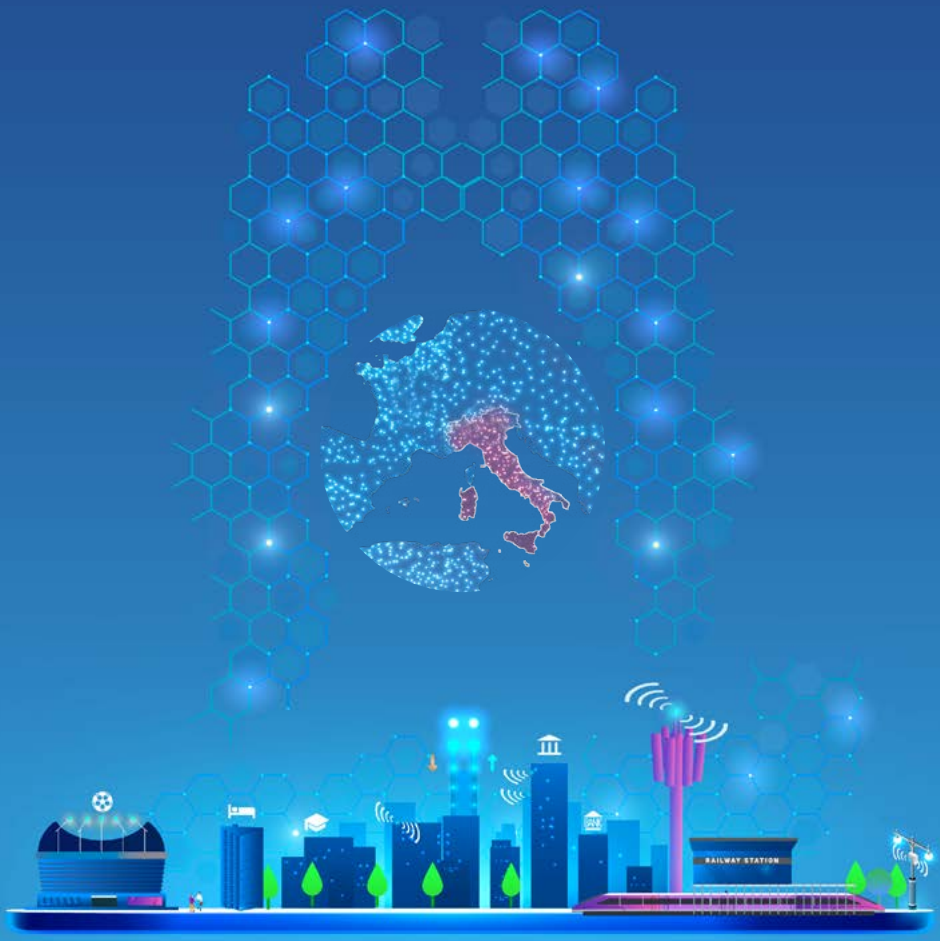
INWIT
A Digital Infrastructure Company

The European House
Ambrosetti

The value of INWIT for Italy



INWIT Business Model Impact Measurement Study

The value of INWIT for Italy

INWIT Business Model Impact Measurement Study

Introduction

INWIT is Italy's leading tower operator and one of the country's top Digital Infrastructure Companies. It develops and manages shared digital infrastructure for mobile telecommunications. INWIT has secured a **national leadership** position through a business model based on **infrastructure sharing** among mobile telecommunications operators. This approach allows for a **more efficient use of resources, reduces** asset **duplication**, fosters technological innovation, and makes a tangible contribution to the country's **sustainable and competitive growth**.

To better understand this impact, INWIT, in collaboration with **TEHA Group**, conducted an impact study aimed at assessing the **benefits** for the country of a model based on the **separation** and subsequent **sharing** of **services** and **infrastructure**. The study focused in particular on the effects of INWIT's infrastructure **sharing** model in the mobile telecommunications sector, as well as the broader **economic, social, cognitive** and **environmental** outcomes linked to **INWIT**'s activities and **investments** in **Italy**.

The analysis has been structured in two parts. The first part examined the value generated by **separating infrastructure from services**, using case studies from countries where this model has already been successfully implemented.
TEHA then developed a **proprietary econometric model** to estimate the average differential impact on GDP and employment across 38 economies and three key sectors: energy, telecommunications and railways. A specific study was also conducted for the telecommunications (TELCO) sector in Italy, taking into account the competitive landscape and INWIT's unique experience.

The second part of the analysis focuses on **measuring** the **value generated** by **INWIT** for the **national system**. This was done using TEHA's proprietary "4 Capitals" model, a **multidimensional model** that evaluates four key dimensions.

The first, **economic capital**, assesses INWIT's contribution to economic value creation, including GDP generation, value created through both direct operations and the broader supply chain, investment attraction and its impact on public finances and the financial system. **Social capital** reflects INWIT's role in generating direct, indirect and induced employment, improving individual well-being, promoting social inclusion and enhancing access to services. **Infrastructure and cognitive capital** measures contributions to the country's infrastructure network, innovation and skills development, to the reduction of the digital divide and the advancement of high-tech solutions. Lastly, **environmental capital** evaluates INWIT's contribution to sustainability, focusing on reduced energy consumption and emissions, streamlined business processes and alignment with environmental goals. The analysis is based on **finalised data** for the **2020–2024** period. Where available, **impact assessments** linked to the **KPIs** and **targets** set out in the **2025–2030 Business Plan** have been integrated in order to reflect the projected evolution of the value generated by INWIT for the country.

The value of separating infrastructure and services across different sectors

To identify the concrete benefits of separating infrastructure from services, and the consequent sharing and specialization, **a qualitative analysis** was carried out on a selection of **benchmark cases**. These involved specific **countries** and **sectors** where the **model** has been effectively **implemented**.
The analysis focused in particular on the telecommunications, energy and railway sectors.

Building on this evidence, and with the goal of quantitatively assessing the socio-economic impact of such separation, TEHA developed a **proprietary econometric model**.

The results clearly demonstrate tangible and measurable benefits: in the five years following the implementation of the separation model, countries that adopted it experienced, on average, a **1.6 p.p.** higher GDP growth compared to benchmarks, while **employment** growth recorded a positive differential of **1.4 p.p**.

BENEFITS RESULTING FROM THE SEPARATION BETWEEN INFRASTRUCTURE AND SERVICES

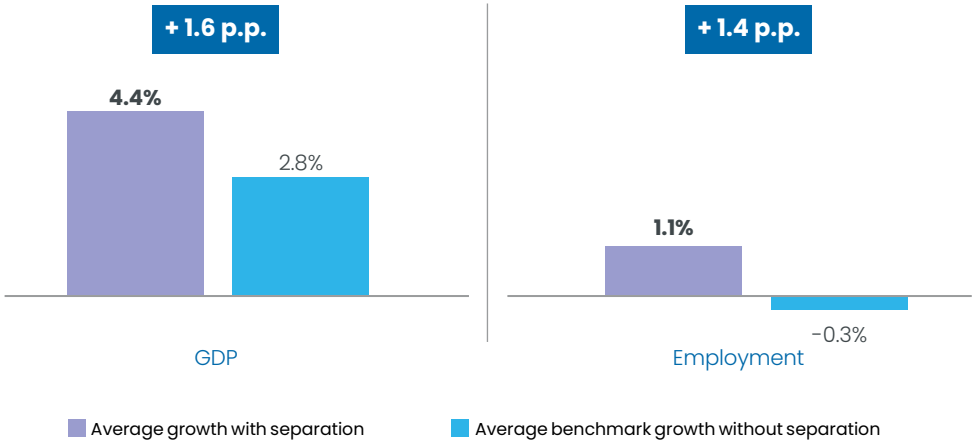


Figure 1. Average of changes in reference sectors, cluster of countries with decoupling vs benchmark (CAGR: composite annual average growth rate), five-year period following decoupling.
Source: processing by TEHA Group based on OECD, Eurostat and World Bank data, 2025

THE MOBILE TELECOMMUNICATION SECTOR IN ITALY

The analysis then focused on the **Italian case** within the **mobile telecommunications sector**, where the separation of infrastructure and services has brought significant **economic benefits** both to the system as a whole and to individual operators thanks to a model based on **infrastructure sharing**, which has enabled a specialised economy and a progressive **increase in the tenancy ratio**[1].

In this context too, TEHA developed a dedicated model to quantify the impact of infrastructure sharing on the mobile telecommunications sector, based on the efficiencies gained and the economies created through shared use. To measure these benefits in terms of cost savings for the sector, TEHA first estimated the **number of new mobile telecom towers** built between 2015 (the year infrastructure and services were separated in Italy) and 2024, assuming a steadily **increasing average tenancy ratio from 1 to 2.2**. It then estimated how many towers would have been required over the same period had the separation not occurred, based on the assumption of a **constant tenancy ratio of 1**. The difference in the number of towers between the two scenarios was then used to calculate the cost savings, based on estimated costs per new tower in terms of CAPEX, OPEX, financial charges and lease or land costs.
The **avoided costs** cover a range of components: land acquisition for tower construction, materials and labour, energy stations and cooling systems, as well as both routine and extraordinary maintenance.
Sharing enables the full capacity of existing infrastructure to be maximised, eliminating the need for duplication. This generates **significant cumulative benefits for the mobile telecom sector over the period considered**, amounting to:

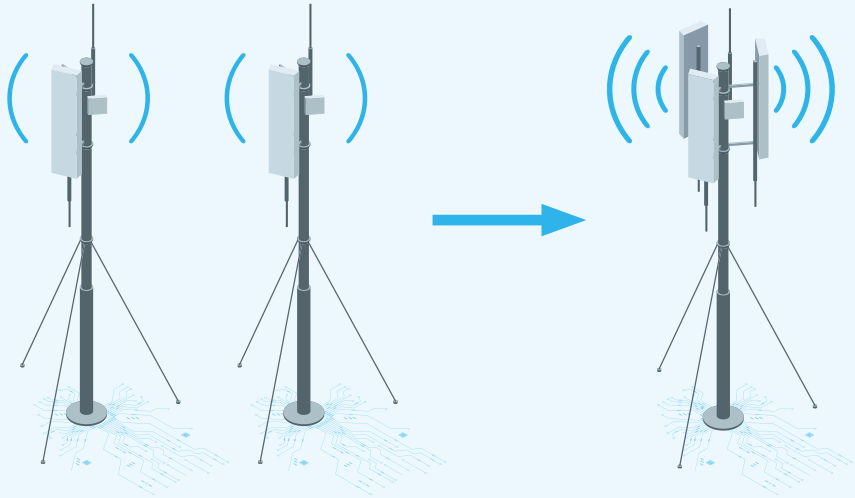
15.8 billion euros

Costs avoided by Telco operators thanks to the separation of infrastructure and services

1. Ratio between the total number of leasing contracts (tenants) and the number of towers.

Reducing infrastructure duplication also helps **limit environmental impacts and other negative externalities**, while improving **service accessibility** and **coverage**.
Specifically, from 2015 to 2024, the infrastructure sharing model helped **avoid emissions of 2.5 million tonnes of CO_2**, which would have otherwise been generated by building additional towers, an amount equivalent to the emissions from 1.7 million intercontinental flights[2].

BENEFITS RESULTING FROM THE SEPARATION AND SHARING OF INFRASTRUCTURE IN THE 2015-2024 PERIOD



ECONOMIC AND ENVIRONMENTAL BENEFITS ASSOCIATED WITH THE SEPARATION AND SHARING BETWEEN INFRASTRUCTURE AND SERVICES IN THE MOBILE TELCO SECTOR IN ITALY

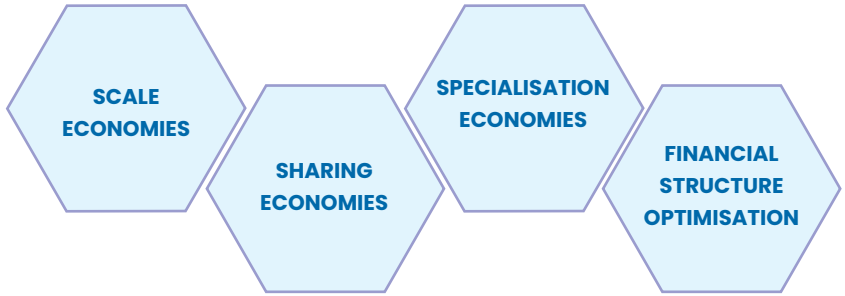
15.8 billion euros
Cumulative avoided costs

2.5 million tCO_2
Avoided emissions

Figure 2. Source: processing by TEHA Group based on INWIT data and other sources, 2025.

2. Considering the average emissions of a flight from Rome Fiumicino to New York JFK.

In summary, the separation has brought several benefits:



The sharing-based neutral host model also fosters a more competitive market, allowing operators to access infrastructure without the need to own it directly.
INWIT's model fully leverages all the advantages of this approach, accounting for approximately **50% of the total value generated across the sector**.

The value generated by INWIT for the national economy

After assessing the benefits of separating infrastructure from services, particularly within Italy's mobile telecommunications sector, the study turned its focus to measuring the value that INWIT contributes to the national economy, considering its operations, business model and investments across four key dimensions: economic, social, environmental and technological.

ECONOMIC

From an **economic** standpoint, INWIT stands out as a leading force in the Italian telecommunications industry, thanks to a **steady and solid growth trajectory** which ranks it among the top 300 firms in Italy, one of the **top 10 TELCOs** and a market leader among **TELCO tower companies**. According to projections in the 2025–2030 Business Plan, INWIT is expected to further strengthen its position, with a compound annual growth rate (**CAGR**[3]) of **+6.1%** over the decade.

3. CAGR: Compound Annual Growth Rate.

This growth trajectory has been supported by a steadily increasing **investment** commitment, with a targeted focus on **infrastructure network development**, **digitalisation** and **technological innovation**. Between 2015 and 2024, INWIT's cumulative investments in Italy reached **1.4 billion euros**, with a further **1.5 billion euros** planned for the 2025–2030 period, bringing the total to approximately **2.9 billion euros**. In 2024, 71% of the allocated resources were devoted to initiatives focused on strengthening **network coverage** and accelerating the **digital transition**, confirming INWIT's strategic role in enabling the evolution of the country's telecommunications infrastructure.

INWIT'S 2015-2030 INVESTMENTS

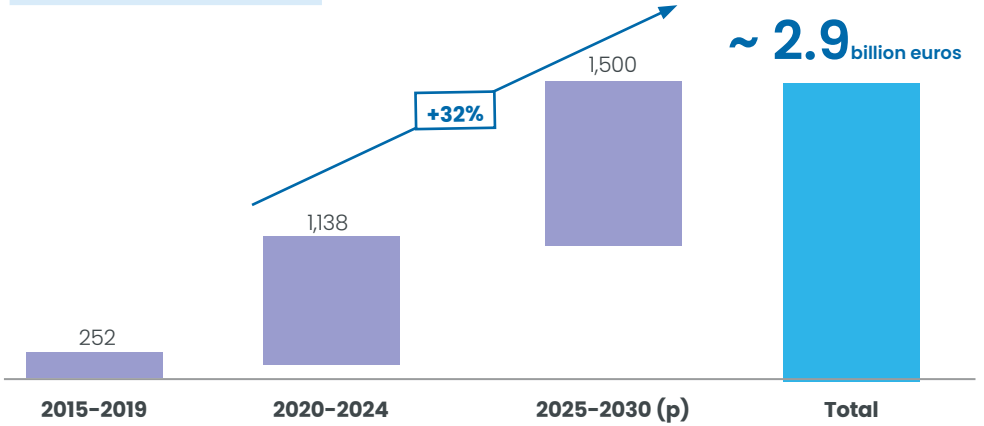
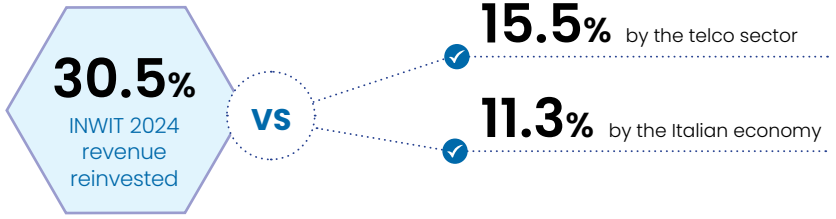


Figure 3. Cumulative investments made by INWIT in Italy by period (millions of euros), 2015-2024 and forecast for 2030. Source: processing by TEHA Group based on INWIT data, 2025.

Further evidence of the sustainability and value-creating contribution of INWIT's growth path is reflected in the **share of revenues reinvested**. In 2024, the company allocated **30.5%** of its revenues to new investments - an increase of **+11.2 percentage points** compared to 2020. This level of reinvestment is **significantly higher** than key **benchmarks**: nearly double the average in the telecommunications sector **(15.5%)**, and well above the average in the services sector **(25.3%)** and the overall Italian economy **(11.3%)**.



The impact of investments is reflected directly in the expansion of **infrastructure assets**. Between 2020 and 2030, the number of **towers** managed by the company is projected to grow by **+27.8%**, rising from 22,300 to **28,500** sites across Italy. In 2024 alone, INWIT built over **915 new sites**, setting a new operational record for the company. With around **25,000 active towers** by the end of 2024, INWIT reaffirms its position as **Italy's leading tower company, both in terms of revenue and infrastructure**, and as a key player in the roll-out of mobile networks and in the development of the country's digital infrastructure.

INWIT also contributes to national GDP through the creation of **Added Value**. In 2024, the company generated a direct Added Value of **969.1 million euros**, with a compound annual growth rate (CAGR) of **+11.7%** over the past five years. This contribution is further enhanced by the impact generated through the activation of the national supply and subcontracting chain (indirect Added Value) and consumption driven by wages paid by INWIT and its suppliers for the share of INWIT-related purchases (induced Added Value).

Between 2020 and 2024, the company contributed a total of 688.6 million euros to the country's public finances. Such significant commitment underscores INWIT's active and responsible role in supporting the national economy through the payment of taxes, duties and other fiscal obligations that help fund public services, infrastructure and overall societal well-being.

In 2024, INWIT activated an extensive network of **economic supply chains** across the **entire country**, working with over **550 Italian suppliers** for a total value of goods and services amounting to **272.1 million euros**, spread across all regions of Italy. Considering the economic ripple effects across the entire supply chain, INWIT's **total contribution** to **Italy's GDP** reached approximately **1.3 billion euros in 2024**, with a cumulative impact of **5.3 billion euros** over the 2020–2024 period.

OVERALL IMPACT ON ITALY'S GDP IN 2024

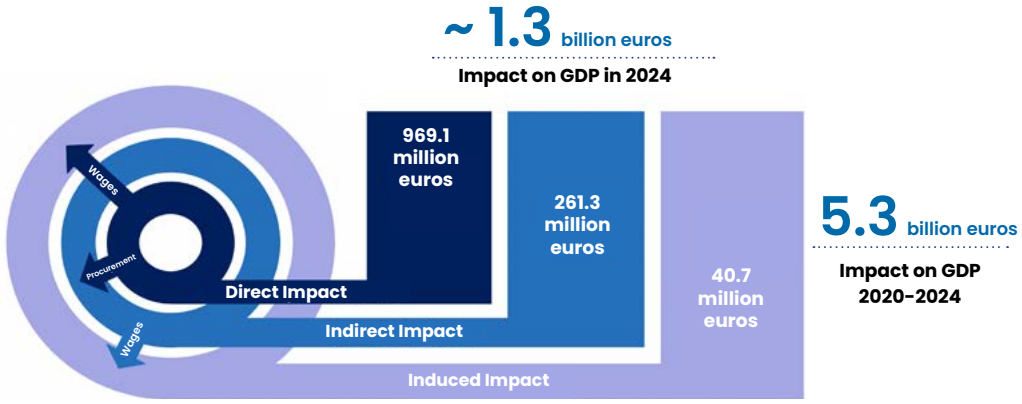


Figure 4. Direct, indirect and induced added value generated by INWIT in Italy (€ million), 2024. Source: processing by TEHA based on ISTAT data, 2025.

In this case too, the economic activation has involved all areas of the country and cut across multiple economic sectors. The **indirect and induced economic benefits** also extend to several **strategic sectors**, including manufacturing (58.3 million euros), telecommunications (53.8 million euros), construction (27.4 million euros), professional and technical services (24.8 million euros), and trade (23.3 million euros), **amounting to a total impact of 302 million euros**. This indirect and induced impact is also reflected geographically, with **significant effects in Lombardy (84.9 million euros)**, **Lazio (47.9 million euros)** and **Veneto (44.1 million euros)**, alongside a broader distribution across the country, confirming INWIT's systemic role in supporting local economic development.

INDIRECT AND INDUCED ADDED VALUE GENERATED BY INWIT IN ITALY

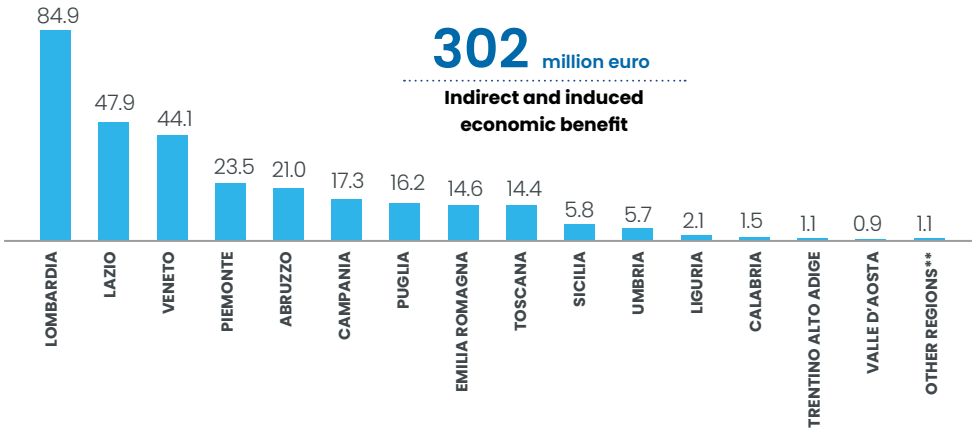


Figure 5. INWIT indirect and induced added value in Italy broken down by region (millions of euros). Source: processing by TEHA based on INWIT and ISTAT data, 2025.
**Other regions include: Friuli-Venezia Giulia, Marche, Molise, Basilicata and Sardinia, 2024.

EMPLOYMENT

Thanks to an innovative, streamlined and flexible organisational model, INWIT has sustained its growth while continuously expanding employment in Italy. Between 2020 and 2024, the number of **employees** increased by **+60%**, rising from **206** to **328**. This growth rate significantly outpaced that of the telecommunications sector (**+9.2%**), the services sector (**+4.7%**), and the broader Italian business landscape (**+4.8%**) over the same period. INWIT's commitment to job quality and gender equality is especially noteworthy. Between 2020 and 2024, **female employment** grew by **+82%**, raising the **proportion of women** to **40%** of the total, a figure that **exceeds the sector averages** for both the services sector (30%) and the telecommunications sector (38%), as well as the **national** average (27%). The company also distinguishes itself for its employment stability, with **98.5%** of contracts being **permanent**.

+60% number of employees — of which — **+40%** women in the workforce

As for added value, by applying the sector interdependencies methodology to INWIT's supply chain, it was possible to quantify the company's contribution to indirect and induced employment. In 2024 INWIT supported a total of **3,182 jobs in Italy**, with an **employment multiplier of 9.7x**: for every direct employee, a further 8.7 jobs were activated along the related economic value chains. This **job-creating capacity** extends across **numerous strategic sectors of the economy** - from telecommunications to manufacturing, administrative services, maintenance and retail - and impacts the **entire country**. The regions most involved are Lombardy, Lazio and Veneto, but the contribution also extends to Piedmont, Abruzzo, Campania and Puglia, reflecting a widespread impact across the North, Centre and South of the country.

DIRECT, INDIRECT AND INDUCED EMPLOYMENT GENERATED BY INWIT IN ITALY

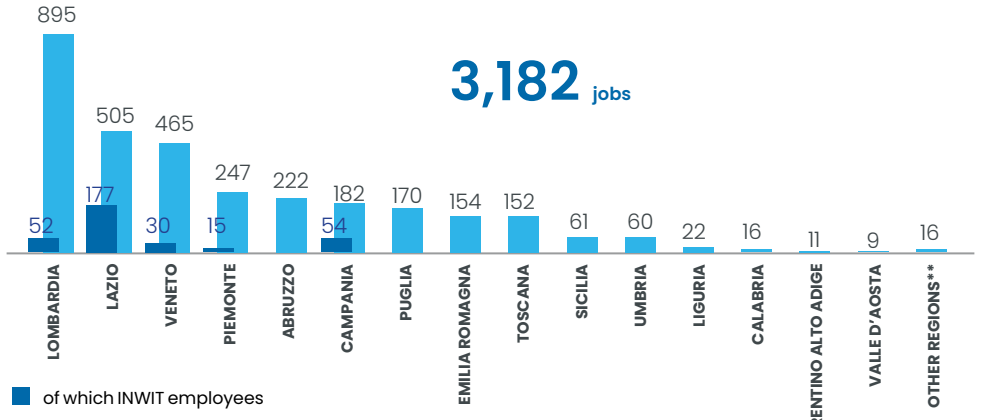


Figure 6. Direct, indirect and induced employment generated by INWIT, broken down by region (FTE – Full-Time Equivalent). Source: processing by TEHA based on INWIT and ISTAT data, 2025.
**Other regions include: Friuli-Venezia Giulia, Marche, Molise, Basilicata and Sardinia, 2024.

INWIT stands out for the high qualification level of its workforce. In 2024, over **64%** of **employees** held at least a **bachelor's degree**, significantly above the national average **(17%)**, the services sector **(19%)**, and even the telecommunications sector **(43%)**. Between 2020 and 2024, the number of graduates employed by INWIT grew by **+42%**, rising from 148 to **210**. This strong foundation of cognitive capital has been supported by a growing investments in staff **training. Between 2020 and 2024, INWIT more than tripled the hours of training delivered from 4,000 to 13,600**, with an average of approximately **43 hours per employee**.

EXTENSIVENESS OF INFRASTRUCTURE

INWIT is recognised for its strategic role as a **Neutral Host**, accessible to all mobile telco operators and active in the hosting of 4G, 5G, FWA, OTMO and IoT[4] services. This collaborative approach has enabled the company to significantly increase the number of hostings on its towers, from 42,000 in 2020 to 58,000 in 2024, with projections reaching 72,000 by 2030 (+71.5%). At the same time, **the tenancy ratio has also increased, reaching 2.32 in 2024, one of the highest in the sector, with further growth expected up to 2.6 by 2030**.

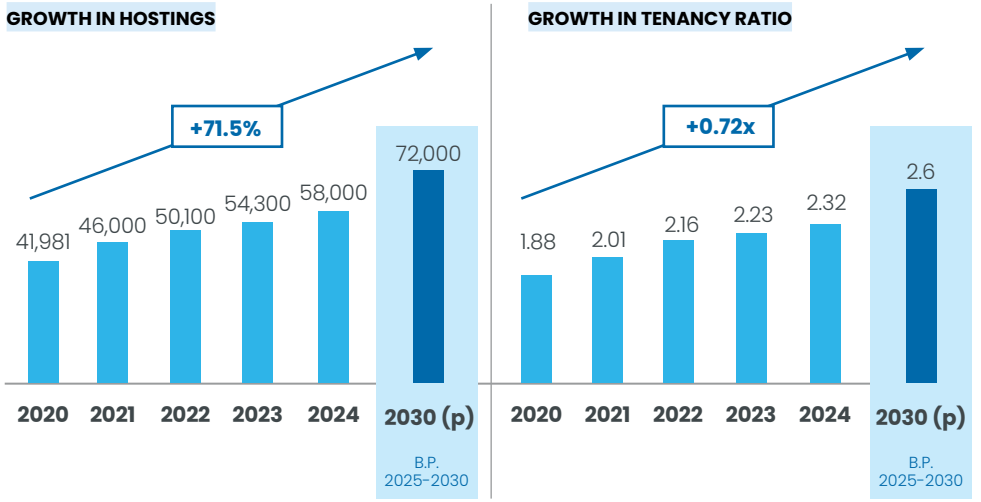


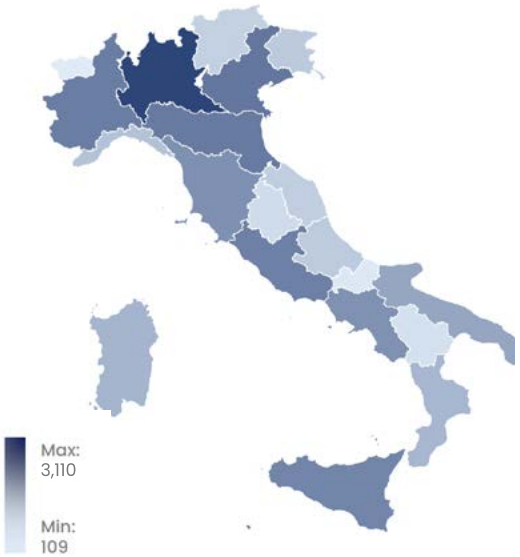
Figure 7. On the left: Number of hospitalities on INWIT towers in 2020-2024 and projection for 2030. On the right: Tenancy ratio (Average number of Mobile Telecommunication Operators per site) of INWIT towers, 2020-2024 and projection for 2030. Source: processing by TEHA based on INWIT data, 2025.

4. FWA: Fixed Wireless Access; OTMO: Other Than Mobile Operators; IoT: Internet of Things.

INWIT also delivers social and economic benefits tied to connectivity and digitalisation throughout the country, thanks to **increasingly widespread coverage** that extends even to remote or hard-to-reach areas. At the national level, thanks to a widespread and collaborative infrastructure model, a steadily increasing tenancy ratio and number of hosts, and continuous infrastructure investments, INWIT has expanded its network to approximately 25,000 towers across Italy. As a result, **the company now has a presence in 82% of Italian municipalities, with an average tower density of one every 3 kilometres in rural areas and one every 500 metres in densely populated urban centres**.

INWIT also won the **NRRP "Italia 5G – Densification Plan**" tender, in a Temporary Grouping of Companies (RTI) with TIM and Vodafone. The project involves the construction of INWIT-owned towers, equipped with the operators' 5G services, **in 1,385 market failure areas**, **or digital divide zones that would otherwise remain out of reach of mobile networks**. As of March 2025, **37% of the areas identified** in the **plan** are **already active**, while over **34%** of the sites are currently under **construction***.

DISTRIBUTION OF INWIT TOWERS BY REGION IN ITALY (MIN - MAX) 2024



As of 2024, the company has at least one tower in over **70%** of Italian municipalities classified as being highly **vulnerable**[5] both **socially** and **economically**. These include **3,160 municipalities** that are home to around **23.2 million residents**, accounting for over **91%** of the **population** living in **disadvantaged areas**. In these territories, in 2024, the company activated more than **1,800 new hosting solutions**, demonstrating its concrete commitment to **ensuring access** to essential digital services even in the most fragile areas.

This coverage capacity also extends to **mountain, rural** and **inner areas**, where INWIT reaches **62.1%, 67.1% and 67.6% of municipalities** respectively. Thanks to its infrastructure network, around **7 million** mountain residents, **12.2 million** rural inhabitants, and **11.5 million** people in so-called inner[6] areas now benefit from reliable, high-performance connectivity.

To further reinforce this commitment, INWIT signed a **memorandum of understanding** with **UNCEM** to bring infrastructure to **900 mountain** and **inner communities** affected by the digital divide, simplifying authorisation processes and accelerating implementation timelines under the Italy 5G Plan. Similarly, INWIT has also signed a **memorandum of understanding** with **ANCI, Infratel and the Digital Transformation Department of the Presidency of the Council of Ministers**.

5. Municipalities with an ISTAT Social and Material Vulnerability Index (IVSM) score above 99.
6. Italian municipalities located more than 30 minutes by road from essential service centres such as healthcare, education and transport.
*Source: https://connetti.italia.it/it/piano/5g/

DISTRIBUTION OF INWIT TOWERS IN ITALY BY AREA TYPE

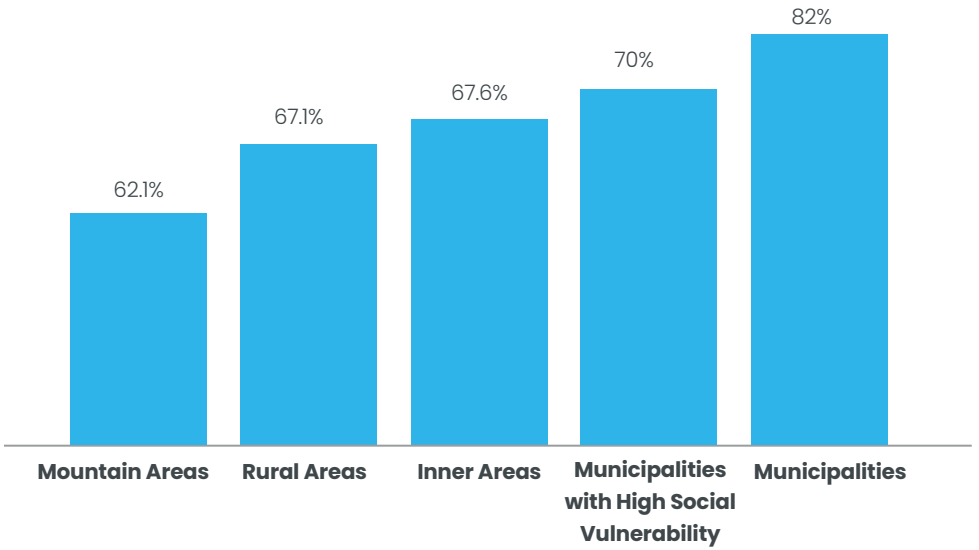


Figure 8. Source: processing by TEHA.

INWIT also continues to invest in the development of **innovative infrastructure and new services**, with further growth prospects extending through to 2030. The 2025–2030 Business Plan outlines a **significant expansion of the Smart Infra portfolio, which includes DAS (Distributed Antenna Systems), fibre backhauling, Internet of Things (IoT), Small Cells and Repeaters**. These systems serve as key enablers for the widespread adoption of **Smart and IoT digital services**, supported by the development of next-generation ultra-fast 5G networks. They are essential for ensuring the capacity and signal quality required by these advanced services. They also guarantee reliable, high-quality multi-operator coverage in areas that are typically challenging to serve—such as **hospitals, airports, train stations, universities, museums, stadiums, and shopping centres, as well as road and motorway tunnels and metro systems**.

INWIT's digital and shared infrastructure already covers over **50 km of metro lines, the main railway stations in Italy, and approximately 1,000 km of road and motorway tunnels nationwide**. In 2024, INWIT acquired exclusive control of **Smart City Roma S.p.A.**, the company leading the **Rome 5G** project through a public-private partnership. Over the next five years, INWIT plans to invest more than **90 million euros** in infrastructure projects to enhance 5G connectivity, Wi-Fi, IoT, small cells and video surveillance across all major hubs in the capital, including subways, public squares and streets.

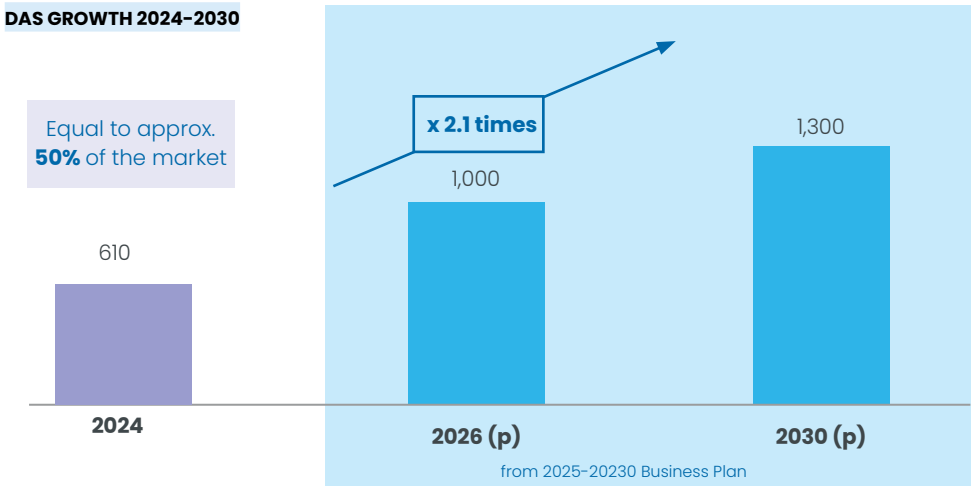


Figure 9. Locations covered by DAS (number), 2024-2030(p). Source: processing by TEHA Group based on INWIT data, 2025.

In the future, **by 2030, the number of locations covered by DAS INWIT is expected to more than double, from the current 610, equal to approximately 50% of the market, to 1,300 locations**.

ENVIRONMENTAL

From an **environmental** perspective, INWIT has consistently pursued **energy efficiency** targets, reducing its energy consumption and contributing to the country's **ecological transition**. Between 2020 and 2024, thanks to the optimisation of energy use and the adoption of targeted technological solutions, the company **avoided**, in relative terms[7], the **consumption** of approximately **108,567 GJ**, a value equivalent to the annual needs of over 11,000 Italian families. This result was also achieved thanks to continuous investments and the installation of **3,711 high efficiency rectifiers** and **2,696 free cooling systems**, which alone generated energy savings for **37,297 GJ** and **78,299 GJ** respectively, for a total of 115,596 GJ of energy saved or self-produced.

This effort also includes a strong expansion of **photovoltaic** installations, with the aim of significantly increasing the share of **renewable energy by 2030**. Between 2021 and 2024, the number of installed systems grew more than 20-fold, reaching a cumulative capacity of **2,687 kWp**, for a total of **650 plants**. This increase enabled the production of approximately **2,986,071 kWh** - equivalent to the annual electricity consumption of over **1,100** Italian households. This dynamic is part of a broader growth trajectory outlined in INWIT's Industrial Plan to 2030, which targets the additional production of approximately **60 MW of photovoltaic energy**. The goal is to cover more than 90% of the company's energy needs through a mix of **renewable** energy purchases and self-production. As of 2024, this percentage was 76%.

7. Compared to the electricity consumption that INWIT would have generated in the period 2020-2023, while maintaining the baseline electricity consumption/revenue ratio of 2020 unchanged.

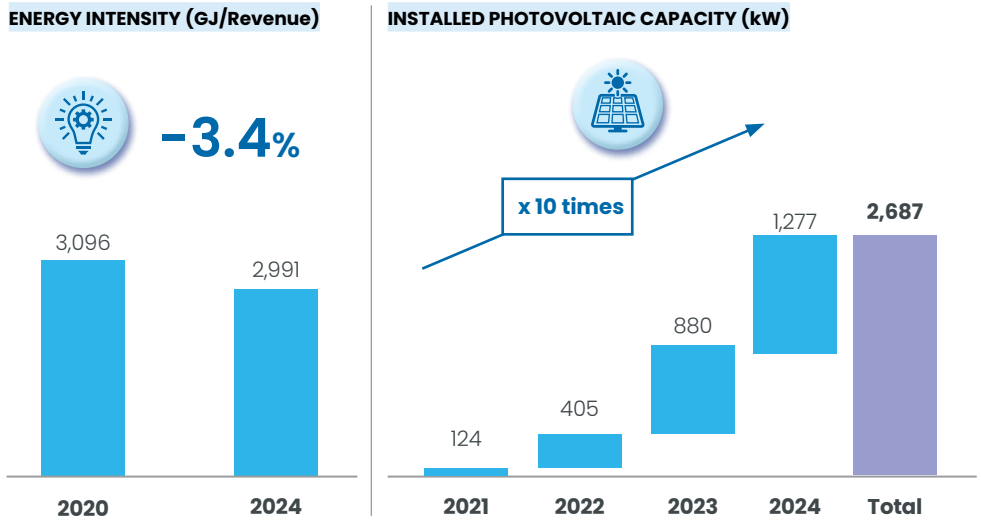


Figure 10. On the left: INWIT relative electricity consumption (GJ per million euros of revenue), 2020-2024. On the right: Installed photovoltaic capacity (kWp), 2021-2024. Source: processing by TEHA based on INWIT data, 2025.

In parallel, INWIT achieved significant results in reducing **total** CO_2 **emissions**[8]. In the 2020-2024 five-year period, avoided emissions exceeded **86,860 tonnes**[9], equivalent to the annual absorption of approximately **766,000 trees** – more than double the tree population of the city of Rome. This result was made possible by a **-33.5% reduction in emission intensity** (tonnes of CO_2 per million euros of revenue) compared to 2020. Since 2024, the company has also started **offsetting Scope 1 and Scope 2 emissions** (market based) through the financing of certified climate action projects.

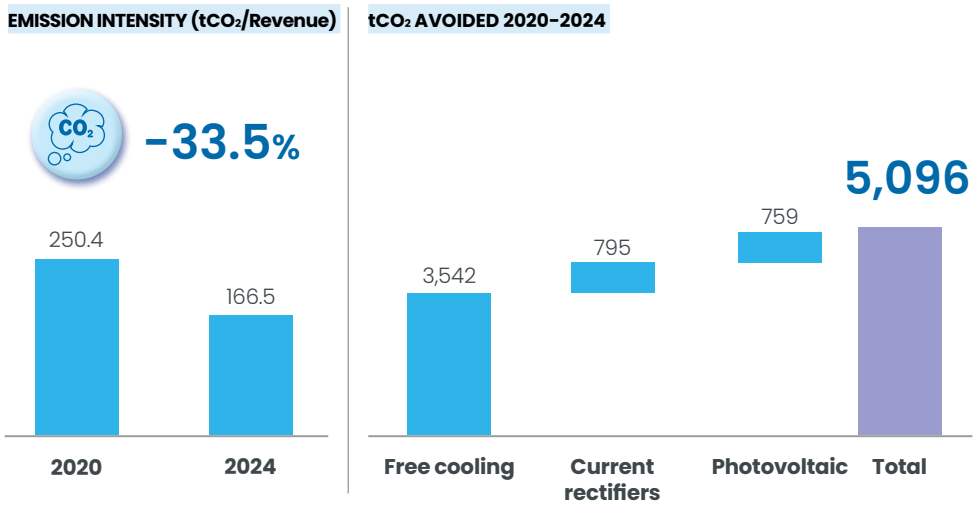


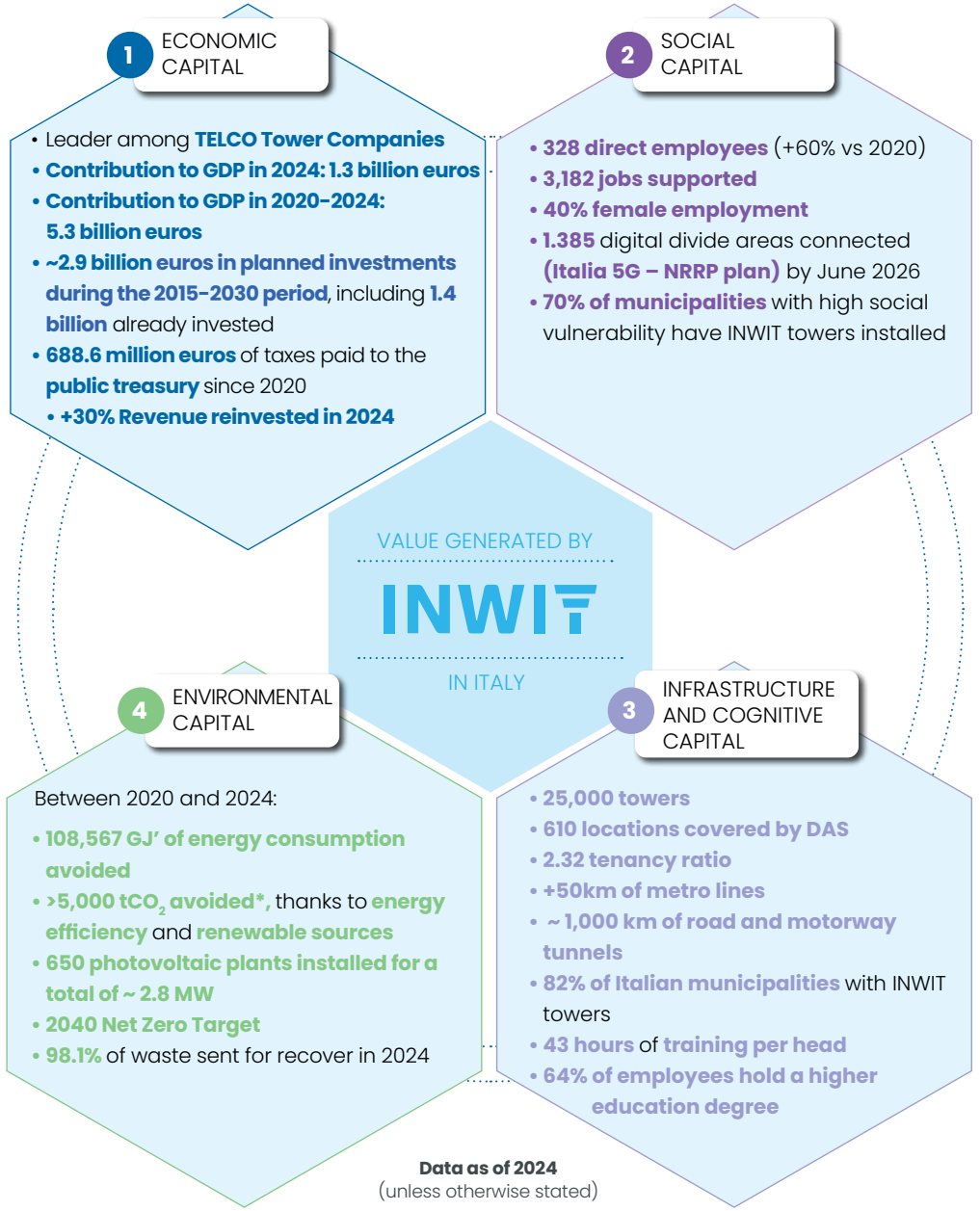
Figure 11: On the left: INWIT's total (Scope 1, Scope 2 and Scope 3 emissions) relative CO_2 emissions (tCO_2 per million euros of revenue), 2020-2024. On the right: CO_2 emissions avoided by INWIT thanks to energy efficiency initiatives and self-production from photovoltaic (tCO_2), 2024. Source: processing by TEHA based on INWIT data, 2025.

At a strategic level, INWIT has adopted **two climate targets, both validated by the Science Based Targets initiative (SBTi)**: a Near-Term target for 2030, which aims for a 42% reduction in Scope 1 and Scope 2 Market-Based emissions compared to 2020 levels, and a **Net Zero target for 2040**, which envisions a 90% reduction in total emissions, with the remaining share neutralised through CO_2 capture and storage technologies.

Finally, INWIT has also made progress in **waste management**. In 2024, the total volume of waste produced dropped by -23.8% compared to the previous year, reaching **844 tonnes**. This improvement is the result of a **product-as-a-service** approach, which optimises material use and reduces consumption and environmental impact. Nearly all discarded materials were sent for recovery: **828 tonnes**, or **98.1% of the total waste**, were processed by specialised facilities, an increase of **0.1 p.p.** over 2023, equivalent to the annual waste output of approximately **1,650 people**.

8. Scope 1, Scope 2 market based and Scope 3 emissions.
9. Compared to the CO_2 emissions that INWIT would have generated in the period 2020-2023, while maintaining the baseline emissions/revenues ratio of 2020 unchanged.

Summary of INWIT's Multidimensional Impacts in Italy



*Based on the same 2020 revenue ratio.

Methodological note

The analysis presented in the study was carried out using an integrated quantitative and qualitative approach, aimed at providing a comprehensive overview of INWIT's positioning and its contribution to national economic growth.

The definition of key KPIs and reference metrics was based on a thorough review of publicly available data – financial statements, annual reports, official public presentations and corporate documents – and was further enriched through a series of direct interviews with company management.

For assessments of positioning and comparative analysis, the benchmarking was conducted across multiple levels: national averages, services sector averages, telecommunications sector averages (ATECO 61), and, where available, data specific to the Telco Tower segment. This methodology made it possible to situate INWIT's performance within a broad and consistent analytical framework that reflects both the unique characteristics of the sector and the competitive landscape.

The economic value generated by INWIT for the national economy was measured in terms of added value, an indicator that captures the wealth a company creates for the territory in which it operates. Direct added value is calculated as the difference between production (output) and the cost of goods and services purchased externally (input). To this are added the components of Indirect and Induced Added Value: the former reflects the impact generated along the economic supply and subcontracting chains, while the latter estimates the effects generated by the consumption of goods and services financed through wages paid to workers directly and indirectly involved.

INFRASTRUTTURE WIRELESS ITALIANE S.P.A.

Registered office
Largo Donegani, 2 - 20121 Milan
email: contatti@inwit.it

Headquarters
Piazza Trento, 10 - 00198 Rome