for geographically dispersed companies.

7. Persistent financial barriers to technology training: The high costs associated with digital training represent a significant barrier for many organisations, especially small businesses. Targeted funding schemes or state subsidies are urgently needed to improve accessibility to advanced training programmes.

G. Weak institutional support and need for specific comprehensive programmes: The majority of organisations surveyed have not received specific support from governmental or international programmes for technology capacity building. This highlights the need for comprehensive support programmes that combine funding, equipment and specialised training in advanced digital skills**.**

10. Clear and practical strategies suggested to improve technology employability: Finally, the recommendations of the organisations are clear and operational: reduce training costs, incorporate local language training, offer training directly in collaboration with technology companies, establish specific government incentives, and promote technology clusters that bring together companies to facilitate effective knowledge transfer. These strategies, clearly identified by respondents, can form the basis for the development of a new strategy.

respondents, can form the basis of an effective operational plan aligned with the needs of the sector.



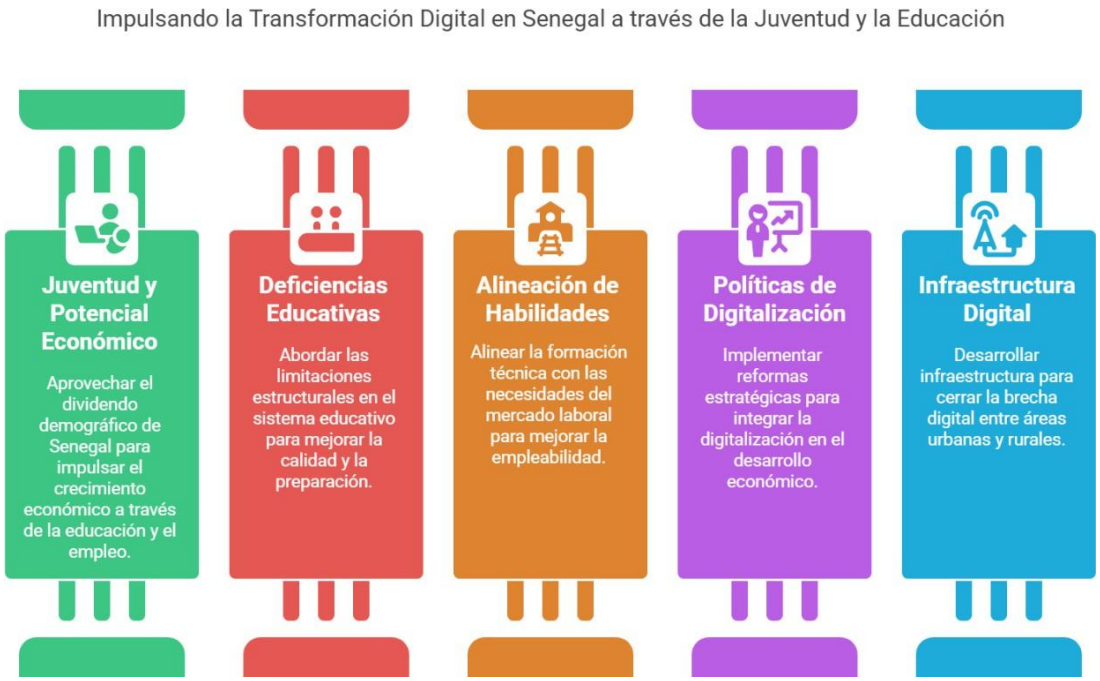
6. Conclusions and next steps

Following a thorough review of the education system, available digital skills and employability in the technology sector in Senegal, several key findings stand out that determine the current situation and provide clear guidelines for future interventions. First, Senegal has experienced remarkable economic and technological growth in the last decade, driven mainly by policies such as the Plan Senegal Emergent (PSE) and the Senegal Digital 2025 Strategy. These initiatives have put the country in a favourable position to develop its digital economy, especially in strategic sectors such as fintech and telecommunications.

However, significant gaps remain, particularly in digital skills. Vocational and technical education and training presents important challenges, such as insufficient alignment of educational programmes with the real demands of the labour market, as well as low private sector participation in curriculum design and training provision. In addition, there is a clear gender digital divide and a regional imbalance in access to digital training, which requires specific actions to foster effective inclusion.

On the other hand, the level of business digitalisation still reflects significant challenges, especially in small and medium-sized enterprises (SMEs), which face difficulties in adopting new technologies due to financial constraints, shortage of adequate infrastructure and lack of specific digital skills among their employees. This scenario underlines the importance of strengthening public-private cooperation to improve digital infrastructure and broaden the scope of labour market-oriented digital skills programmes.

6.1. Summary of key findings



Finding 1: Youth as a strategic driver for digital transformation in Senegal.

Senegal has a predominantly young population, with the under-25s accounting for 62% of its total population (Dasgupta et al., 2022). This demographic bonus offers immense economic and social potential if education and labour policies are properly managed. However, the reality shows that more than 30 % of 15-29 year olds are not in education, employment or training (NEET), with young women particularly disadvantaged (World Bank, 2022). To take full advantage of this demographic dividend, Senegal needs to significantly strengthen its education system and orient it towards the digital and technological skills required by strategic sectors such as fintech and telecommunications.

Finding 2. Structural weaknesses in the education system.

The Senegalese education system, inherited from the French colonial model, still has major structural limitations that hinder its ability to adapt effectively to current demands (Seye Djité, 2019). Despite the reforms undertaken, problems persist, such as school dropout, low educational quality in critical areas such as mathematics and science, and insufficient preparation of teachers. These shortcomings directly hinder the development of the digital competences needed for the development of the digital skills needed to teach the country.

directly hinder the development of digital skills needed for the technology sector.

Finding 3. Widespread shortage of certified technical skills.

Only a small proportion of the economically active population has certified technical or vocational training. About 83.7% of the unemployed lack formal technical training, which drastically reduces their job opportunities in emerging technology sectors (ANSD, 2023). This reflects a critical disconnect between the training offered and the needs of the labour market, and represents an urgent challenge for public policies focused on digital employability.

Finding 4. National policies committed to digitalisation.

The Emerging Senegal Plan (PSE) and the National Strategy "Sénégal Numérique 2025" (SN2025) mark a clear commitment by the Senegalese government to digital transformation as the backbone of the country's economic and social development (Government of Senegal, 2023). These strategic plans envisage important educational and technological reforms; however, effective implementation still faces considerable challenges related to adequate articulation and funding, as well as the effective involvement of the private sector in these processes.

Finding 5: Insufficient development of digital infrastructure.

Although Senegal shows remarkable progress in the development of digital infrastructures, including fibre optics and mobile connectivity, a significant digital divide persists between urban and rural areas (Groupe Défis C Stratégies, 2019). This inequality limits the country's ability to fully deploy the potential of digital technologies, especially in rural areas and less developed regions.

Finding c: Poor alignment between technical training and business needs.

There is a significant gap between the skills acquired in the technical and vocational training (TVET) system and the specific demands of Senegalese businesses. Although the government has tried to implement the Public-Private Partnership (PPP) model, it has not yet proven fully effective due to the limited active participation of the private sector in curriculum design and the identification of key competencies (Kamara C Thiam, 2021).

Finding 7: Growing need for cybersecurity specialists.

As Senegal increases its exposure to digital technologies, the country faces serious risks in terms of cybersecurity. The government's National Cybersecurity Strategy (SNC2022) reveals a worrying shortage of trained cybersecurity professionals, which represents a strategic challenge for all economic sectors (Government of Senegal, 2022). More specialised educational provision in this area is urgently needed.

Finding 8: Limited effective integration of ICTs at the university level.

Although there are innovative initiatives such as the Virtual University of Senegal, the results are mixed due to problems such as the lack of adequate teacher training and technical difficulties related to the university's technological infrastructure (Diop, 2022). Real ICT integration requires not only investment in equipment, but also intensive training and support for teachers and students.

Finding S: Insufficient progress in gender equality in digital literacy.

Despite the efforts made, women still have a limited presence in advanced technical and digital training, mainly due to socio-cultural and economic barriers (Government of Senegal, 2023). Overcoming this situation requires targeted proactive policies that promote the effective inclusion of women in technology-related educational programmes.

Finding 10: Growing potential of the digital entrepreneurship ecosystem.

The digital entrepreneurial ecosystem in Senegal, with prominent initiatives such as the CTIC Dakar incubator, shows enormous potential to generate significant economic value and quality youth employment (Groupe Défis C Stratégies, 2019). However, these initiatives require greater institutional and financial support, as well as more equitable access to digital infrastructure and specialised technical training.

6.2. Suggestions for programme implementation and Canary Islands-Senegal collaboration

The successful implementation of strategic programmes for digital skills and employability in Senegal requires a comprehensive and coordinated approach, involving both the public and private sectors, to tap the human and economic potential identified in the country. The combination of a high youth demographic bonus, a clear political will towards digital transformation and an emerging entrepreneurial ecosystem represent ideal conditions to deploy initiatives that strengthen local technological capabilities and, at the same time, generate sustainable growth opportunities.

In this context, the experience of the Canary Islands, both in training and in technological and business development, makes them a natural and strategic partner for international cooperation with Senegal. The geographical proximity, cultural affinity and the vocation of the Canary Islands as a logistical and technological platform between Europe and West Africa are significant advantages that allow the consolidation of a mutually beneficial alliance, aimed at effectively addressing the identified gaps and promoting inclusive and sustainable socio-economic development.

Programme 1: Strengthening basic digital skills for vulnerable young people

The large proportion of young people not in education, employment or training in Senegal (over 30% according to the World Bank, 2022) represents a huge socio-economic challenge and an opportunity for strategic intervention. It is imperative to address this situation through intensive programmes that provide basic digital skills directly oriented towards employability.

This programme should establish a modular training model focused on elementary digital skills (Internet use, office automation, digital platforms and basic communication skills). The training scheme should be conceived as itinerant, with mobile classrooms equipped with technology that visit rural and peri-urban areas in particular. The aim would be to reduce the territorial digital divide that currently limits the country's equitable development (ANSD, 2023).

The public institutions of the Canary Islands could offer their accumulated experience in digital literacy projects, highlighting the implementation of the "mobile digital classroom", already successfully used in the Canary Islands. Canarian technology companies specialised in virtual educational platforms, online courses and digital content creation could play a key role as strategic suppliers. Technical and methodological cooperation would facilitate the transfer of good practices and innovative solutions to Senegal, ensuring the

sustainability of the project by training local trainers.

Programme 2: University-Business model for advanced digitisation

The disconnect between higher education and the demands of the Senegalese labour market is one of the major obstacles identified in this report. Senegalese universities still face major challenges in effectively incorporating ICTs into their curricula (Diop, 2022). Therefore, a robust model of cooperation between Canarian technology companies and Senegalese universities is proposed to promote digitisation and curricular adaptation to the real labour market.

This model would include the creation of joint platforms between the Cheikh Anta Diop University, the Virtual University of Senegal and Canary Islands technology centres or universities specialising in advanced technology. Canary Islands companies could implement paid internship and work experience programmes in emerging sectors such as fintech, data analysis, artificial intelligence and software development, creating certified training pathways that facilitate the immediate labour market integration of graduates.

In addition, these partnerships can be structured through two-way academic exchanges, allowing for the mobility of students, professors and researchers. This would not only strengthen Senegal's technical capacities, but also increase opportunities for Canary Islands companies to explore new markets in West Africa through strategic academic collaborations.

Programme 3: Establishment of the Canary Islands-Senegal Centre of Excellence in Cybersecurity

Senegal faces a significant increase in the risks associated with accelerated digitalisation, but still has limited cybersecurity capabilities (Government of Senegal, 2022). The creation of a specialised Centre of Excellence in Cybersecurity, the result of collaboration between leading Canary Islands entities in the sector and Senegalese organisations such as the National Cybersecurity Agency, is a direct response to this critical challenge.

This centre would have three main axes: advanced technical training, permanent technological vigilance against cyber threats and internationally recognised professional certification in cybersecurity. Canary Islands technology companies would provide cutting-edge technology and proven methodologies in the European Union, while Senegal would offer physical infrastructure and progressively trained local human capital. This partnership would substantially improve Senegal's digital resilience, while creating a regional benchmark in cybersecurity with projection throughout West Africa.

Programme 4: Canary Islands-Senegal Network for Digital Entrepreneurship

Senegal has an emerging but under-utilised digital entrepreneurship ecosystem (Groupe Défis C Stratégies, 2019). The creation of a network of digital incubators and accelerators between the Canary Islands and Senegal would represent an ideal mechanism to stimulate this sector, strengthening Senegalese technology start-ups and opening up new commercial and investment opportunities for Canary Islands companies.

This programme would operate as a comprehensive platform offering incubation, training in digital project management, specialised mentoring and access to seed funding. Entities such as CTIC Dakar, or the future technology cluster of Senegal could become strategic partners for Canary Islands companies, through intermediate bodies such as FEMEPA, FEMETE, Clúster Tecnológico de Canarias, etc., to explore joint business opportunities. At the same time, Senegalese start-ups could be given access to international experience and markets, especially European ones, through the Canary Islands as a technological and commercial bridge between Europe and Africa.

Programme 5: Curricular and technological modernisation of Vocational and Technical Education and Training (VTE)

Vocational and technical training in Senegal faces important challenges in terms of educational quality, curricular updating and technological integration (Ministry of Vocational Training of Senegal, 2014). The Canary Islands, with extensive experience in technological vocational training, can provide effective models in competency-based curriculum management and in the duality between classroom and company.

This programme would envisage joint curriculum development in emerging technology sectors such as fintech, telecommunications, renewable energy and e-commerce. Canary Islands companies would actively participate by offering practical training to Senegalese students in real working environments, ensuring a direct transfer of skills adjusted to the market. In addition, the continuous training of Senegalese teachers would be promoted through stays in the Canary Islands, thus strengthening the technical skills of local teachers.

Cooperation between Senegal and the Canary Islands has an exceptional strategic potential, based on historical, geographical, economic and cultural reasons that make this relationship a logical and mutually beneficial alliance.

From a geographical point of view, the Canary Islands occupy a privileged position as a gateway between Europe and West Africa, facilitating a fluid exchange of goods, services, technology and knowledge between the two regions. The Canary Islands offer competitive advantages in advanced digital infrastructures, specialised technical training capacities and a favourable business environment for technological innovation, key characteristics for promoting digital and economic development in Senegal.

On the other hand, Senegal is presented as a market with great opportunities for expansion, being an economy in full swing. The country is positioned as a strategic gateway to Sub-Saharan African markets, acting as a regional technological and economic hub. This represents a clear opportunity for Canary Islands companies interested in internationalising their technological or educational services to new emerging African markets.

In addition, both regions share the same time zone and relative geographical proximity, greatly facilitating face-to-face exchanges, operational logistics and joint project management. Culturally, there is a historical understanding that favours long-term cooperation, based on mutual respect, joint learning and the generation of shared value.

In short, these reasons provide a solid justification for establishing a lasting strategic partnership between Senegal and the Canary Islands, taking advantage of the competitive advantages of both regions and generating positive impacts in terms of social inclusion, creation of youth employment, technology transfer and economic strengthening, consolidating the Canary Islands as a preferred development partner in West Africa.

10. Annexes

10.1. Details of the questionnaire

Section 1: General information about the organisation

1. Name of the organisation * Type of organisation
2. Type of organisation * Type of organisation
    - Private company
    - Professional organisation
    - Public body
    - NGO
    - Other
3. Size of organisation (number of employees) * Less than 10
    - Less than 10
    - 10-50
    - 51-100
    - More than 100
4. Main sector of activity *
    - Trade
    - Services
    - Manufacturing
    - Information technology
    - Other

Section 2: Status of digitisation in the organisation

5. Which digital technologies does your organisation currently use? (Check all that apply) * (Check all that apply)
    - Core office technologies
    - Cloud computing
    - Process automation tools
    - Big Data and data analytics

- Artificial intelligence
- E-commerce
- Digital marketing
- Other

6. What is the level of technology adoption in your organisation? *
   - Low (we use basic technologies)
   - Medium (we have implemented some technological solutions)
   - High (our organisation is highly digitised)
7. What are the main barriers your organisation faces in moving towards digitisation (tick all that apply)?
   - Lack of technological infrastructure
   - High costs
   - Lack of qualified personnel
   - Lack of information on available technologies
   - Lack of awareness of the benefits
   - Other
8. Which digital tools or services do you consider most important for your organisation in the next two years? *

Section 3: Digital training needs

9. What is the current level of digital skills of your employees? *
   - Basic
   - Intermediate
   - Advanced
10. Has your organisation provided digital skills training to your employees in the last 12 months? *

- Yes
- No

11. If yes, what type of training has been provided? (Please tick all that apply)

- Basic office skills
- Digital marketing
- Cybersecurity
- Use of automation tools

- Programming or software development
- Other

12. What digital skills do you see as a priority for your organisation in the next two years?

- Data management
- Software development
- Artificial intelligence
- Process automation
- Digital marketing
- E-commerce
- Other

13. What is your organisation's preferred training modality? *

- Face-to-face
- On-line
- Blended

14. What are the main difficulties in training your employees in e-skills? (Tick all that apply) * Lack of time

- Lack of time
- Cost of training
- Lack of suitable training providers
- Lack of adequate technological infrastructure
- Other

Section 4: Employability and skills gap

15. In your sector, what are the most in-demand technology skills today? *

- Programming and development
- Data analysis
- Technology project management
- IT security
- Other

16. Do you think that the training of technology workers in Senegal is sufficient to meet the needs of your sector? *

- Yes

- No
- Don't know

17. Are there significant skills gaps in your sector? If yes, which ones? Which ones? *
18. What are the most difficult technology profiles to recruit in your organisation? *
19. What actions do you consider necessary to improve employability in the technology sector in Senegal (tick all that apply)?

- Improve the training offer
- Strengthen the collaboration between educational institutions and companies
- Create more government incentives for technology training
- Facilitate access to technological resources
- Other

Section 5: Support policies and programmes

20. Has your organisation received support from governmental or non-governmental programmes to improve its technological capabilities? *

- Yes
- No

21. If yes, what type of support have you received (tick all that apply)?

- Grants or funding
- Access to technology infrastructure
- Training programmes for employees
- Technical assistance
- Other

22. What types of support programmes do you think are most needed to improve employability and digital skills in Senegal? *

Section 6: Conclusion

23. What recommendations would you make to improve digital literacy in your country? *
24. What measures could improve the employability of tech workers in your sector? *

10.2. Bibliography

- Agence de l'Informatique de l'État (ADIE). (2023a). Perspectives de l'Emploi dans le Secteur Technologique au Sénégal. ADIE.
- Agence de l'Informatique de l'Etat (ADIE). (2023b). Emplois Tech au Sénégal en 2023. ADIE.
- Agence Nationale de la Statistique et de la Demographie (ANSD). 2023a. Rapport sur l'Emploi et les Compétences au Sénégal. ANSD.
- National Agency for Statistics and Demography (ANSD). 2023b. Situation économique et sociale du Sénégal 2022-2023. ANSD.
- Alliance for Affordable Internet (A4AI). (2023). Internet affordability data and analysis. Retrieved from http://a4ai.org
- African Development Bank (ADB). (2023). African Economic Outlook 2023. Abidjan: AfDB.
- World Bank (2023). World Development Indicators and employment data for Senegal. Washington, D.C.: The World Bank.
- Dakar Chamber of Commerce (n.d.). Statistics and figures on Internet users in Senegal. Retrieved 2025.
- CIA (2024). The World Factbook: Senegal. Retrieved from https://www.cia.gov/the-world-factbook/countries/senegal/
- Conseil National du Patronat (CNP) (2024). Data on digitisation in Senegalese companies (Information collected at meeting in February 2025).
- General Delegation for the Rapid Entrepreneurship of Women and Youth (DER/FJ). (2021-2024). Financing and training programmes for entrepreneurs. DGEF.
- Fonds de Financement de la Formation Professionnelle et Technique (3FPT). (2023). Reports and data on the financing of vocational and technical training programmes.
- Government of Senegal. (2022a). Lettre de Politique Sectorielle de Développement du MEFPAI 2022-2026. Ministry of Employment, Vocational Training and Apprenticeship.
- Government of Senegal. (2022b). Stratégie Nationale de Cybersécurité du Sénégal. Ministry of Communication, Telecommunications and Digital Economy.
- Government of Senegal. (2023a). Plan Sénégal Émergent - Plan d'Actions Prioritaires 2024-2028. Ministry of Economy, Plan and Cooperation.

- Government of Senegal. (2023b). Stratégie Numérique SN2025 - Plan d'Actions Actualisé.
  d'Actions Actualisé. Ministry of Communication, Telecommunications and Digital Economy.
- African Union (AU) Institutions (2020). Agenda 2063 and African Digital Transformation Strategy 2020-2030. African Union.
- LISER (Luxembourg Institute of Socio-Economic Research) (2023). La Formation Professionnelle et Technique et l'Emploi au Sénégal. Policy and Development Study.
- Ministry of Communication and Digital Economy of Senegal. (2024). Rapport sur la Digitalisation et l'Innovation au Sénégal. Dakar.
- Ministry of Economy, Finance and Planning of Senegal. (2023). Rapport sur l'Économie Sénégalaise: Secteurs, Perspectives et Políticas Publicas. Dakar.
- Ministry of Higher Education, Research and Innovation (MESRI) (2022). Rapport sur l'Intégration du Genre dans l'Enseignement Supérieur et la Recherche Scientifique au Sénégal.
- International Labour Organisation (ILO). (2023). State of Skills in Senegal. Geneva: ILO.
- Plan Senegal Emergente (PSE). (2023). PSE general documentation and sectoral action plans.
- Stratégie de Transformation Digitale de la Union Africaine (AU). (2020). Digital Transformation Strategy for Africa 2020-2030. Addis Ababa: African Union.
- International Telecommunication Union (ITU). (2023). Digital Development Dashboard. Geneva: ITU.
- Cheikh Hamidou KANE Digital University (former Virtual University of Senegal). (2024). Academic statistics and enrolment reports.

10.3. List of abbreviations

- 3FPT: Fonds de Financement de la Formation Professionnelle et Technique (Financing Fund for Vocational and Technical Training).
- A4AI: Affordable Internet Alliance
- ADIE: State Data Processing Agency
- AFRICANTECH: International cooperation project co-financed by ERDF (INTERREG MAC).
- AfCFTA: African Continental Free Trade Area
- ANSD: National Agency for Statistics and Demography
- ARTP: Autorité de Régulation des Télécommunications et des Postes (Telecommunications and Postal Regulatory Authority)

- AUDA-NEPAD: African Union Development Agency - New Partnership for Africa's Development
- ADB: African Development Bank
- WB: World Bank
- BT: Technician's Brevet
- BTS: Brevet de Technicien Supérieur
- CDP: Commission de Protection des Données Personnelles du Sénégal (also referred to as the Personal Data Protection Agency)
- CIA: Central Intelligence Agency
- CNAE: National Classification of Economic Activities
- CNP: Conseil National du Patronat
- COVID-19: Coronavirus Disease 2019
- CTIC: Centre d'Incubation et de Transfert de l'Innovation de Dakar (Dakar Incubation and Innovation Transfer Centre)
- DCE: Directorate of Foreign Trade
- DER/FJ: Délégation Générale à l'Entreprenariat Rapide des Femmes et des Jeunes Jeunes
- ERP: Enterprise Resource Planning
- ERDF: European Regional Development Fund
- FEMEPA: Federación de la Pequeña y Mediana Empresa del Metal y Nuevas Tecnologías (Federation of Small and Medium-Sized Metal and New Technology Enterprises)
- FONSIS: Fonds Souverain d'Investissements Stratégiques
- AI: Artificial Intelligence
- INTERREG MAC: Territorial Cooperation Programme Madeira-Azores- Canary Islands
- MCTPEN: Ministry of Communication, Telecommunications, Post and Digital Economy
- MEFPAI: Ministry of Employment, Vocational Training, Apprenticeship and Inclusion
- NCDF: National Digital Competences Framework
- ILO: International Labour Organisation
- WTO: World Organization of Workers
- ONFP: National Vocational Training Office
- PSE: Plan Sénégal Émergent
- SME: Small and Medium-Sized Enterprise
- SN2025: Sénégal Numérique 2025

- ICT: Information and Communication Technologies
- AU: African Union
- ITU: International Telecommunication Union
- UNCHK: University Digital Cheikh Hamidou Kane (formerly Virtual University of Senegal)
- UVS: Virtual University of Senegal