

Interreg



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Workshop «EU Energy Policy and Recent Efficiency Directive Developments»

New tools and resources for sustainable school buildings.

Ing. Nicola Potenza

Interregional Task Force for School Building in Basilicata/Molise/Puglia

November 5th, 2024



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1. THE TASK FORCE SCHOOL BUILDING PROJECT

The School Building Task Force project, the organization and the activities carried out at the service of local authorities are illustrated.

2. THE REGIONAL SCHOOL BUILDING REGISTER

Law no. 23/1996 establishes the School Building Registry, divided into regions, which constitutes the cognitive tool for the state of school buildings in Italy. The contents and the number of school buildings present in each Italian region are illustrated, with an in-depth analysis for the Puglia Region.

3. SCHOOL BUILDING RESOURCES - 2014/2021

The school building funding that made the maintenance of Italian schools possible in the 2014/2021 period is listed, with a focus on the Puglia Region.

4. NATIONAL RECOVERY AND RESILIENCE PLAN

After an introduction on the PNRR in Italy, investments in school buildings as part of the National Recovery and Resilience Plan are illustrated. In particular, the resources allocated to local authorities in the Puglia Region and the type of interventions financed.

5. THE DNSH PRINCIPLE

The Do Not Significant Harm (DNSH) Principle for access to PNRR funding is described in order for the financed interventions to include measures that concretely contribute to the ecological transition and which, under no circumstances, do not cause significant damage to the environment.

6. SHOWCASING BEST PRACTICES

Some interventions carried out and underway in the Puglia, Basilicata and Molise regions of particular relevance in the field of environmental sustainability and energy efficiency are illustrated.

7. FUNDING OPPORTUNITIES

Public financing opportunities in the field of school construction are presented.

8. PLANNING OF INTERVENTIONS

The procedures are described for the correct planning of interventions on schools that local authorities must implement in order to efficiently use public funding.

Task Force School Building

“Support for the implementation of school building interventions through oversight and support to the beneficiary entities”

Established in May 2014, it is tasked with providing support for the implementation of interventions funded in this sector.

The TFES provides support to local authorities, beneficiaries of the funding, by conducting inspections at the school buildings and areas subject to intervention, in order to assess the implementation status and the consistency of the physical and procedural progress of the projects and works. It also supports the administrations responsible for the resources during the programming, investigation, and allocation phases of the funding.

These activities make it possible to identify any critical issues that hinder or delay the implementation of interventions, suggest possible solutions to remove obstacles to implementation, and facilitate coordination and collaboration between different institutional levels, achieving results in terms of accelerating interventions and improving their quality. The TFES also provides technical and informational support to local authorities for the implementation and systematization of the data entered into the School Building Registry.



Central Coordination: Department for Cohesion Policies and the South. Office IV – Office for Strengthening Administrative Capacity for Cohesion

Interregional Coordinators: Experts for coordinating and supervising the activities of the territorial TFs

Regional Teams: Composed of engineers and architects

MIM Team: Technical and administrative experts assigned to the MIM

Involved Personnel: Over 100 experts

Main lines of activity

Supporto Enti locali
(Comuni, Province, CM)

Sopralluoghi presso le sedi istituzionali degli Enti e le aree di cantiere

Azioni mirate di affiancamento alla produzione di atti ed elaborati in favore degli Enti interessati

Supporto all'implementazione e aggiornamento Anagrafe Edilizia Scolastica

Supporto Ministero Istruzione e Regioni

Supporto nella raccolta dei fabbisogni e selezione degli interventi

Attività connesse alla verifica e controllo delle procedure e della spesa sostenuta dai beneficiari

Strengths:

- Rapid transfer of information within and outside the organizational structure
- Greater sharing of *best practices* between entities and territories

Legge 11 gennaio 1996, n. 23

Norme per l'edilizia scolastica.

(pubblicata nella Gazzetta Ufficiale n. 15 del 19/01/1996)

Art. 7

Anagrafe dell'edilizia scolastica

[1] Il Ministero della pubblica istruzione realizza e cura l'aggiornamento, nell'ambito del proprio sistema informativo e con la collaborazione degli enti locali interessati, di un'anagrafe nazionale dell'edilizia scolastica diretta ad accertare la consistenza, la situazione e la funzionalità del patrimonio edilizio scolastico. Detta anagrafe è articolata per regioni e costituisce lo strumento conoscitivo fondamentale ai fini dei diversi livelli di programmazione degli interventi nel settore.

[2] La metodologia e le modalità di rilevazione per la realizzazione dell'anagrafe nazionale di cui al comma 1 sono determinate dal Ministro della pubblica istruzione, con proprio decreto, sentito l'Osservatorio per l'edilizia scolastica.

SNAES

Sistema Nazionale dell'Anagrafe dell'Edilizia Scolastica

Anagrafe

Online i dati aggiornati dell'Anagrafe dell'edilizia.

Al via l'operazione trasparenza sui dati dell'Anagrafe dell'edilizia scolastica, da oggi disponibili in chiaro, per singolo istituto scolastico, attraverso il portale del Ministero dell'Istruzione, dell'Università e della Ricerca nella [sezione dedicata ai dati e open data](#).



Edifici Attivi

40.221

Divided into 8 main sections

Compilation by the local authorities managing the buildings

The screenshot displays the 'Identificazione dell'edificio' section of the web application. At the top, there is a navigation bar with tabs labeled A through H, with 'A' selected. Below the navigation bar, there are buttons for 'STAMPA TUTTE LE SCHEDA' and 'VALIDAZIONE SCHEDA'. The main content area is titled 'DATI EDIFICIO' and contains several input fields for building identification data. The fields are organized into two columns. The left column includes: 'GESTORE IMMOBILE' (Comune), 'CODICE EDIFICIO' (0720040037), 'PROVINCIA' (Bari), 'COD. PROVINCIA' (072), 'FRAZIONE O LOCALITÀ' (ACQUAVIVA DELLE FONTI), 'VIA, PIAZZA ECC.' (Piazza), and 'CAP' (70021). The right column includes: 'CODICE IMMOBILE NELL'INVENTARIO DELL'ENTE GESTORE', 'COMUNE' (Acquaviva delle Fonti), 'EOD. COMUNE' (072001), 'DENOMIN. STRADA' (GARIBOLDI), and 'CIVICO' (592). Below these fields, there are two input boxes for 'GEOREFERENZIAZIONE EDIFICIO (centro del tetto dell'edificio)' with values 40.896796 and 16.845857. A section titled 'Indicare quali ambienti funzionali sono presenti' contains three groups of radio buttons for selecting functional spaces: 1 - Spazi didattici, 2 - Spazi collettivi, and 3 - Spazi amministrativi. Each group has 'SI' and 'NO' options. There are also several 'Se SI indicare:' fields for specific room types like 'aula', 'aula informatiche', 'aula tecniche', 'mensa', 'auditorium/aula magna', 'palestra', and 'piscina'. At the bottom, there is a checkbox for 'EDIFICIO STRATEGICO PER LA PROTEZIONE CIVILE' and an 'AGGIORNA' button.

SECTION A – BUILDING IDENTIFICATION

SECTION B – GENERAL INFORMATION ABOUT THE BUILDING LOCATION

- B1 – LOCATION
 - B1.1 – STRUCTURAL UNITS AND BUILDING BLOCKS
- B2 – CATASTAL DATA
- B3 – CONNECTIONS
- B4 – ENVIRONMENT AND SCHOOL AREA
- B5 – CHARACTERISTICS OF THE SCHOOL AREA

SECTION C – GENERAL INFORMATION ABOUT THE BUILDING

- C1 – RIGHT OF USE
- C2 – BUILDING USE
- C3 – ORIGIN AND AGE
- C4 – BUILDING MORPHOLOGY
- C5 – OVERALL DIMENSIONS
- C6 – CONSTRUCTION TECHNOLOGY
- C7 – STATE OF CONSERVATION

SECTION D – SAFETY CONDITIONS AND SPECIAL REQUIREMENTS

- D1 – CERTIFICATIONS
- D2 – FIRE SAFETY DOCUMENTATION
- D3 – SAFETY EQUIPMENT
- D4 – SPECIAL REQUIREMENTS

SECTION E – FUNCTIONAL CHARACTERISTICS AND DIMENSIONS OF SPACES

SECTION F – SPORTS FACILITIES

- F1 – GYMS
- F2 – OUTDOOR FACILITIES AND SWIMMING POOLS

SECTION G – OTHER INFORMATION

- G1 – INFORMATION ABOUT THE CANTEEN SERVICE
- G2 – FARM ENTERPRISE

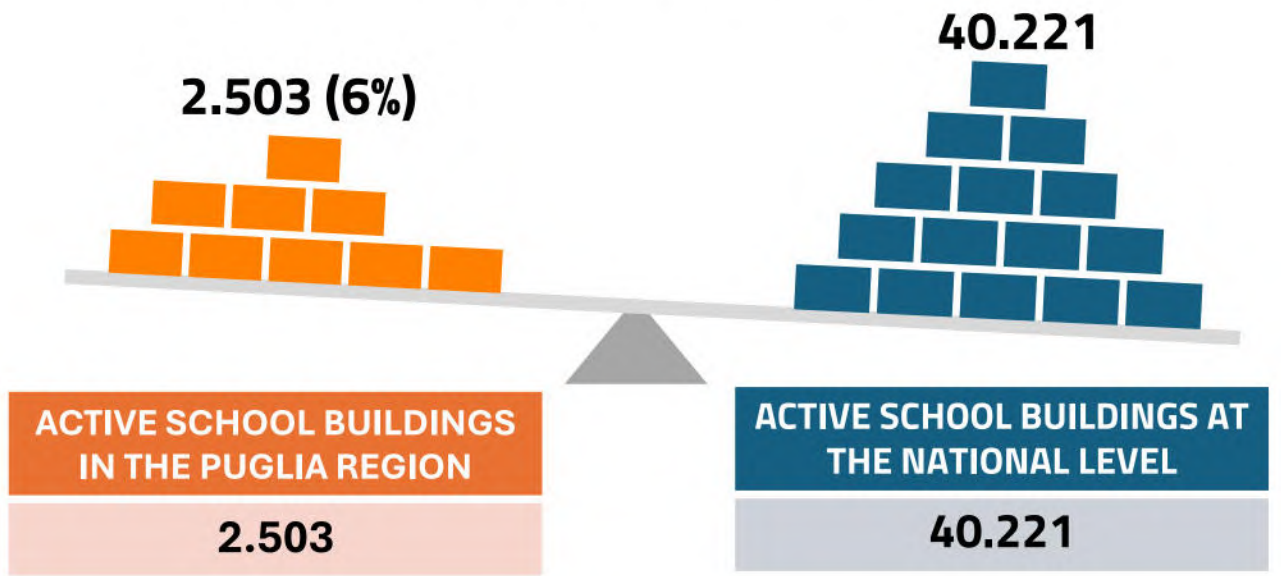
SECTION H – FUNDING

- H1 – INVESTMENTS MADE
- H2 – INVESTMENTS IN THE THREE-YEAR PLAN

SCHOOL BUILDINGS BY REGION



COMPARISON OF THE PUGLIA REGION WITH THE NATIONAL DATA





40.221

"ACTIVE" SCHOOL BUILDINGS

(housing public schools of all levels and grades)

82%

33.085
FIRST CYCLE
SCHOOL
BUILDINGS

18%

7.136
SECOND CYCLE
SCHOOL
BUILDINGS



40.466

SCHOOL LOCATIONS (Preschool, Primary, First and Second Cycle)

87%

35.150
FIRST CYCLE
SCHOOL
BUILDINGS

13%

5.316
SECOND CYCLE
SCHOOL
BUILDINGS



7.286.151

STUDENTS

64%

4.745.456
STUDENTS OF THE
FIRST CYCLE OF
EDUCATION

36%

2.645.849
STUDENTS OF THE
SECOND CYCLE OF
EDUCATION



366.310

CLASSES

66%

241.758
CLASSES OF THE
FIRST CYCLE OF
EDUCATION

34%

124.552
CLASSES OF THE
SECOND CYCLE OF
EDUCATION

COMPARISON OF THE PUGLIA REGION WITH THE NATIONAL DATA

ACTIVE SCHOOL BUILDINGS IN THE PUGLIA REGION

2.503

of which geolocated: 99,7%

ACTIVE SCHOOL BUILDINGS ON NATIONAL LEVEL

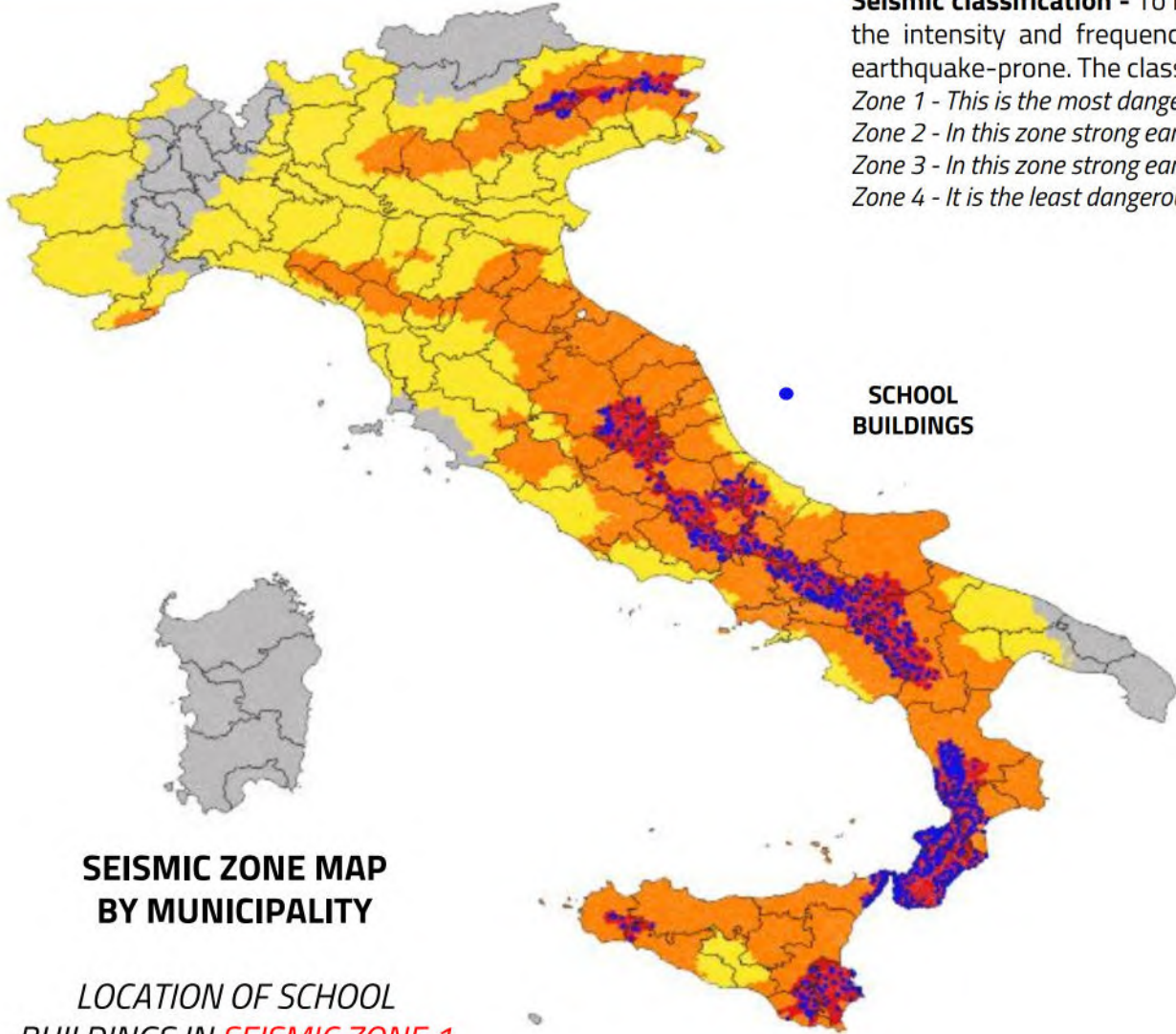
40.221

of which geolocated: 98,9%



Seismic classification - To reduce the effects of the earthquake, state action has focused on classifying the territory, based on the intensity and frequency of past earthquakes, and applying special standards for construction in areas classified as earthquake-prone. The classification is divided into 4 zones::

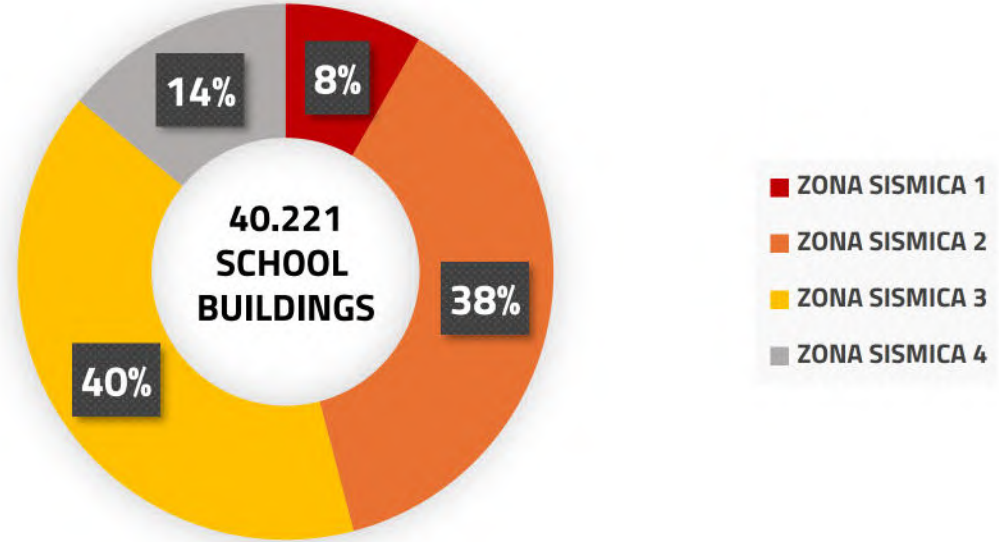
- Zone 1 - This is the most dangerous zone. The probability of a strong earthquake happening is high
- Zone 2 - In this zone strong earthquakes are possible
- Zone 3 - In this zone strong earthquakes are less likely than in zone 1 and 2
- Zone 4 - It is the least dangerous zone: the probability of an earthquake happening is very low



SEISMIC ZONE MAP BY MUNICIPALITY

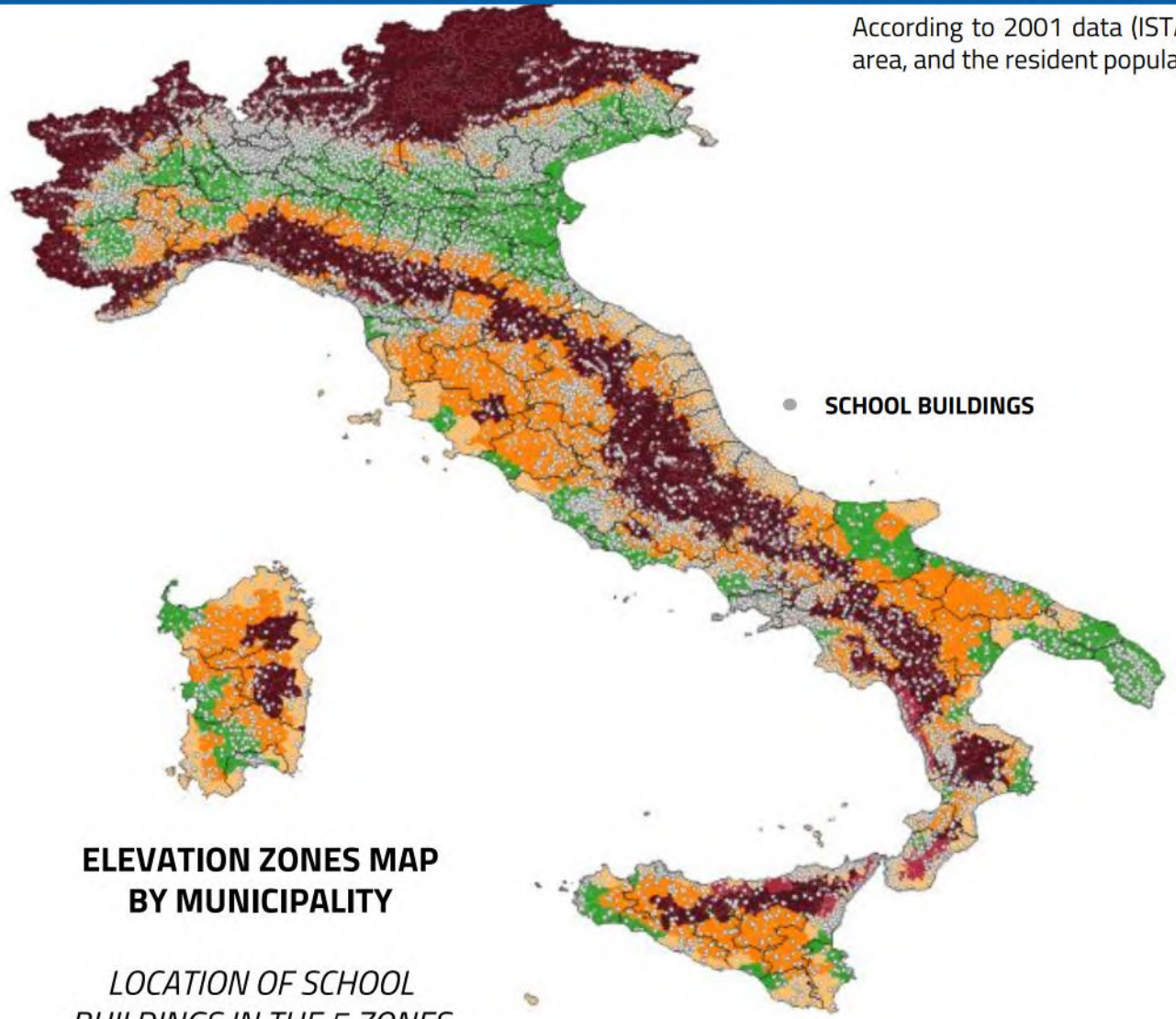
LOCATION OF SCHOOL BUILDINGS IN **SEISMIC ZONE 1** AMOUNTING TO MORE THAN **3.600**

% SCHOOL BUILDINGS BY SEISMIC ZONE



Source: Open Data Ministry of Education, Civil Defense Department and Istat data on Soluxioni Srl processing

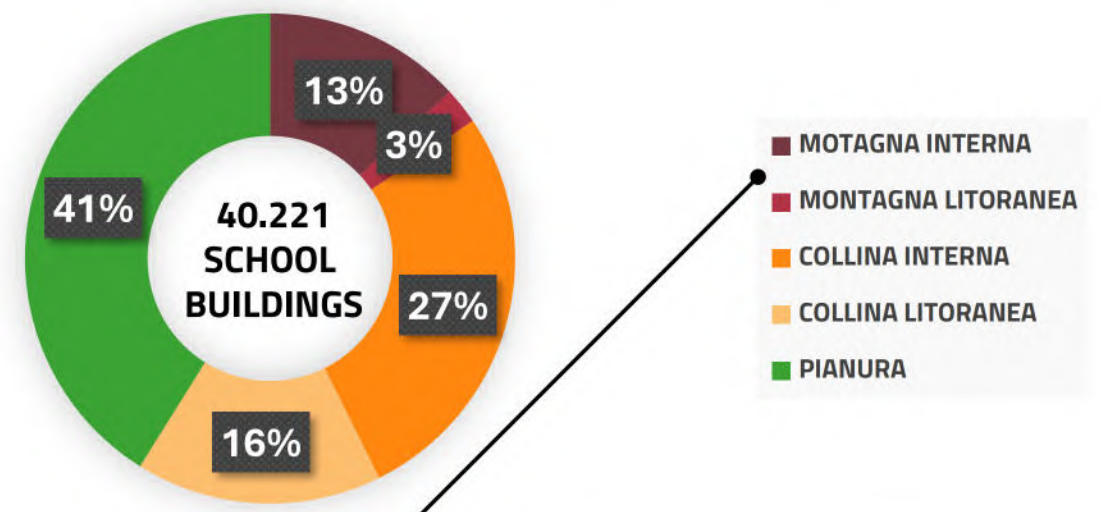
According to 2001 data (ISTAT), the **mountain area** of the country is 10.611.200 hectares, accounting for **35.2%** of the total area, and the resident population in mountain municipalities is **7.405.369**, accounting for **12.99%** of the total.



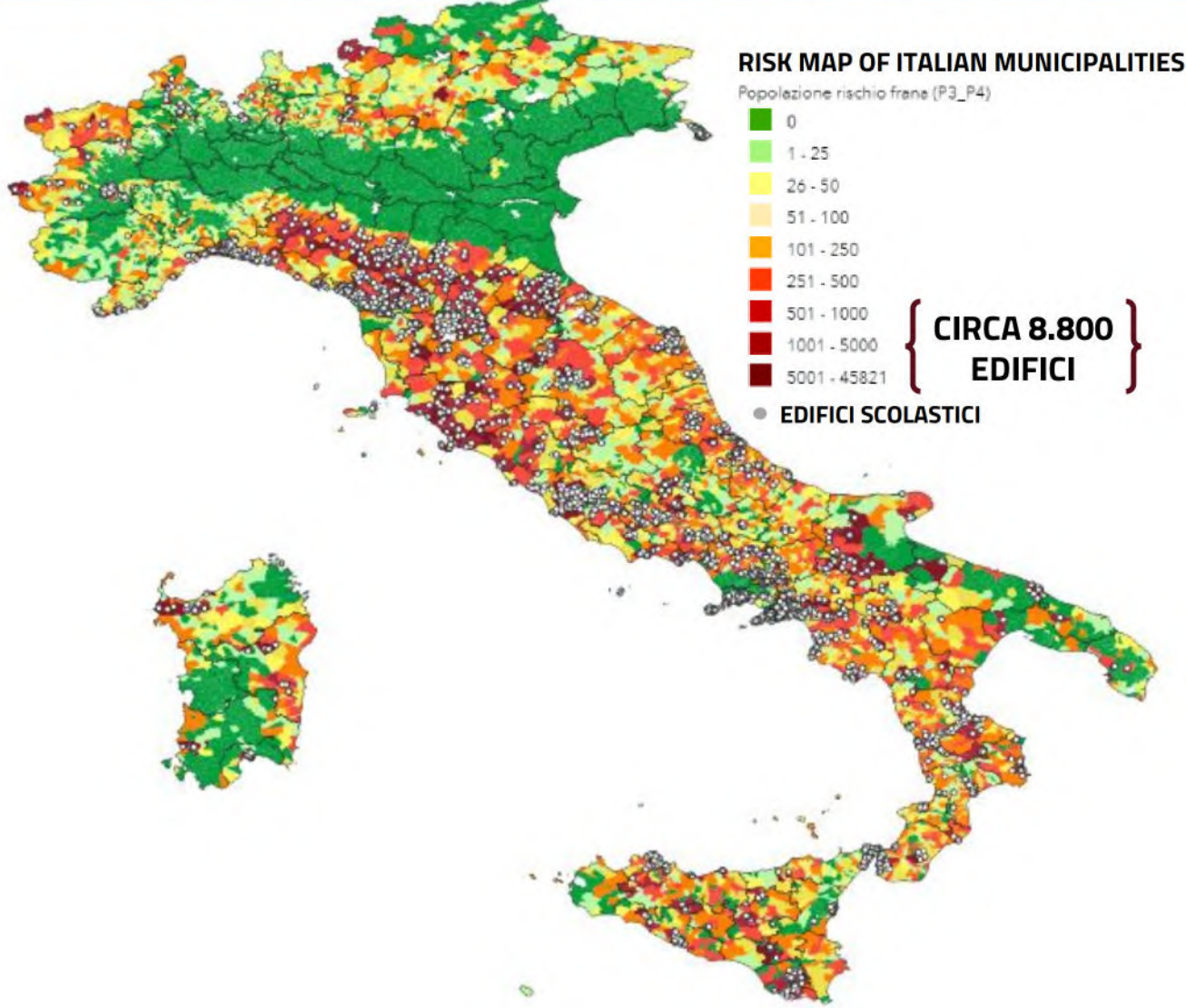
ELEVATION ZONES MAP BY MUNICIPALITY

LOCATION OF SCHOOL BUILDINGS IN THE 5 ZONES

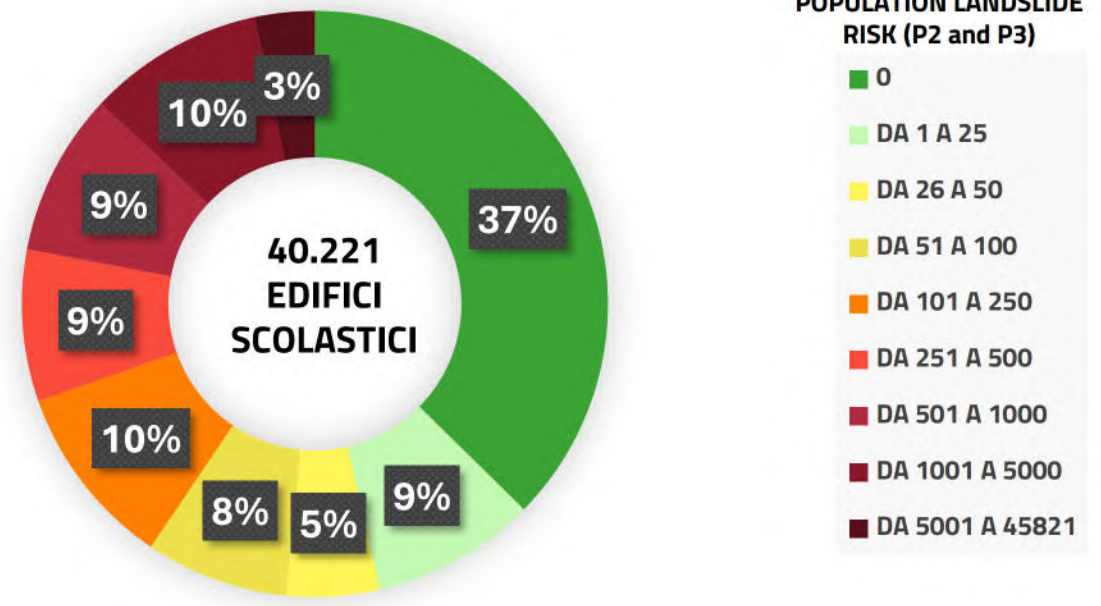
% SCHOOL BUILDINGS BY ELEVATION ZONES



more than 6.400 buildings fall in mountain areas



% SCHOOL BUILDINGS IN THE MUNICIPALITIES WITH POPULATION AT RISK OF LANDSLIDE (P3 and P4)

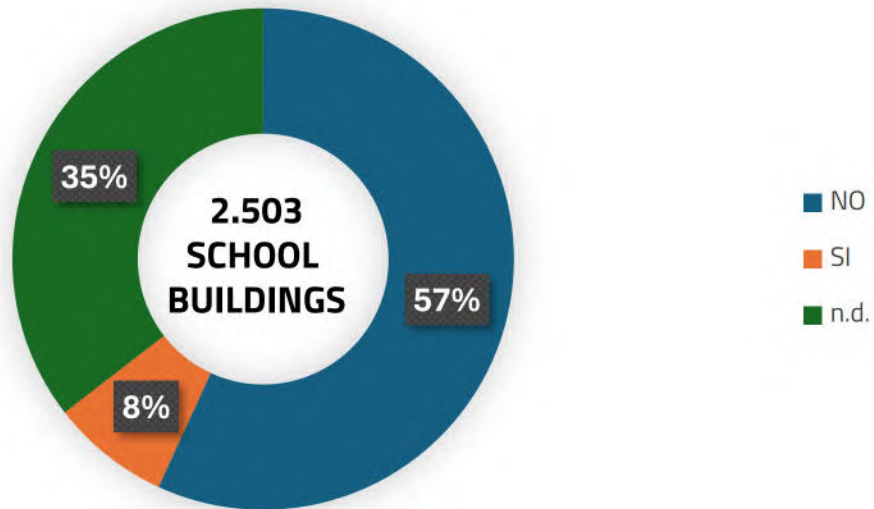


Source: Open Data Ministry of Education, Civil Defense Department and Istat data on Soluxioni Srl processing

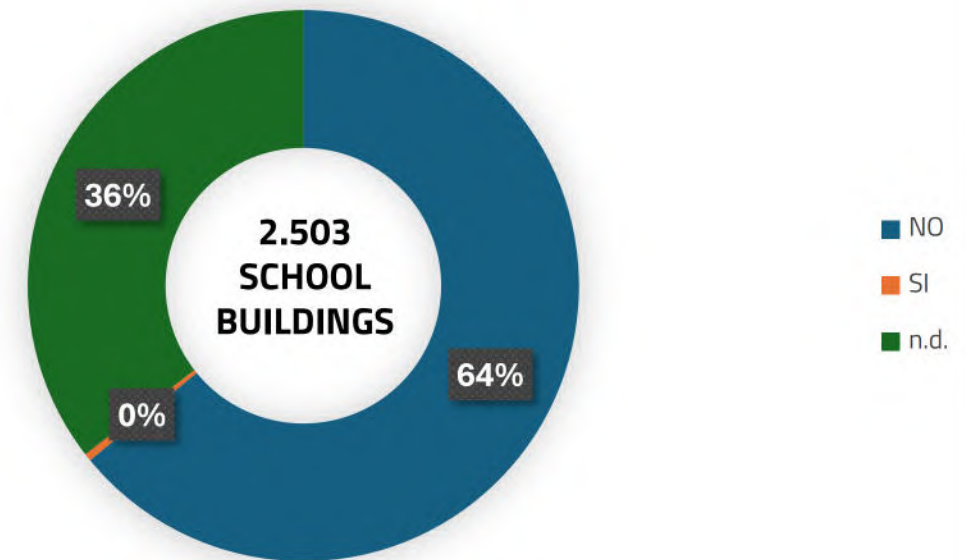


TI TROVI NELLA SEZIONE
Notizie generali sull'edificio scolastico

% PRESENCE OF ENERGY PERFORMANCE CERTIFICATE (APE)

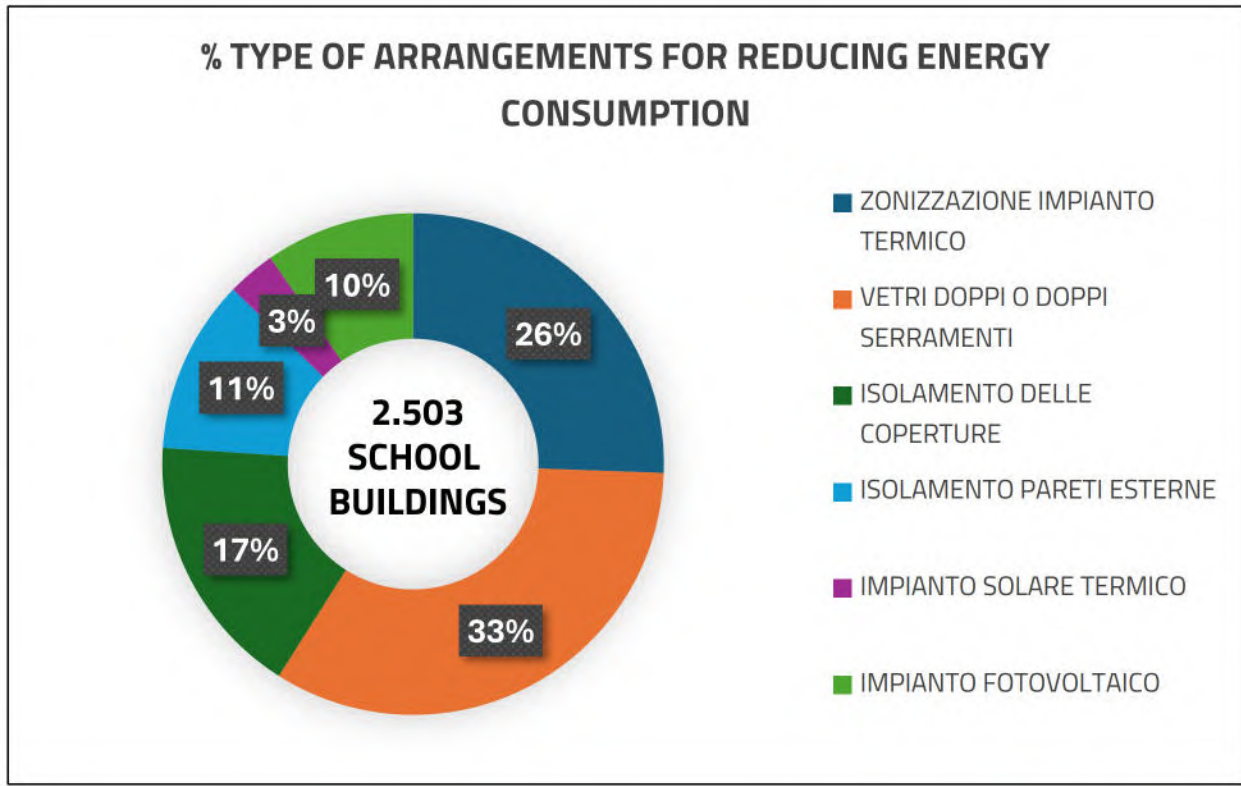
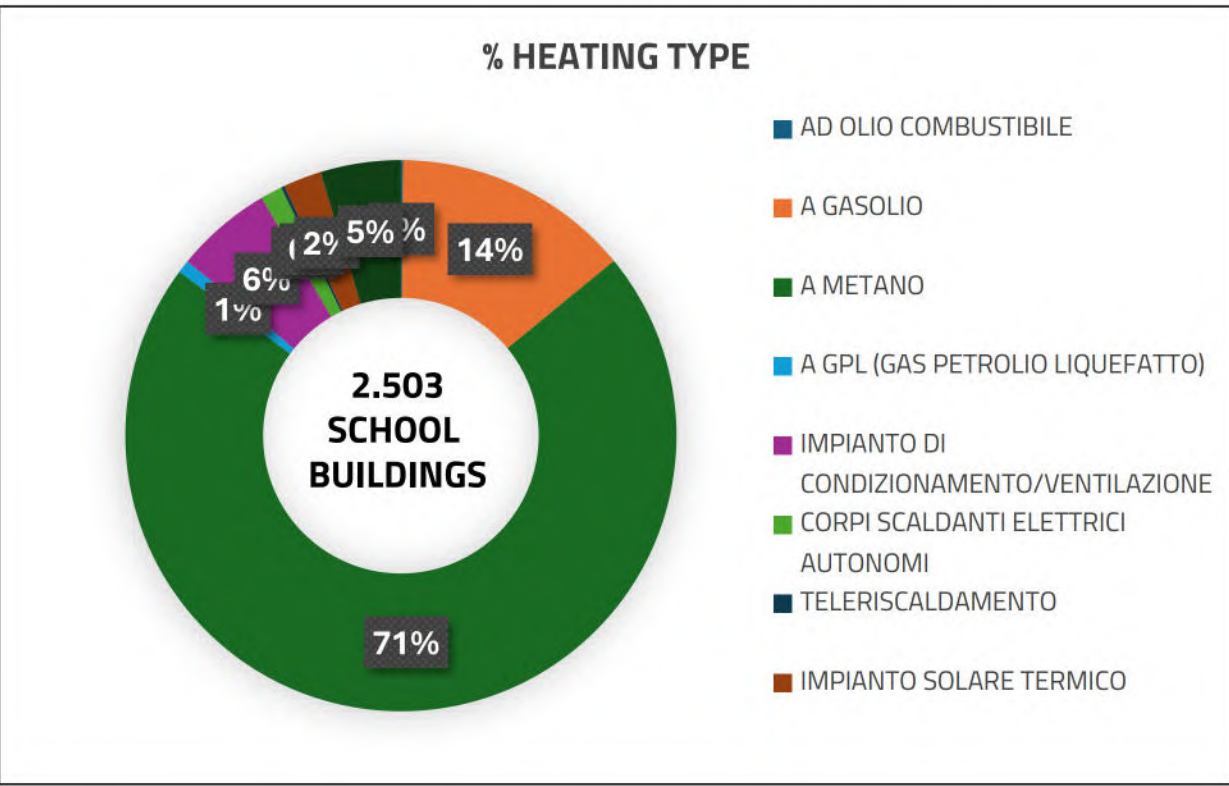


% THE SCHOOL BUILDING IS NZEB





TI TROVI NELLA SEZIONE
Notizie generali sull'edificio scolastico



SCHOOL BUILDING RESOURCES - period 2014/2021



Interventi post indagini	PWRR FUTURA	PIANO 2020
Asili nido, Scuole dell'infanzia e Centri Polifunzionali	Fondi edilizia scolastica per avvio anno scolastico 2021-2022	Fondi edilizia scolastica per avvio anno scolastico 2020-2021
Finanziamenti Province e Città metropolitane	PIANO 2019	SISMA 120 ABRUZZO, LAZIO, MARCHE E UMBRIA
PIANO PALESTRE	PIANO ANTINCENDIO	INDAGINI DIAGNOSTICHE
MUTUI BEI	PROGRAMMAZIONE NAZIONALE	SCUOLE SICURE
8 x 1000	ALLUVIONE SARDEGNA 2013	SCUOLE ANTISISMICHE
POLI PER L'INFANZIA	SCUOLE NUOVE	#SCUOLEINNOVATIVE
FONDO COMMA 140	VERIFICHE VULNERABILITÀ SISMICA	Fondi INAIL
PROGETTAZIONE DI INTERVENTI DI MESSA IN SICUREZZA DI EDIFICI SCOLASTICI		

RESOURCES ALLOCATED IN THE AREA OF SCHOOL BUILDING PUGLIA REGION - period 2014/2021



Total interventions: 1.016



Total resources: € 908.029.050,06



Local governments: 246 su 263

In addition, 1.400 grants were disbursed by MIM and MIT for the design of interventions, conducting vulnerability checks, diagnostic investigations of attics, and fire safety, totaling more than 31 million euros.

INTERVENTIONS PRESIDED BY THE PUGLIA SCHOOL BUILDING TASK FORCE - period 2014/2021

615

Number of interventions

234

Local governments

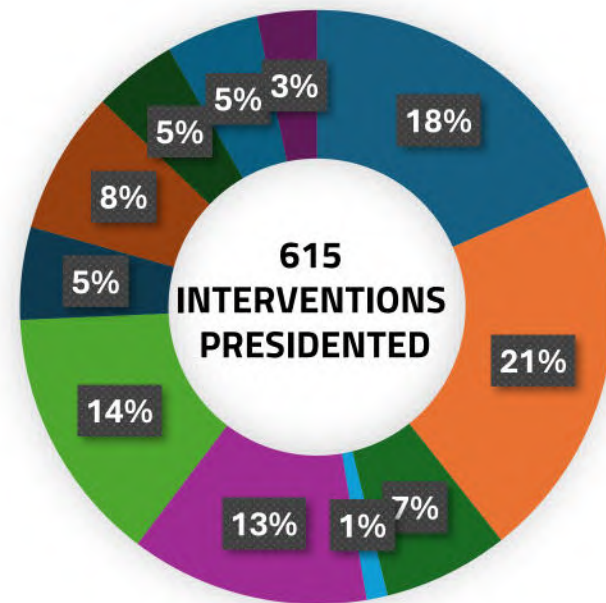
577,6 mln €

Funding value

939.135 €

Average value of intervention

% TYPE OF INTERVENTION



- Adeguamento impiantistico
- Adeguamento impiantistico - Efficietamento energetico
- Adeguamento strutturale
- Adeguamento strutturale - Efficietamento energetico
- Adeguamento strutturale e impiantistico
- Adeguamento strutturale e impiantistico - Efficietamento energetico
- Ampliamento
- Demolizione e ricostruzione
- Efficietamento energetico
- Manutenzione straordinaria
- Nuova costruzione

Of the 615 interventions overseen by TFES, 99 involve new construction and 250 involve energy efficiency work totaling 373 million euros



Italiadomani

PIANO NAZIONALE DI RIPRESA E RESILIENZA

L'importo totale del PNRR è di:

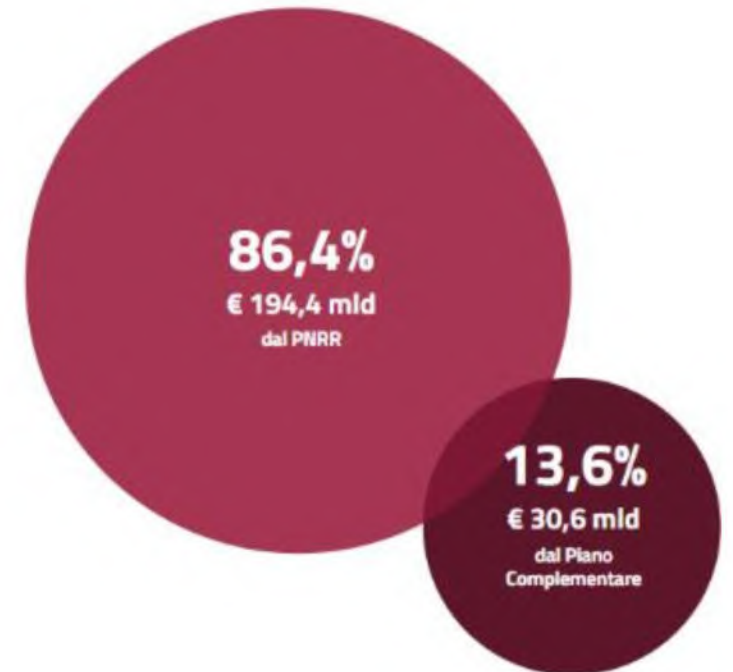
€ 194,4 mld

Importo totale **€ 225 mld**



Sovvenzioni a fondo perduto (*grants*):

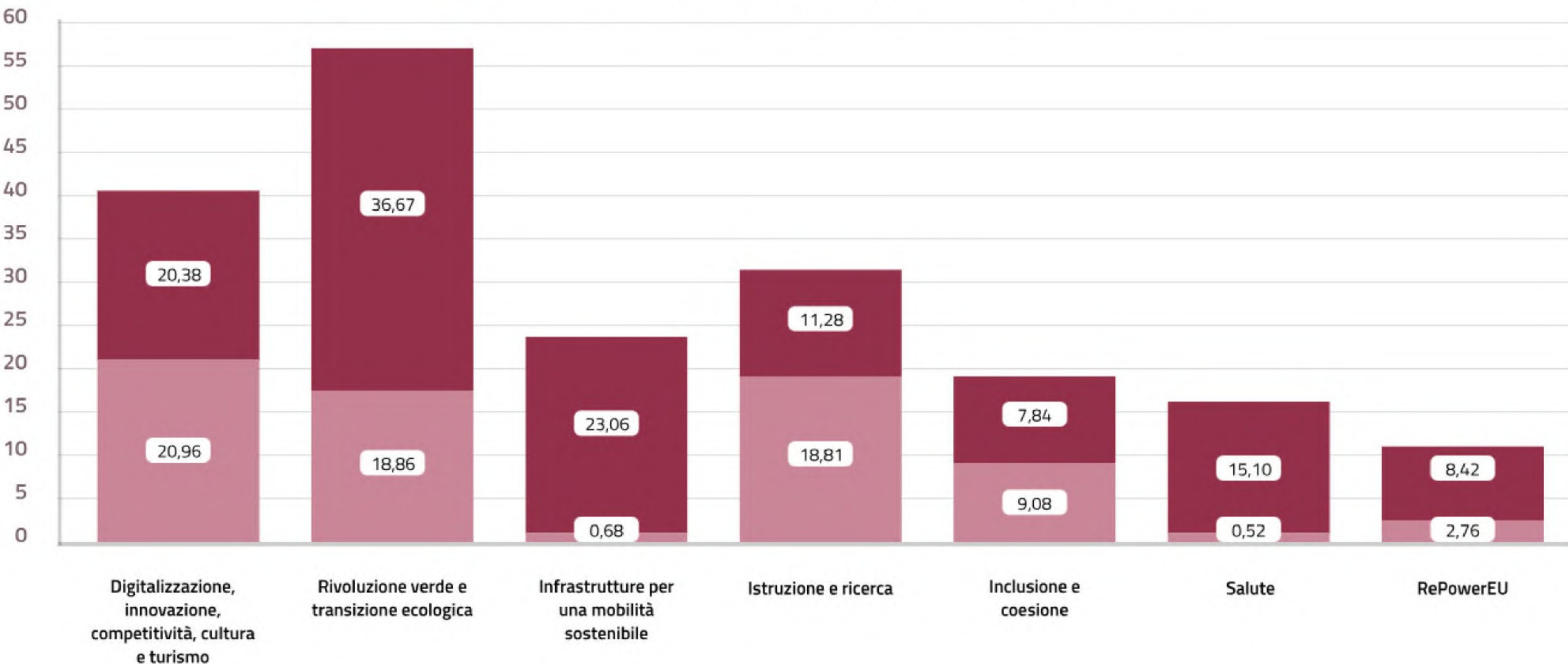
71,8 mld di euro





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PIANO NAZIONALE DI RIPRESA E RESILIENZA



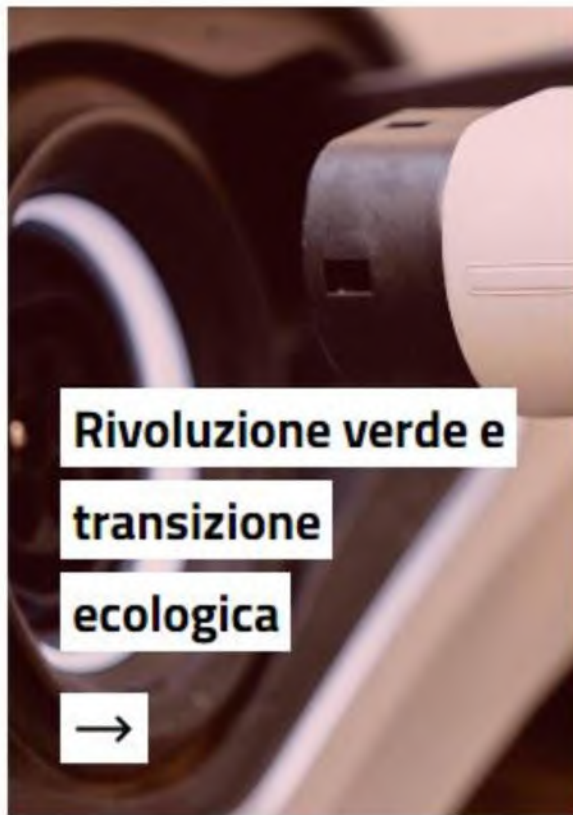


Totale destinato alla Missione

€ 41,34 mld

21,26 %

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 55,52 mld

28,56 %

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 23,74 mld

12,21 %

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 30,09 mld

15,48 %

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 16,92 mld

8,70%

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 15,62 mld

8,03%

dell'importo
totale del PNRR



Totale destinato alla Missione

€ 11,18 mld

5,75%

dell'importo
totale del PNRR

FUTURA

PNRR ISTRUZIONE LA SCUOLA PER L'ITALIA DI DOMANI



Finanziato dall'Unione europea
NextGenerationEU



Ministero dell'Istruzione e del Merito

L'importo totale è di:

€ 12,125 mld

COSTRUZIONE DI NUOVE SCUOLE

Assigned resources

1,006 mld

ASILI NIDO E SCUOLE DELL'INFANZIA

Assigned resources

3,245 mld

POTENZIAMENTO DELLE INFRASTRUTTURE PER LO SPORT A SCUOLA

Assigned resources

0,300 mld

MENSE

Assigned resources

1,075 mld

MESSA IN SICUREZZA E RIQUALIFICAZIONE DELLE SCUOLE

Assigned resources

4,399 mld

SCUOLE 4.0: NUOVE AULE DIDATTICHE E LABORATORI

Assigned resources

2,100 mld



PNRR EDUCATION INFRASTRUCTURE INVESTMENT	PUGLIA REGION Local governments	PUGLIA REGION Educational institutions
Number of interventions funded	774 of which 539 were native projects	628
Total funding amount	€ 1.050.836.406 of which 688.5 mln native projects	€ 130.281.828
Number of entities/educational institutions	234 su 263	628

PNRR EDUCATION. The school for tomorrow's Italy.



COSTRUZIONE DI NUOVE SCUOLE



ASILI NIDO E SCUOLE DELL'INFANZIA



POTENZIAMENTO DELLE INFRASTRUTTURE PER LO SPORT A SCUOLA



MENSE



MESSA IN SICUREZZA E RIQUALIFICAZIONE DELLE SCUOLE



SCUOLE 4.0: NUOVE AULE DIDATTICHE E LABORATORI

80,2 million

12 new schools

418,4 million

217 kindergartens

23 poles for children

36 preschools

14,2 million

18 gyms to be renovated

6 new gyms

21,4 million °

2 gyms to be renovated

11 new gyms

37,4 million

71 new canteens

20 existing canteens

55,9 million *

98 new canteens

6 existing canteens

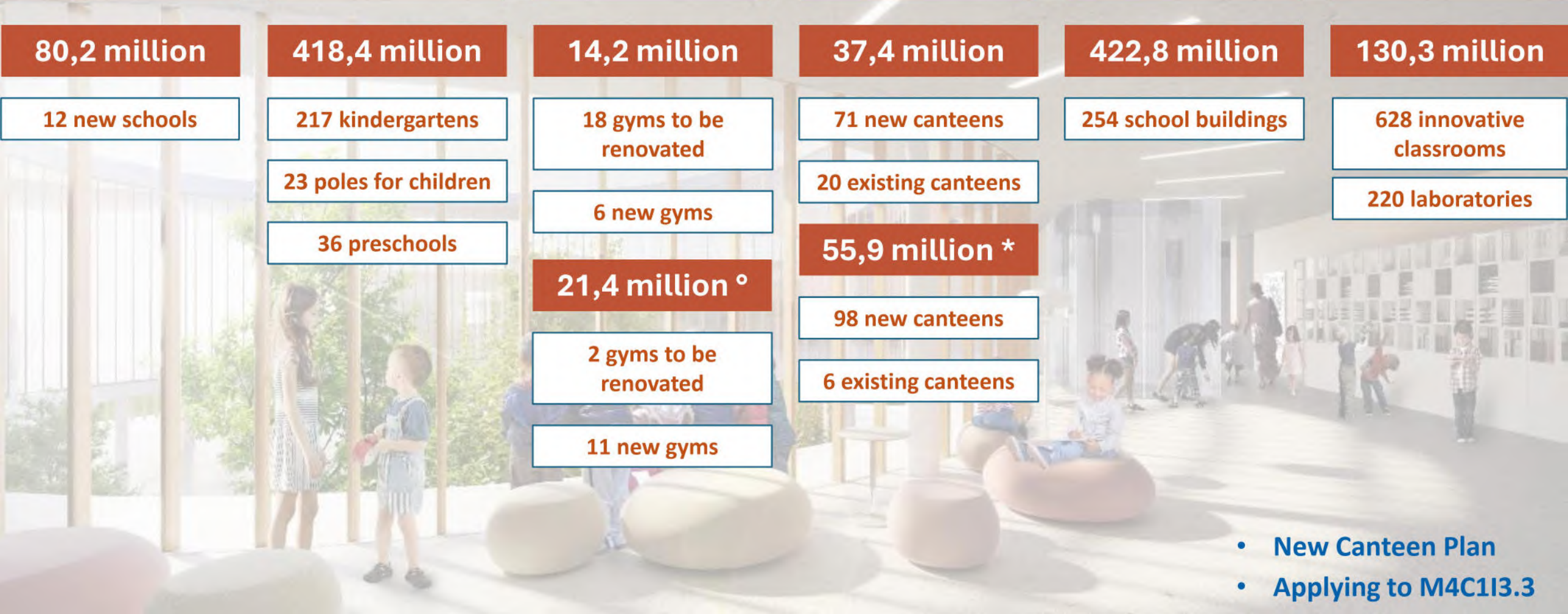
422,8 million

254 school buildings

130,3 million

628 innovative classrooms

220 laboratories



- New Canteen Plan
- Applying to M4C1I3.3

Access to funding is conditional on National Recovery and Resilience Plans (NRPs) including measures that concretely contribute 37 percent of resources to the ecological transition and, in no case, violate the principle of Do Not Significant Harm (DNSH), i.e., do not cause significant harm to the environment.

DNSH PRINCIPLE - DEFINITION AND APPLICATION

The **“do no significant harm” principle** requires that every economic activity contribute substantially to ecosystem protection without harming any of the following environmental objectives:

1. **mitigation of climate change**
2. **adaptation to climate change**
3. **sustainable use or protection of water and marine resources**
4. **circular economy, including waste prevention, reuse and recycling**
5. **pollution prevention and reduction**
6. **protection and restoration of biodiversity and ecosystems**

Administrations are **required to ensure and concretely verify** that each measure and project funded **does not significantly harm environmental objectives** by adopting specific requirements in major programmatic and implementation acts.

To facilitate member states in evaluating the DNSH principle, the Commission has prepared a special checklist.

1. CLIMATE CHANGE MITIGATION

- **Reduce energy consumption** and significantly increase energy efficiency, with a reduction in energy consumption of at least 20%. Expect to achieve a relative improvement in primary energy requirements.
 - New construction will ensure the construction of **NZEB buildings** in compliance with national regulations.
 - The measure meets **green public procurement (Minimum Environmental Criteria - CAM)**.
 - Need to purchase **environmentally sustainable digital equipment** that fully complies with environmental standards , while ensuring the highest level of energy savings.
- **Energy Performance Certificate (APE)** issued by a qualified person certifying the near-zero energy building (NZEB) classification.
 - **Affidavit from qualified person** certifying that the building's overall non-renewable energy performance index (EPgl,tot) is at least 20 percent below the threshold set for near-zero energy buildings (NZEB) requirements.

2. ADAPTATION TO CLIMATE CHANGE

- For buildings located in areas of high hydrogeological risk, only **new construction with relocation** will be eligible, and for major renovations carried out in areas of high seismic risk, **seismic retrofitting** will be required.
 - The buildings to be constructed will ensure optimal insulation and low consumption, largely covered by **self-production of energy, obtained from renewable sources**.
 - Building envelopes will be designed to ensure **building insulation**, to avoid heat loss and overheating in summer.
 - Buildings will be equipped with **air recirculation and air quality control systems**.
 - For new buildings or buildings undergoing major renovations, measures will be taken to **improve accessibility for people with reduced mobility**.
- Check the specifications in the **technical report on Climate Risk Analysis** and related adaptation solutions.

3. SUSTAINABLE USE OR PROTECTION OF WATER AND MARINE RESOURCES

- All relevant water appliances must be in the **top 2 classes for water consumption** of the EU water label.
- Upon acceptance of material sheets, **verify that consumption characteristics** (lt/minute, lt/hour, dimensions) are compatible with international product standards.
- The latter point can be considered verified by complying with the C.A.M. criterion on water saving and sanitary water systems (2.3.9).

4. CIRCULAR ECONOMY, INCLUDING WASTE PREVENTION, REUSE AND RECYCLING

- At least 80% (by weight) of the nonhazardous construction and demolition waste generated at the site must be prepared for **reuse or sent for recycling or other material recovery**, including backfilling operations that use the waste to replace other materials.
- **Verification of FIRs (Waste Identification Forms)** produced by the contractor and preparation of a summary table showing the percentage of waste going for Recycling or Recovery.
- **Declaration by the disposal center** as the recipient of the waste on the amount of waste sent for recovery related to the work site being processed.
- **Drafting of the report accompanying the SALs** indicating the waste produced, showing that at least 70% has destination to an “R” operation.
- Both points can be considered verified by meeting the C.A.M. criteria on Selective demolition, recovery and recycling (2.6.2) and Disassembly and end-of-life (2.4.14).

5. PREVENZIONE E RIDUZIONE DELL'INQUINAMENTO

- Saranno adottate misure per ridurre le emissioni sonore e le emissioni di polveri e inquinanti durante i lavori di costruzione.
 - I componenti ed i materiali da costruzione non contengono amianto.
 - Previste azioni volte all'utilizzo di materiali e prodotti caratterizzati da un basso impatto ambientale.
- **Verification of the PAC (Environmental Site Plan)**, which must be prepared by the contractor prior to the start of work and, where required by regional regulations, forwarded to ARPA.
 - Upon acceptance of the material sheets, **check for the non-existence of components, products and materials containing hazardous substances** referred to in the "Authorization List" found in the REACH Regulation.
 - Both points can be considered verified by complying with the C.A.M. criteria related to Environmental Performance of the Construction Site (2.6.1) and Technical Specifications for Construction Products (2.5).

6. PROTECTION AND RESTORATION OF BIODIVERSITY AND ECOSYSTEMS

- Check whether the planned interventions affect or are located in or near biosensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites, and major biodiversity areas), as well as other protected areas.
 - Where wood is used for the construction of structures, cladding and finishes, it must be ensured that 80% of the virgin wood used is FSC/PEFC certified or other equivalent certification.
- Upon acceptance of material sheets, verify the presence of FSC/PEFC certification or other equivalent product certification issued under accreditation for virgin wood.
 - The latter point can be considered verified by meeting the C.A.M. criterion for wood products (2.5.6).

SUBJECTS INVOLVED IN SITE DNSH VERIFICATION

CONTRACTING STATIONS

- They must ensure that **projects meet DNSH requirements from the bidding and design stage** by including specific clauses in contracts.

CONSTRUCTION MANAGEMENT

- Is responsible for **monitoring the execution of the project**, ensuring that **site operations comply with the DNSH principle**.
- It is responsible for **verifying the use of sustainable materials, compliance with environmental regulations and the adoption of mitigation measures**.

ENTERPRISES

- **They must implement the measures provided for DNSH compliance**.
- This includes adopting sustainable practices, **managing resources** (water, energy, materials) efficiently, and **reducing pollutant emissions during construction phases**.

CONTROL AND SUPERVISORY BODIES

- They may be commissioned to conduct **periodic inspections** to verify compliance with environmental regulations on the construction site.

ENVIRONMENTAL CERTIFIERS

- They issue **certifications related to sustainability**, energy consumption, or waste and natural resource management.

LOCAL COMMUNITIES

- Civil society, through local associations or committees, can also play an indirect role in **monitoring compliance with DNSH criteria** by reporting any critical issues or negative impacts on the environment.

Municipality of Foggia

Renovation and redevelopment work at the Bovio Institute



Gross floor area

4.869 mq

Total volume

21.205 mc

Intervention amount

6.750.000 €
1.386 €/mq



Messa in sicurezza e riqualificazione delle scuole
Missione 4-C1 - Investimento 3.3

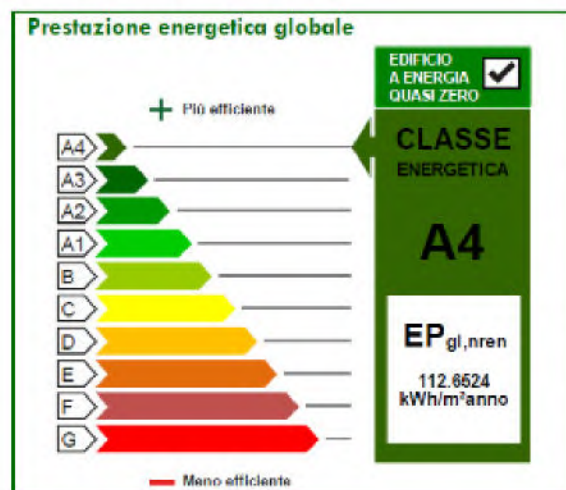
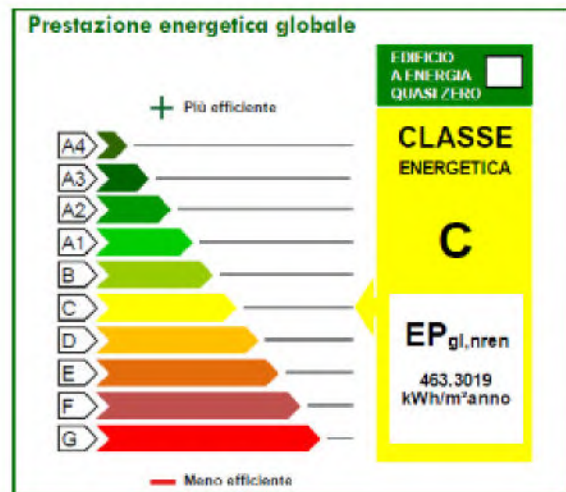


Municipality of Foggia

Renovation and redevelopment work at the Bovio Institute



Messa in sicurezza e riqualificazione delle scuole
Missione 4-C1 - Investimento 3.3



MAIN PLANNED WORKINGS

- Autoclaved aerated cellular concrete exterior infill and insulation panels.
- Energy-efficient window frames.
- Integrated photovoltaic system of total power equal to $P=107.67$ kwp.
- Solar thermal system for the production of domestic hot water.
- Air conditioning system of the radiant floor panel type.
- Heating system of the high-efficiency monoblock air-water heat pump type.
- Controlled mechanical ventilation system.
- Lighting system with energy-efficient LED fixtures.

Annual energy savings of 75%.

Municipality of Melpignano



Asili nido e scuole dell'infanzia
Missione 4-C1 – Investimento 1.1

“Agrinido - Energies, Pedagogies, Agricultures” Construction of a kindergarten



Gross floor area

500 mq

Total volume

2.000 mc

Intervention amount

1.320.000 €
2.640 €/mq



Municipality of Melpignano



Asili nido e scuole dell'infanzia
Missione 4-C1 – Investimento 1.1

“Agrinido - Energies, Pedagogies, Agricultures” Construction of a kindergarten



The inspiring idea is that of a circumscribed, soft and sinuous space that fits into the environment like a green hill, below which the agri-nursery spaces are developed. The settlement principle of the project stems from the dual intention to create a new, multifunctional space and to integrate the new school complex into the surrounding fabric and to make the building and its indoor and outdoor spaces dialogue.

Municipality of Matera



Costruzione di nuove scuole
Missione 2-C3 - Investimento 1.1

Demolition and reconstruction of the new school building to be used as a branch of the Higher Education Institute “A. Turi” in Matera



Gross floor area

3.150 mq

Total volume

12.810 mc

Intervention amount

8.052.000 €
2.556 €/mq

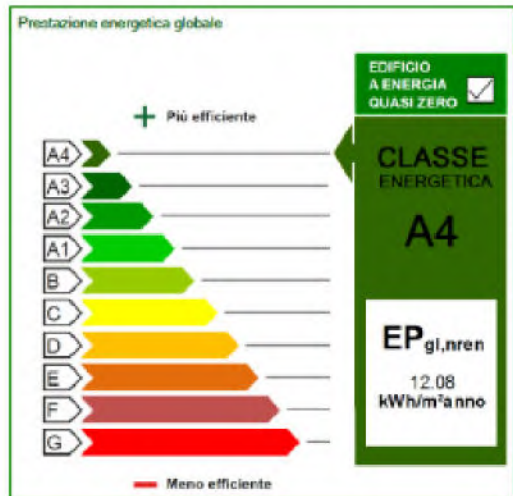


Municipality of Matera



Costruzione di nuove scuole
Missione 2-C3 - Investimento 1.1

Demolition and reconstruction of the new school building to be used as a branch of the Higher Education Institute “A. Turi” in Matera



MAIN PLANNED WORKINGS

- The envelope is made of a 36-cm gasbeton facing protected by a ventilated facade made of HPL (high-pressure laminate) sheets.
- The air conditioning system is of the radiant floor panel type with an integrated VMC (controlled mechanical ventilation) system and heat recovery.
- Thermal energy production is by an air-to-water heat pump system powered by electricity generated by photovoltaic panels.
- Attention has been paid to thermal and electrical energy recoveries and water conservation for non-human consumption.

Annual energy savings of 80%.

Municipality of Venafro



Finanziato dall'Unione europea
NextGenerationEU

Costruzione di nuove scuole
Missione 2-C3 - Investimento 1.1

Construction of the new “Leopoldo Pilla” Comprehensive Institute in Via Maiella by building replacement



Gross floor area

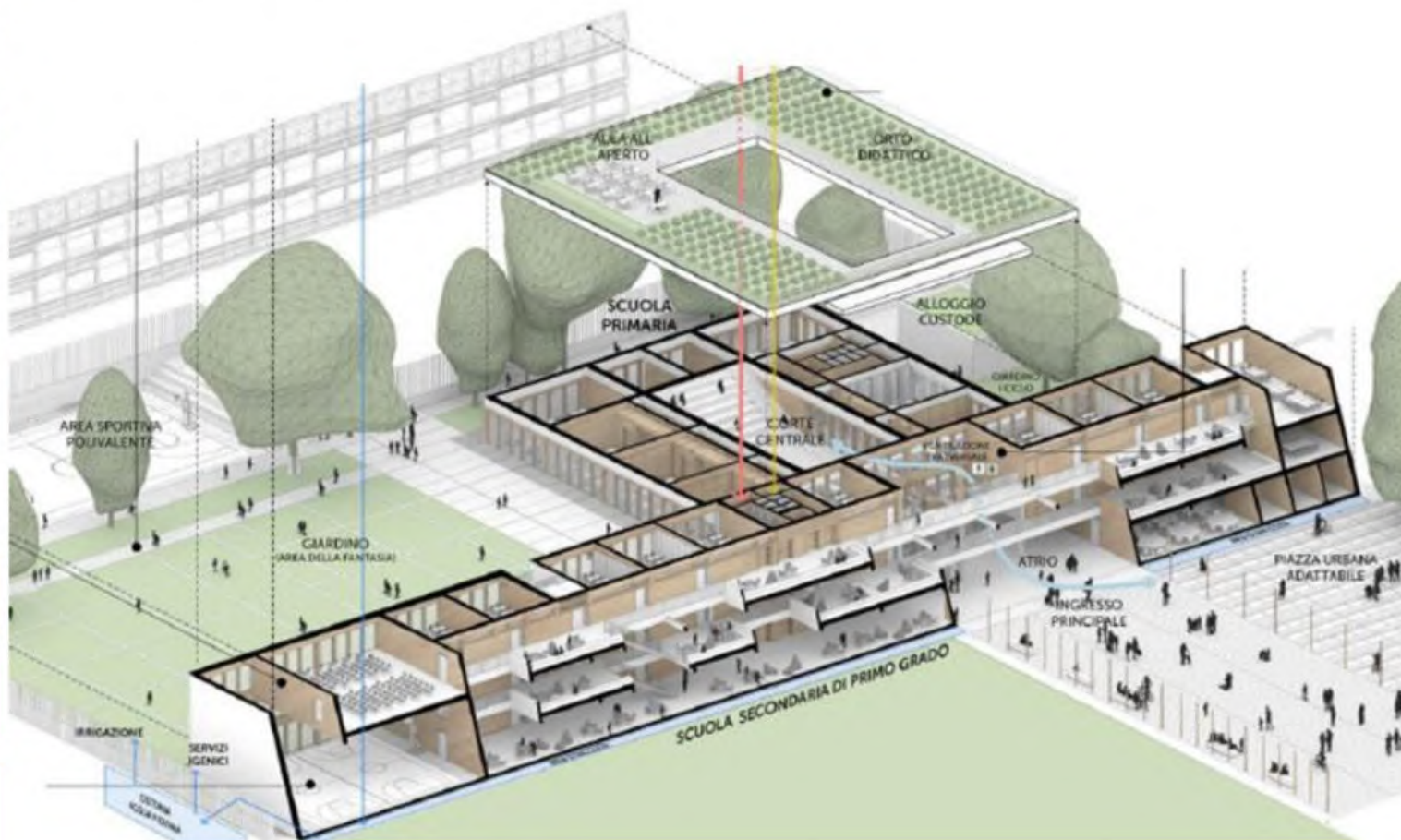
3.737 mq

Total volume

15.937mc

Intervention amount

9.812.955 €
2.626 €/mq

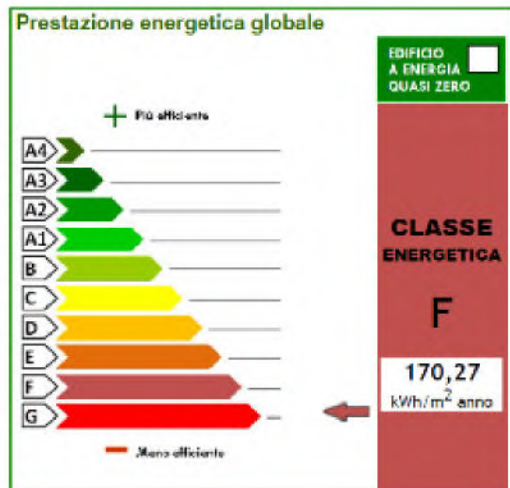


Municipality of Venafro



Costruzione di nuove scuole
Missione 2-C3 - Investimento 1.1

Construction of the new “Leopoldo Pilla” Comprehensive Institute in Via Maiella by building replacement



MAIN PLANNED WORKINGS

- The new school complex includes a box structure made of cross-laminated timber (or X-LAM).
- Thermal energy production is by hydronic heat pump machines serving low-temperature systems (such as radiant floor and AHU coils).
- A centralized DHW production system served by a hydronic heat pump is provided.
- VRF systems are used for spaces where summer cooling is also planned.
- The photovoltaic system placed on the roof contributes to the supply of electricity from renewable sources.



PR PUGLIA FESR - FSE+ 2021-2027



LA DOTAZIONE FINANZIARIA DEL PROGRAMMA REGIONALE

Quota comunitaria:

€ 3.792.544.726 di cui:

FESR:

€ 3.010.175.541

FSE+:

€ 782.369.185

Quota pubblica totale:

€ 5.577.271.656 di cui:

FESR:

€ 4.426.728.737

FSE+:

€ 1.150.542.919

PR PUGLIA FESR - FSE+ 2021-2027



The cohesion policy for the 2021-2027 programming period provides for the pursuit of five policy objectives (PO):

- **PO1 - A smarter Europe** through innovation, digitalization, economic transformation and support for small and medium-sized enterprises;
- **PO2 - A greener, carbon-free Europe** through implementation of the Paris Agreement and investment in energy transition, renewable energy and combating climate change;
- **PO3 - A more connected Europe** equipped with strategic transport networks;
- **PO4 - A more social Europe**, achieving concrete results regarding the European Pillar of Social Rights and supporting quality employment, education, vocational skills, social inclusion and equitable access to healthcare;
- **PO5 - A Closer Europe for Citizens** through support for locally managed development strategies and sustainable urban development across the EU.

OP	ASSI	FONDO	DOTAZIONE PUBBLICA
OP1	I Competitività e innovazione	FESR	1.757.087.351
OP2	II Economia verde	FESR	1.261.764.706
	III Mobilità urbana sostenibile	FESR	88.235.294
OP3	IV Trasporti	FESR	205.882.353
OP4	V Occupazione	FSE	222.058.823
	VI Istruzione e formazione	FESR FSE+	84.705.882 376.750.170
	VII Occupazione giovanile	FSE+	138.065.150
	VIII Welfare e salute	FESR FSE	668.235.294 367.647.059
OP5	IX Sviluppo territoriale e urbano	FESR	205.882.353
	X Assistenza tecnica	FSE+	46.021.716
	XI Assistenza tecnica	FESR	154.935.504

PR PUGLIA FESR - FSE+ 2021-2027



OP2

ASSE II Economia verde

Obiettivi Specifici

2.1 Promuovere l'efficienza energetica e ridurre le emissioni di gas a effetto serra

Azioni

2.1 Efficientamento energetico di edifici pubblici

PR PUGLIA FESR - FSE+ 2021-2027



OP2

ASSE II Economia verde

Obiettivi Specifici

2.4 Promuovere l'adattamento ai cambiamenti climatici, la prevenzione dei rischi di catastrofe e la resilienza, prendendo in considerazione approcci ecosistemici

Azioni

2.5 Interventi per la prevenzione dei rischi e l'adattamento climatico

PR PUGLIA FESR - FSE+ 2021-2027



OP4

ASSE VI

Istruzione e formazione FESR/FSE+

Obiettivi Specifici

4.2 (FESR) Migliorare la parità di accesso a servizi di qualità e inclusivi nel campo dell'istruzione, della formazione e dell'apprendimento permanente mediante lo sviluppo di infrastrutture accessibili, anche promuovendo la resilienza dell'istruzione e della formazione on-line e a distanza

Azioni

6.1 Interventi per le infrastrutture di educazione, istruzione e formazione

FSC

Fondo per lo Sviluppo
e la Coesione

COMITATO INTERMINISTERIALE
PER LA PROGRAMMAZIONE ECONOMICA
E LO SVILUPPO SOSTENIBILE

DELIBERA 3 agosto 2023.

Fondo sviluppo e coesione 2021-2027. Imputazione pro-grammatica in favore di regioni e province autonome. (De-libera n. 25/2023).

Tabella 1 – FSC 21-27. Imputazione programmatica pro-quota a Regioni e Province autonome (importi in euro)

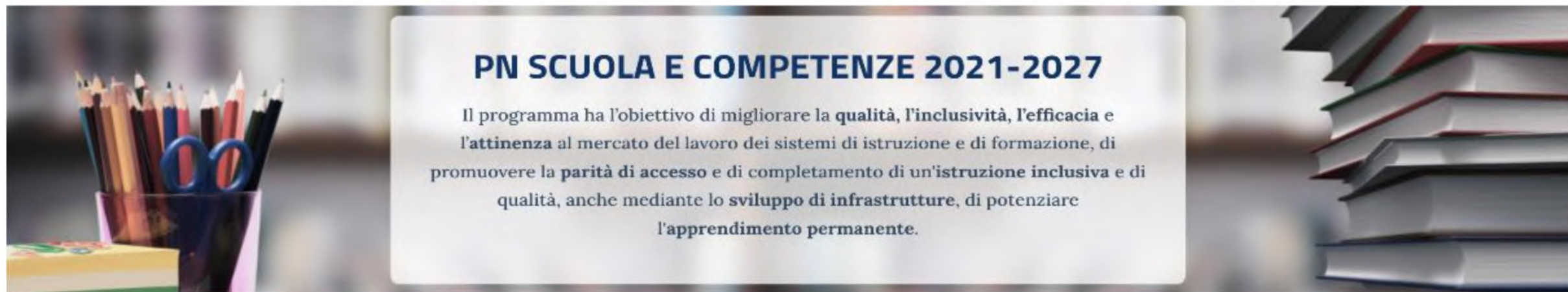
REGIONI	CHIAVI DI RIPARTO	Importi lordi	Anticipazioni disposte per legge o con delibere del CIPESS	Importi netti
		A	B	C=A-B
Abruzzo	4,8	1.257.403.209,90	97.523.994,62	1.159.879.215,28
Basilicata	3,6	944.950.931,61	83.435.625,49	861.515.306,12
Calabria	11,0	2.863.063.355,70	633.189.453,57	2.229.873.902,13
Campania	25,3	6.569.722.029,63	582.186.243,46	5.987.535.786,17
Molise	1,7	444.928.381,89	37.484.372,06	407.444.009,83
Puglia	17,6	4.588.810.310,17	234.602.586,00	4.354.207.724,17
Sardegna	9,5	2.470.333.140,35	156.787.857,74	2.313.545.282,61
Sicilia	26,4	6.862.465.370,96	237.096.977,23	6.625.368.393,73
Totale Mezzogiorno	100,0	26.001.676.730,23	2.062.307.110,17	23.939.369.620,06
Emilia-Romagna	9,2	588.320.374,10	107.700.000,00	480.620.374,10
Friuli-Venezia Giulia	3,0	189.951.924,29	15.746.630,97	174.205.293,32
Lazio	19,1	1.212.989.604,10	192.241.643,59	1.020.747.960,51
Liguria	4,2	265.806.731,50	35.391.334,83	230.415.396,67
Lombardia	19,0	1.210.305.778,84	185.200.000,00	1.025.105.778,84
Marche	5,2	333.646.734,15	40.200.000,00	293.446.734,15
PA Bolzano/Bozen	1,3	82.389.843,97	11.300.000,00	71.089.843,97
PA Trento	1,5	94.627.909,29	17.800.000,00	76.827.909,29
Piemonte	12,9	819.569.291,23	132.013.666,35	687.555.624,88
Toscana	10,7	683.562.137,38	151.896.843,25	531.665.294,13
Umbria	3,7	238.196.338,86	27.700.000,00	210.496.338,86
Valle d'Aosta/ Vallée d'Aoste	0,6	36.995.111,30	4.260.162,94	32.734.948,36
Veneto	9,5	607.572.385,77	69.200.000,00	538.372.385,77
Totale Centro Nord	100,0	6.363.934.164,77	990.650.281,93	5.373.283.882,84
TOTALE		32.365.610.895,00	3.052.957.392,10	29.312.653.502,90



Il futuro alla portata di tutti

Reprogramming is currently underway for about 2 billion euros of resources from the 2014-2020 ROP certification.

Thematic Area *Axis 11 - Education and Training* also includes interventions in the area of school construction, which will be included in the drafting Cohesion Agreement between the Department for Cohesion Policies and for the South of the Presidency of the Council of Ministers and the Region of Puglia.



The National Program under the ownership of the Ministry of Education and Merit, called “PN School and Skills 2021 - 2027” and financed through ERDF and ESF+ funds, contains the strategic priorities of the education sector and has a seven-year duration.

To achieve these goals, the Program's budget amounts to about 3.8 billion euros, broken down as follows:

- over 2.8 billion allocated from the European Social Fund Plus (ESF+) for the training of students, school staff and the adult population;
- about 960 million allocated from the European Regional Development Fund (ERDF) for laboratories and innovative digital equipment.

The PN 2021 - 2027 is aimed at preschools, schools of cycle I and II education and CPIAs throughout the country.

DECREE-LAW May 7, 2024 , No. 60 converted with amendments by L. July 4, 2024, No. 95
Additional urgent provisions on cohesion policies.

Art. 29. Provisions on education and combating educational poverty

1. In order to reduce the territorial and infrastructural gaps in the “less developed regions,” **a 200 million euro plan is authorized** from the resources of the National Program “School and Skills,” programming period 2021-2027 [...], **for the strengthening of infrastructure for sports in schools,** for the benefit of interventions, consistent with the objectives of the aforementioned National Program, already positively evaluated within the framework of the rankings for safety in Mission 4 - component 1 - investment 1.3 “Strengthening of infrastructure for sports in schools” of the PNRR.
2. In order to strengthen technical and vocational education in the less developed regions, a **150 million euro plan is authorized** from the resources under the National Program “School and Skills,” programming period 2021-2027[...], **for the implementation of innovative and advanced laboratories** for the development of specific technical and vocational skills related to the relevant courses of study.
3. In order to strengthen and improve the educational offer in the age group 0-6 years, the **expenditure of 100 million euros is authorized** from the National Program “School and Skills,” programming period, 2021-2027 [...], **for the provision of innovative educational furniture,** including in the facilities subject to funding in less developed regions referred to in Mission 4 - component 1 - investment 1.1 “Plan for kindergartens and preschools and early childhood education and care services” of the NRP.

Legge 11 gennaio 1996, n. 23 **Norme per l'edilizia scolastica.** (pubblicata nella Gazzetta Ufficiale n. 15 del 19/01/1996)

Art. 4

Programmazione, procedure di attuazione e finanziamento degli interventi

[2] La programmazione dell'edilizia scolastica si realizza mediante piani generali triennali e piani annuali di attuazione predisposti e approvati dalle regioni, sentiti gli uffici scolastici regionali, sulla base delle proposte formulate dagli enti territoriali competenti sentiti gli uffici scolastici provinciali, che all'uopo adottano le procedure consultive dei consigli scolastici distrettuali e provinciali.



CHI PUÒ RICHIEDERE L'INCENTIVO

Tutti gli enti pubblici possono richiedere il Conto Termico, per riqualificare edifici dei quali siano proprietari o utilizzatori. L'incentivo è erogato a chi sostiene le spese degli interventi.

COSA FINANZIA IL CONTO TERMICO

Il Conto Termico finanzia **fino al 65% delle spese** sostenute per gli **interventi di manutenzione sull'involucro e sugli impianti degli edifici finalizzati all'incremento dell'efficienza energetica e alla produzione di energia termica da fonti rinnovabili**, come ad esempio:

- miglioramento dell'**isolamento termico** dell'involucro edilizio;
- sostituzione di **infissi e pannelli vetrati** di alta qualità e introduzione di **schermature**;
- sostituzione dei **sistemi per l'illuminazione**;
- sostituzione dei **sistemi per la climatizzazione con tecnologie ad alta efficienza**;
- produzione di **energia termica da fonti rinnovabili**;
- introduzione di **sistemi avanzati di controllo, gestione dell'illuminazione, della ventilazione, del condizionamento, etc.**

Il **meccanismo copre**, in ogni caso, il **100% dei costi della diagnosi energetica effettuata per determinare gli interventi da realizzare** ed è **compatibile con qualunque altro finanziamento, pubblico o privato**, a patto che la somma dei contributi non superi il 100% del costo totale degli interventi.



COME RICHIEDERE L'INCENTIVO

La richiesta di incentivo in Conto Termico può essere presentata **sia a intervento concluso**, in modalità di **"accesso diretto"**, sia prenotando l'incentivo **a intervento in corso o ancor prima di avere iniziato i lavori**, attraverso la modalità **"a prenotazione"**. La richiesta deve essere presentata al GSE **attraverso il portale internet dedicato** – il Portaltermico – accessibile attraverso l'Area Clienti del sito www.gse.it.

1. ACCESSO DIRETTO

A interventi completati, la richiesta deve essere presentata entro 60 giorni dalla fine dei lavori e l'incentivo, a prescindere dall'importo, **viene erogato in un'unica soluzione entro 2 mesi** dalla sottoscrizione del contratto con il GSE. Tramite il **mandato irrevocabile all'incasso**, è possibile trasferire l'incentivo direttamente a soggetti terzi (per esempio, al proprio fornitore).

2. ACCESSO A PRENOTAZIONE

Per **"prenotare l'incentivo"** prima dell'avvio dei lavori o a lavori già in corso, un ente pubblico ha **3 diverse opzioni**, a seconda della documentazione disponibile e dello stato di avanzamento degli interventi

A: Prenotazione con diagnosi e "atto formale di impegno"

B: Prenotazione con contratto di prestazione energetica

C: Prenotazione all'assegnazione dei lavori

THE GSE THERMAL ACCOUNT

INTERVENTIONS AND ELIGIBLE COSTS

Tipologia intervento	Costo unitario ammissibile	Percentuale spesa riconoscibile e incentivo massimo erogabile	Tipologia intervento	Costo unitario ammissibile	Percentuale spesa riconoscibile e incentivo massimo erogabile
1.A Isolamento termico di superfici opache	Tra 80 €/mq e 250 €/mq 40% (*) (**) in relazione al tipo pareti: perimetrali, pavimenti o coperture	40% (*) (**) 400.000 €	1.E Trasformazione degli edifici in nZEB	500 €/mq (zone A, B, C) 575 €/mq (zone D, E, F)	65% 1.500.000 € o 1.750.000 € in relazione alla zona climatica
1.B Sostituzione di infissi	350 €/mq (zone A, B, C) 450 €/mq (zone D, E, F)	40% (**) 75.000 € o 100.000 € in relazione alla zona climatica	1.F Sostituzione di sistemi per l'illuminazione di interni e delle pertinenze esterne con sistemi efficienti di illuminazione	15 €/mq (lampade alta efficienza) 35 €/mq (lampade a led)	40% 30.000 € o 70.000 € in relazione al tipo di lampada
1.C Sostituzione di impianti di climatizzazione invernale con generatori di calore a condensazione	160 €/kW (P ≤ 35 kW) 130 €/kW (P > 35 kW)	40% (**) 3.000 € o 40.000 € in relazione alla potenza impianto	1.G Installazione di tecnologie di building automation degli impianti termici ed elettrici degli edifici	25 €/mq	40% 50.000 €
1.D Installazione di sistemi di schermatura e/o ombreggiamento	150 €/mq (schermature) 30 €/mq (sistemi controllo)	40% 5.000 € o 30.000 € a seconda della tipologia di intervento			



Trasformazione degli edifici esistenti in "edifici a energia quasi zero NZEB" – zona climatica A, B, C	65 (**)	960 €/m ²	2.500.000
Trasformazione degli edifici esistenti in "edifici a energia quasi zero NZEB" – zona climatica D, E, F	65 (**)	1.200 €/m ²	3.000.000

(**) Per gli interventi realizzati su edifici pubblici a uso scolastico o di strutture ospedaliere del Servizio sanitario nazionale la percentuale incentivata della spesa ammissibile è pari al 100%.

ATTUALITÀ

Palestre scuole superiori, la Provincia vince il bando per Da Vinci, Riccati-Luzzatti e Beltrame

Publicata dal Ministero la graduatoria degli interventi ammessi a finanziamento

Sei qui: Home / News / Camaiore / Dettaglio

██████████, il comune vince un bando per la messa in sicurezza delle scuole

██████████ — lunedì 22 aprile 2024 0

██████████, il Comune vince un bando per la messa in sicurezza e l'adeguamento sismico del plesso scolastico P.V. Marone

Publicato il 20 agosto 2021 • [Comune](#) , [Scuola](#)

Edilizia scolastica

Il Comune di ██████████ vince il bando per la scuola materna di via De Gasperi

Pioggia di milioni per le scuole comunali, il Comune vince 4 bandi



RECONSTRUCTION OF EXISTING BUILDING HERITAGE OF OWN COMPETENCE

(school buildings, gyms, kindergarten hubs)



UPDATING REGIONAL SCHOOL BUILDING REGISTRY

(request missing building entries, update building sheets, floor plans, geo-referencing, certificates)



DRAFTING OF THE DPPS - PRELIMINARY DOCUMENT FOR SCHOOL PLANNING

(define the arrangement deemed optimal for schools in order to create favorable conditions for policies that aim, through schools, to contribute to sustainable local development of each territory)



VERIFICATION OF POSSESSION OF THE CERTIFICATE OF HABITABILITY

(static inspection, fire prevention certificate/SCIA, total plant compliance, sanitation suitability, etc.)



STRUCTURAL VERIFICATION OF THE SCHOOL BUILDING

(assessment of the resulting seismic hazard index α as per the seismic vulnerability verification performed)



DRAFTING PROJECT PROPOSAL (aimed at achieving full usability and functionality of the building in accordance with current regulations) **AND INSERTING THE PROJECT IN THE REGIONAL REPERTOIRE OF SCHOOL BUILDING NEEDS** (in the ARES 2.0 portal www.ediliziascolastica.regione.puglia.it).



PIANO SVILUPPO COESIONE DELLA REGIONE PUGLIA

“Fondo rotativo per l’anticipazione delle spese di progettazione tecnica a favore delle amministrazioni pubbliche”

Sezione Programmazione Unitaria

AVVISO PUBBLICO

per la presentazione di candidature per lo sviluppo delle attività di progettazione di fattibilità tecnico-economica e/o esecutiva ai sensi dell’art. 41 del D. Lgs. n. 36 del 31 marzo 2023 e ss.mm.ii

As of Oct. 9, 2023, the public administrations listed in DGR No. 1283 of 09/18/2023 can submit new applications under the Revolving Fund for the advance payment of technical design expenses.

The maximum contribution that can be granted to each individual Proposing Entity may not, cumulatively, exceed €300.000,00, net of any reimbursements already made.

Applications, complete with attachments, should be sent to:

fondoprogettazione@pec.rupar.puglia.it

Re.Re.FES

Regional Directory of School Building Needs

PURPOSE OF THE REPERTOIRE

Determine an updated register of school building interventions useful for **three-year school building planning** and/or **regional and national school building initiatives**.

TO WHOM IT IS ADDRESSED

All **entities owning and operating** school buildings **registered in ARES** can participate by nominating buildings belonging to both state schools and municipal nurseries and kindergartens.

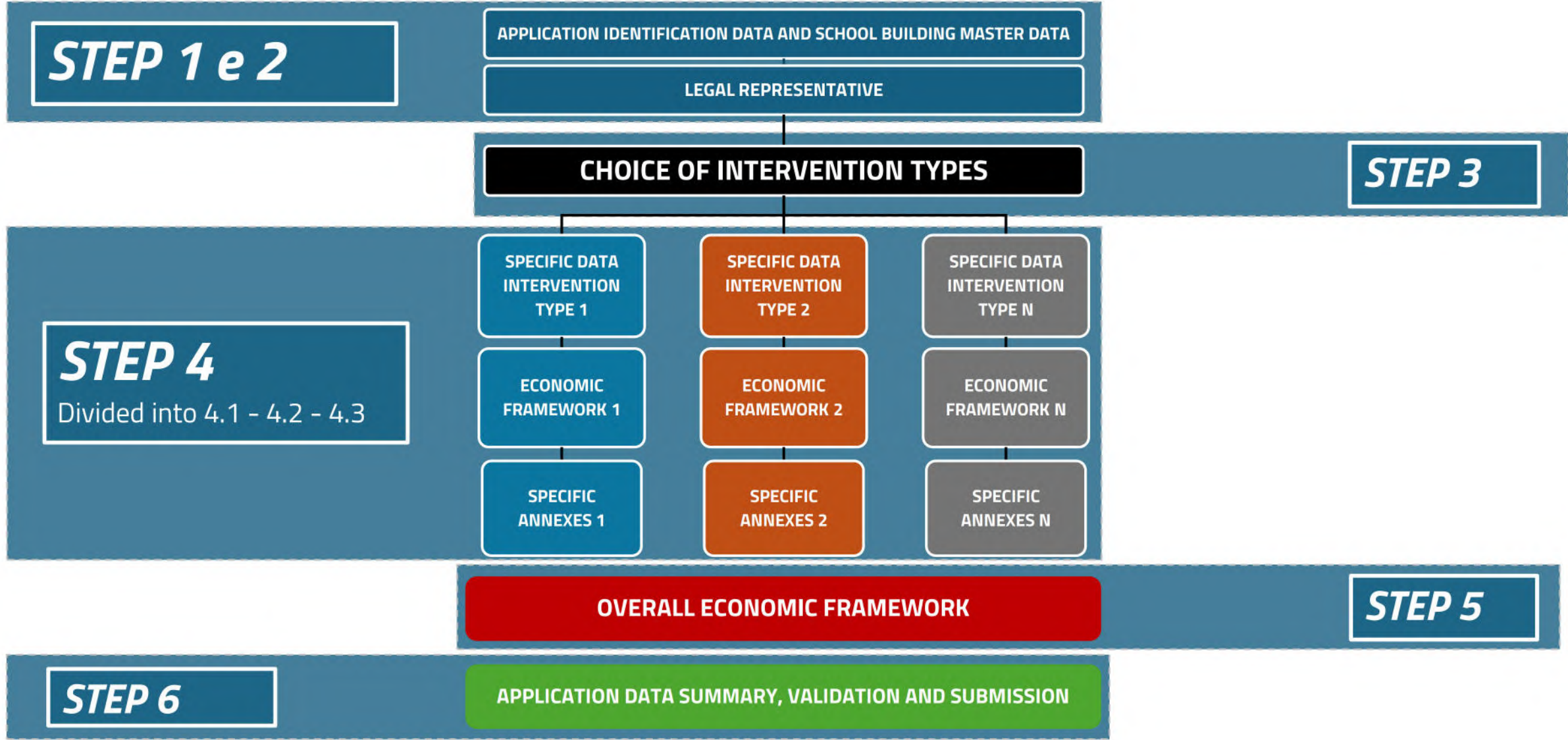
TYPES OF ELIGIBLE INTERVENTIONS

There are **18** types of eligible interventions ranging from **new construction, seismic retrofitting** to **design only**. Also included are **asbestos abatement interventions, seismic inspections** and an “**other**” typology where special requests or those not provided for in this first version of the form can be entered.

LEVEL OF DESIGN REQUIRED

The application of an intervention within the repertoire can be accompanied by **no level of design** up to the **Executive Project**, passing through the Technical-Economic Feasibility Project.

APPLICATION PROCESS



THE REGIONAL NEEDS DIRECTORY

INTERVENTI



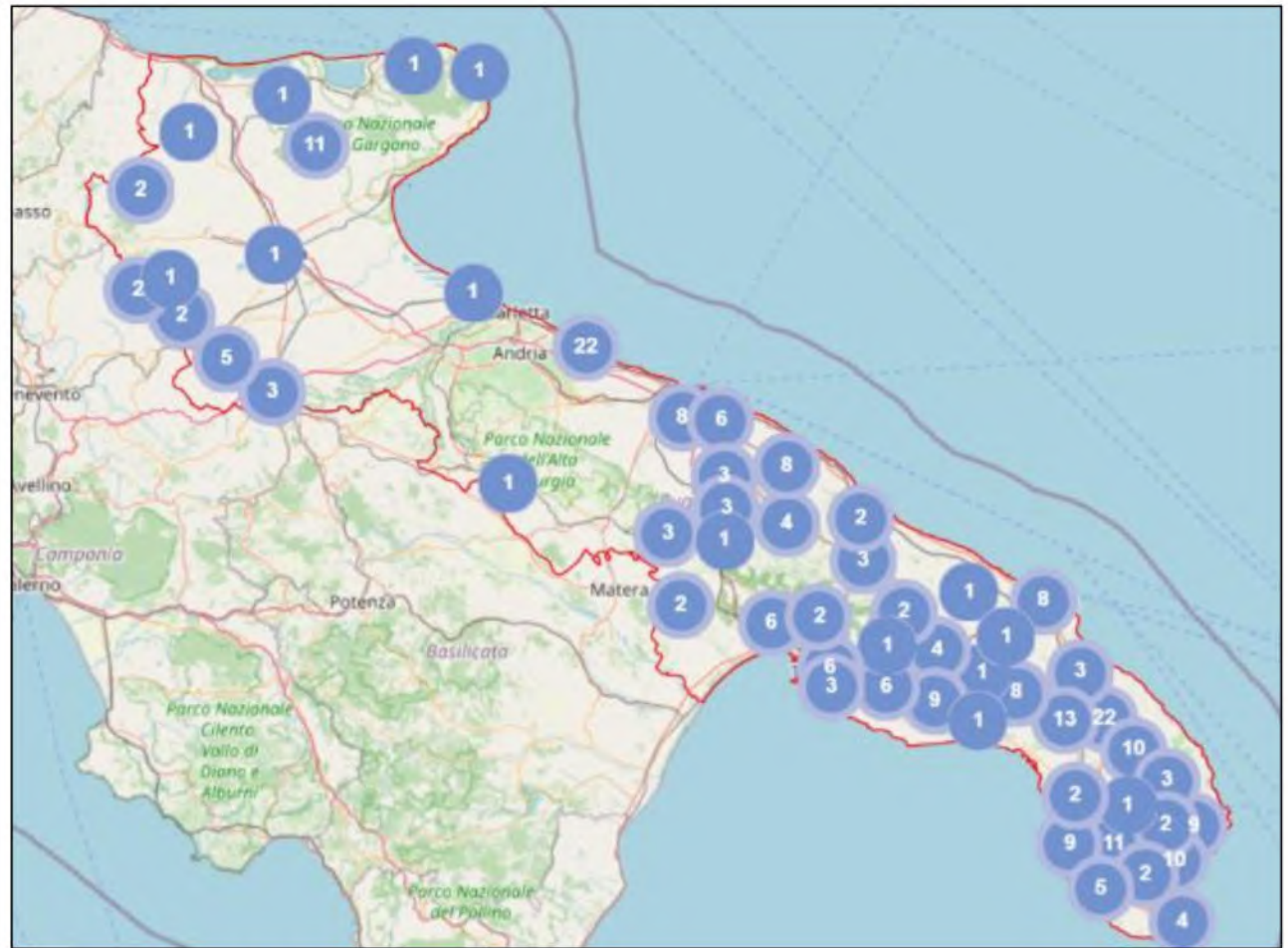
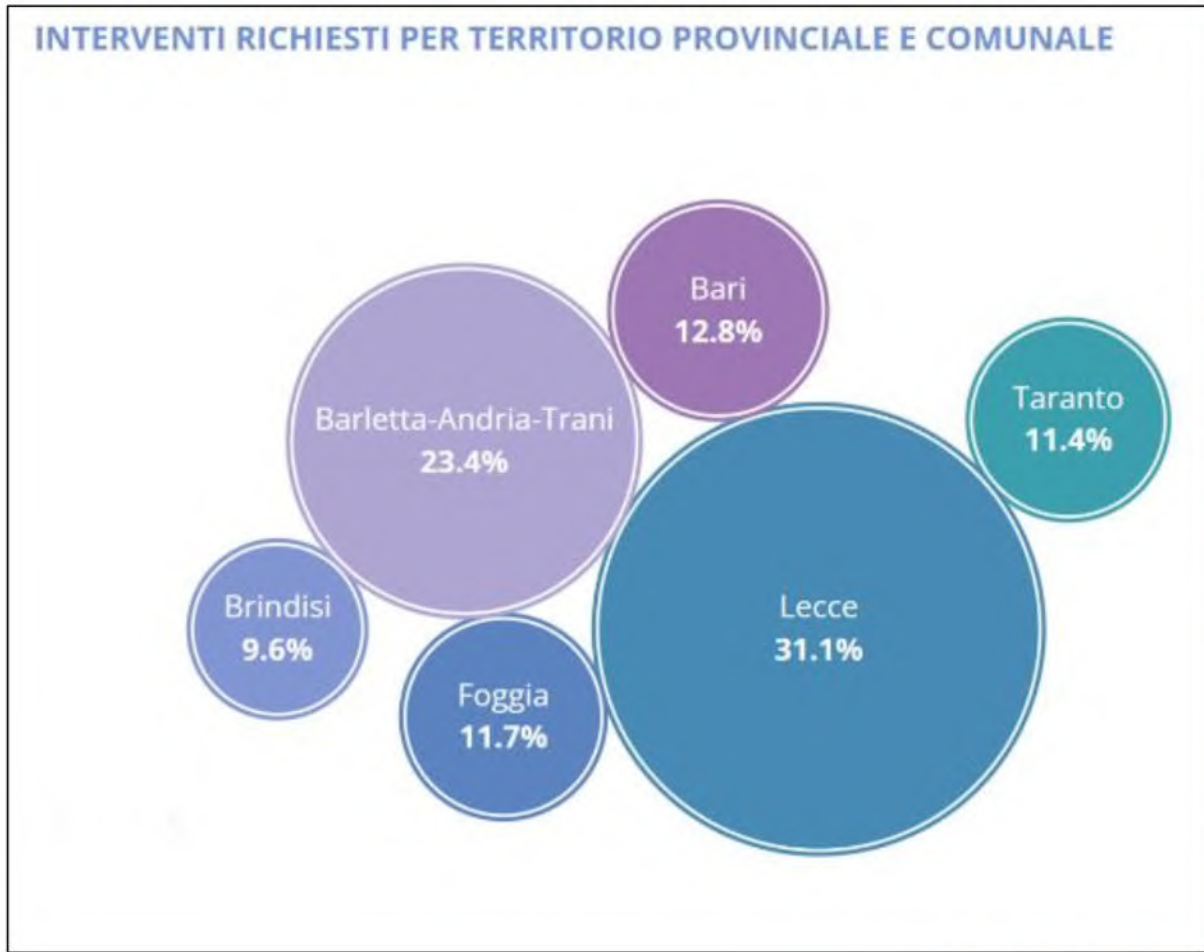
EDIFICI COINVOLTI



COSTO COMPLESSIVO



FINANZIAMENTI RICHIESTI



Dati aggiornati al 30 ottobre 2024

FUTURA



Finanziato
dall'Unione europea
NextGenerationEU



Ministero dell'Istruzione
e del Merito

LA SCUOLA PER L'ITALIA DI DOMANI

PNRR ISTRUZIONE

1 UNA SCUOLA DI QUALITÀ

Una buona architettura come condizione per apprendimenti migliori e segno riconoscibile per la comunità

2 UNA SCUOLA A BASSO CONSUMO

Edifici a impatto minimo

3 UNA SCUOLA SOSTENIBILE

Scuole costruite con materiali e strutture sostenibili

4 UNA SCUOLA APERTA

Scuole con spazi accoglienti per la comunità

5 UNA SCUOLA FRA DENTRO E FUORI

Ogni spazio è importante

6 UNA SCUOLA PER APPRENDERE MEGLIO

La progettazione degli spazi in chiave pedagogica

7 UNA SCUOLA PER CHI CI LAVORA

Gli spazi di lavoro come risorsa dell'azione educativa

8 UNA SCUOLA PER I CINQUE SENSI

L'apprendimento per tutti

9 UNA SCUOLA ATTREZZATA

Il rapporto tra spazi e arredi

10 UNA SCUOLA CONNESSA

Tecnologie per l'apprendimento

FUTURA



Finanziato
dall'Unione europea
NextGenerationEU



Ministero dell'Istruzione
e del Merito

LA SCUOLA PER L'ITALIA DI DOMANI

PNRR ISTRUZIONE

PROGETTARE, COSTRUIRE E ABITARE LA SCUOLA

Designing new schools is an action that looks to the future, a future that is perhaps even long-term, helping to define what **education in our country will look like in the coming decades**.

But it is a process that inevitably starts from the present, from an **understanding of the needs of people and communities**-schools and territories-to be integrated into a current and forward-looking vision of the **relationship between teaching and architecture**, resulting in **new effective and functional learning environments**.

In the urban sprawl of the last century, **school buildings appeared as pure “standards” or “services”** needed by the new satellite neighborhoods. **Today, however, we must look to them as true catalysts of urban life**, as important centers of sociality and as places capable of promoting important values through an “implicit pedagogy”: sensitivity to the environment, equal opportunity, social inclusion, intellectual engagement, and openness to an increasingly connected world.

New school buildings, through designers, will be able to transform these elements into a unique value that encompasses them and even survives them: that of quality, solidity and beauty of landscape, space and buildings.

In short, everything that represents the main legacy of the Italian urban culture of the last twenty centuries.

A group of children with backpacks walking away from the camera towards a school building. The scene is bright and slightly blurred, suggesting a sunny day. The children are wearing various colored backpacks, including blue, yellow, and pink. The school building in the background has large windows and a modern architectural style.

THANKS FOR YOUR ATTENTION

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