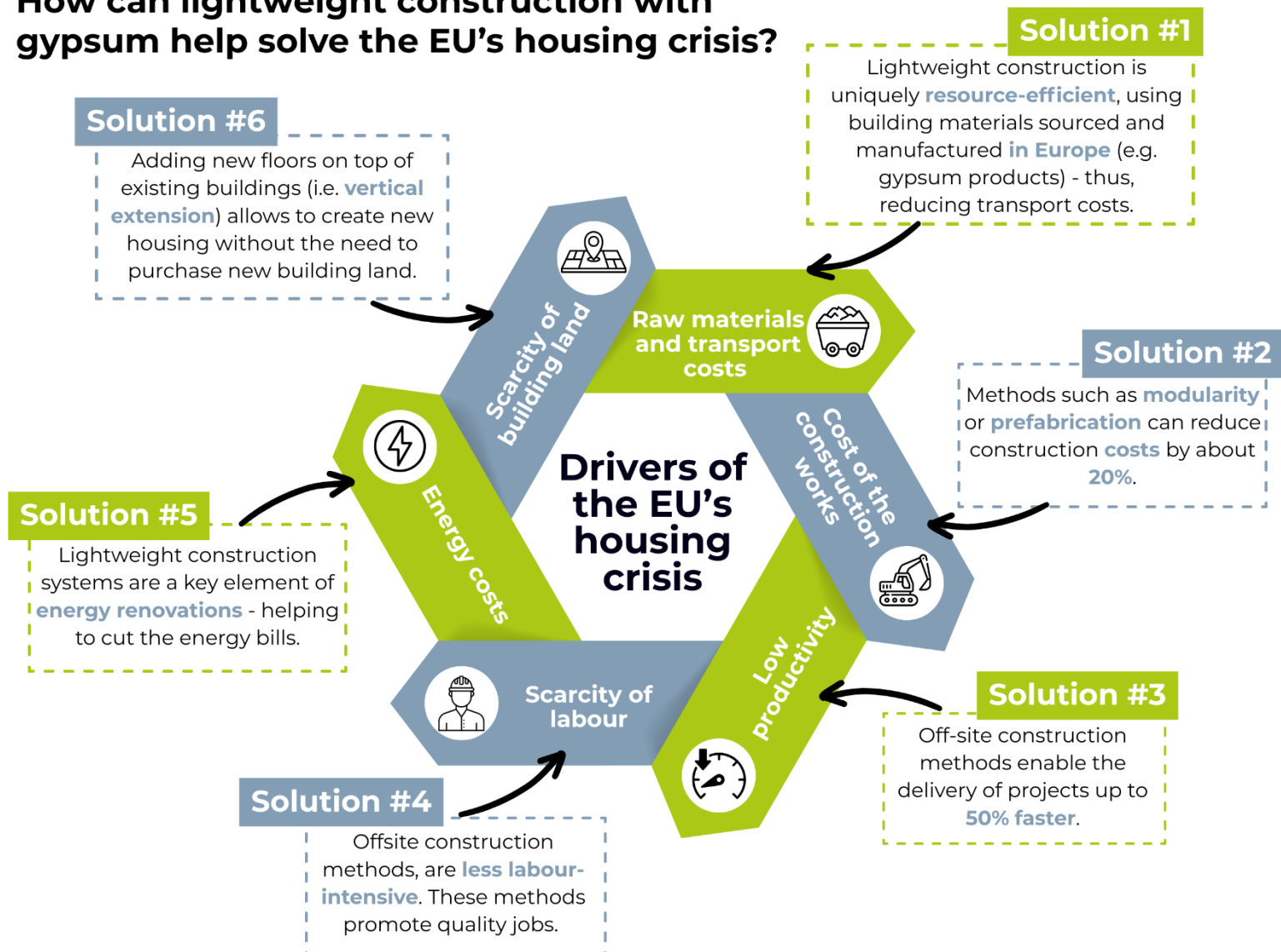


Eurogypsum's 5 recommendations for the European Affordable Housing Plan

- 1) Make the best use of existing buildings and construction resources.
- 2) Utilise domestic resources & local industries to support the EU's competitiveness.
- 3) Boost the uptake of modular and offsite construction.
- 4) Maintain the ambition on energy efficiency of buildings.
- 5) Do not overlook indoor comfort and safety.

How can lightweight construction with gypsum help solve the EU's housing crisis?



Eurogypsum's 5 recommendations for the European Affordable Housing Plan

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The new European Commission has taken an important step towards addressing the pressing issue of the housing crisis at the European level. The inclusion of housing policy into the portfolio of the Commissioner for Energy and Housing, Dan Jørgensen, and the announcement of the upcoming European Affordable Housing Plan provided a new momentum on the topic.

Eurogypsum, the European federation of national associations of gypsum product manufacturers, welcomes these announcements and believes that **lightweight construction using gypsum products** offers unique advantages with regards to **affordability, innovation, efficiency** and **sustainability**, which should be duly recognised in the future European Affordable Housing Plan.

About gypsum and affordable housing

Gypsum is a mineral sourced in Europe and used to manufacture products such as **plaster, plasterboard** and **gypsum blocks**. These products are widely used in **walls, partitions, cavity systems** and **ceilings**, and are among the most **cost-effective** construction materials available in Europe.

Gypsum is extracted from Europe's 160 **quarries** and processed in 101 **factories** close to the local markets, directly employing 16,000 **people**.

Together with insulation materials and steel or timber frames, gypsum products form part of **lightweight construction systems**. Lightweight construction solutions with gypsum enable the provision of new living space **cost-effectively**:

- Gypsum is a mineral sourced and processed **in Europe**. This means shorter distances between the site of extraction, manufacturing and the end-user, helping to **minimise transport costs**.
- Lightweight construction systems are uniquely **resource-efficient** – thanks to the smart combination of different lightweight materials, they achieve high technical performance with lower mass of materials used.
- These systems go hand in hand with modularity, off-site construction, and prefabrication, making it possible to deliver projects up to **50% faster** and **cutting the costs by 20%**¹. This is especially relevant in urban contexts where

¹ Bertram, N., Fuchs, S., Mischke, J., Palter, R., Strube, G., & Woetzel, J. (2019). Modular construction: From projects to products. McKinsey & Company.

<https://www.mckinsey.com/-/media/mckinsey/business%20functions/operations/our%20insights/modular%20construction%20from%20projects%20to%20products%20new/modular-construction-from-projects-to-products-full-report-new.pdf>

time constraints and land scarcity require fast, modular and adaptable solutions.

- Today, building land price is a major determinant of housing costs². Lightweight construction enables longer use of the buildings which are already standing – through renovation, repurposing, or constructing additional floors on top of an existing building. As such, these solutions **reduce the need** for acquiring **new building land**.
- Lightweight systems are widely used for energy renovations, helping to **cut energy bills**.

Gypsum solutions help provide housing in a resource and cost efficient manner.

They are moreover indispensable for energy renovations and prolonging the lifespan of existing buildings. We therefore encourage the uptake of following five recommendations in the European Affordable Housing Plan.

Five recommendations for the European Affordable Housing Plan:

(1) Make the best use of existing buildings and construction resources.

What makes buildings special is that they can have multiple lives. We can **repurpose** buildings, for instance turning offices into homes. We can **renovate** them to fit changing needs and decarbonise our building stock. Gypsum-based solutions such as low-carbon, lightweight plasterboard systems with wood or steel frames make these changes possible. This way, old-fashioned, inefficient buildings can be revived, being transformed into modern, comfortable and climate-proof spaces. Repurposing and readjusting buildings is also an efficient use of time and resources that comes at a more affordable price.

In many European cities, the need for more housing coincides with the issue of urban sprawl and high cost of the scarce building land. Providing new, much-needed housing units should not come at the expense of eliminating urban green spaces. One possible solution to this problem is **vertical extension** - constructing additional floors **on top of an existing building**. It is a uniquely resource efficient solution, as it allows to preserve the existing building construction. In addition, vertical extensions **can also improve the thermal efficiency of top floors** by reducing heat loss through the roof, contributing to lower energy bills³.

² Payne, G., & Munoz Levy, D. (2021). The role of land in achieving adequate and affordable housing. UN-Habitat.

https://unhabitat.org/sites/default/files/2021/09/the_role_of_land_in_adequate_housing_final.pdf

³ Tichelmann, K. U., Groß, K., & Günther, M. (2016). Deutschland-Studie 2015: Wohnraumpotentiale durch Aufstockungen. Technische Universität Darmstadt & Eduard Pestel Institut für Systemforschung e.V. https://www.twe.architektur.tu-darmstadt.de/media/twe/publikationen_13/Deutschlandstudie2015_ohne_best_practice_beispiele.pdf

Lightweight construction solutions make vertical extensions possible. Thanks to the relatively low weight of materials used in lightweight constructions, new floors can be added without compromising the safety of the existing structure.

Vertical extension is a readily available solution, which has been utilised all over Europe to create more living space. Yet, there is still a **vast existing potential** to realise vertical extensions on a wider scale. A 2015 study conducted in Germany concluded that more than **1.5 million** housing units could be created using vertical extension⁴. In the Netherlands, a 2024 study has found that around **100.000** new dwellings can realistically be created by 2030 thanks to vertical extension⁵. Similarly, a study realised in Brussels showed that using vertical extensions, the city could house a minimum of **59,000** additional inhabitants⁶.

Currently, in most EU Member States, constructing vertical extensions is not a systemic aspect of the urban planning, or housing policy. City authorities often lack tools to plan the rational use of vertical extensions, respecting both sustainable development and the quality of life in the city. There is also a need to adapt urban regulations to make construction of vertical extensions more accessible.

Recommendations:

1. Encourage Member States to utilise **repurposing** of buildings in their housing strategies to achieve new housing units by transforming vacant or underutilised buildings. The Commission should promote **sharing of best practices and research** on this topic between Member States.
2. EU Member States should be encouraged to **research the existing potential** of creating new living space thanks to vertical extensions.
3. EU funded projects and programmes, such as the **New European Bauhaus**, should promote vertical extension and top-up renovation examples.
4. Member States should be encouraged to apply **lower VAT rates** (or other incentives) on vertical extension projects, as is the case for the renovation of buildings.
5. As part of the “**best-practices sharing**” which are expected to form part of the European Affordable Housing Plan, the European Commission should facilitate the dissemination of best practices and research related to:
 - the use of **vertical extensions in spatial planning**
 - e.g., the Dutch government initiative – *Optoppen* as part of the program “[Beter benutten van bestaande gebouwen](#)” (Better use of

⁴ Tichelmann, K. U., Groß, K., & Günther, M. (2016). Deutschland-Studie 2015: Wohnraumpotentiale durch Aufstockungen. Technische Universität Darmstadt & Eduard Pestel Institut für Systemforschung e.V. https://www.twe.architektur.tu-darmstadt.de/media/twe/publikationen_13/Deutschlandstudie2015_ohne_best_practice_beispiele.pdf

⁵ Stec Groep. (2024). *Handreiking optoppen 1.0: Delen is vermenigvuldigen*. <https://stec.nl/wp-content/uploads/2024/05/Stec-Groep-23.395-Praktische-handreiking-optoppen.pdf>

⁶ Amer, M., Mustafa, A., Teller, J., Attia, S., & Reiter, S. (2017). A methodology to determine the potential of urban densification through roof stacking. *Sustainable Cities and Society*, 35(Supplement C), 677–691. <https://doi.org/10.1016/j.scs.2017.09.021>

existing buildings) – creating a programmatic approach to vertical extension.

- **permitting procedures** for vertical extensions and top-up renovations
 - e.g., [UK Statutory Instruments 2020 no. 632](#) (Part 20) - its provisions made it possible to simplify and improve the implementation of vertical extensions.
- **co-financing models** for top-up renovations (e.g. the funding of energy renovation of an entire building thanks to the profit from creating additional floors).

(2) Utilise domestic resources and local industries to support the EU's competitiveness.

In the recent years it has become evident that **Europe cannot allow itself to be overly dependent on imports of crucial raw materials**. Those used for renewable energy supply and other strategic technologies are rightly addressed in the Critical Raw Materials Act (CRMA). This urgent need is also reflected in the recently published Clean Industrial Deal (CID). The CID also brings special attention to secondary raw materials, e.g., through the announcement of the Circular Economy Act for 2026.

Europe is rich in raw materials used in construction. It is essential that **domestic resources and industries are used for the provision of housing in Europe**. Local sourcing reduces exposure to global supply chain disruptions and price volatility. It also supports regional economies and job creation.

The European Affordable Housing Plan **should encourage the principle of “buying European” and reinforce the EU's objectives to secure the supply of primary and secondary raw materials** enshrined in the CRMA and the CID. In particular, the EU should provide levers for the easier access to these raw materials which provide unique characteristics, as for example gypsum does regarding fire safety and recyclability (gypsum being infinitely recyclable).

Encouraging the use of domestic raw materials for the supply of housing offers a chance not only to reduce import dependencies, but also to strengthen the **competitiveness of European construction industry**. In the next years, another crucial driver of competitiveness of the EU construction sector will be the implementation of the new Construction Products Regulation (CPR). Crucially, attention should be paid to the way the CPR is implemented, ensuring that it is feasible to comply with by SME's and provides a suitable, pragmatic framework for the reporting of environmental performance of construction products.

Simultaneously, **resource efficiency** in construction is crucial to reduce the demand for virgin raw materials and diminish the environmental impacts of the construction sector. Therefore, the European Affordable Housing Plan should encourage the use of resource-efficient construction solutions which can be easily

disassembled and recycled at the end-of-life, such as lightweight construction systems.

Recommendations:

1. The **measures adopted in the CRMA** for critical and strategic raw materials (streamlined permitting, improved access to finance, monitoring of European supply capacity) should be replicated for **raw materials essential for housing construction and renovation** to secure domestic supply in the long term.
2. The sourcing of materials essential for housing construction and renovation should be considered as a **strategic activity** to ensure that other policy initiatives not further complicate the **permitting processes**.
3. The European Affordable Housing Plan should encourage the use of secondary raw materials **in a realistic way**, taking into account the available volumes of recyclable construction and demolition waste.
4. In implementing the **new CPR**, the Commission should **reduce the bureaucratic burden** - especially for SMEs – among others by keeping the current practice of reporting production-weighted average values for environmental characteristics, instead of introducing the unstandardised **“worst case approach”**.

(3) Boost the uptake of modular and offsite construction.

Innovative construction methods such as **modular and offsite construction** help to reduce the construction times, amount of materials used, and construction waste produced. Offsite solutions are also less labour-intensive and generally safer than on-site methods. In projects using these methods, up to 80% of the labour activity can be performed inside a manufacturing facility. As such, this type of construction works can also attract a different pool of workers. Given the existing scarcity of workforce in the construction sector identified in many EU member states, less labour intensive and more attractive working conditions are the way forward. They highly fit for digitisation – making use of Building Information Modelling (BIM), digital twins, automation etc. Offsite and modular methods are at the forefront of the digitisation of the construction sector. **These methods are already readily available and can reduce the project times by up to 50% and the costs by 20%**⁷. However, existing barriers prevent the upscaling of offsite and modular construction solutions. To ensure the timely delivery of housing, the European Affordable Housing Plan should provide levers for the use of these time- and resource-efficient methods.

⁷ Bertram, N., Fuchs, S., Mischke, J., Palter, R., Strube, G., & Woetzel, J. (2019). Modular construction: From projects to products. McKinsey & Company.
<https://www.mckinsey.com/-/media/mckinsey/business%20functions/operations/our%20insights/modular%20construction%20from%20projects%20to%20products%20new/modular-construction-from-projects-to-products-full-report-new.pdf>

Recommendations:

1. Industrialised construction methods such as **offsite, modular construction** should be supported through: **standardisation** of systems and solutions; simplified **permitting; public procurement** criteria; rewards and **incentives** promoting faster project delivery and reduced site disruption.

(4) Maintain the ambition on energy efficiency of buildings.

It is critical to continue the existing momentum on **increasing the renovation rate** in Europe, brought forward by the Renovation Wave strategy and the Energy Performance of Buildings Directive (EPBD). The EU housing policy needs to strive for *affordable* and *sustainable* housing. These two properties go hand in hand by reducing the costs of heating for future inhabitants. In the long term, **a renovated home is an affordable home**. On a larger scale, ensuring the energy efficiency of Europe's building stock is a matter of energy security and achieving EU's climate targets. Therefore, it is crucial that the European Affordable Housing Plan is **consistent with the EPBD objectives** and includes provisions both for the construction of new energy-efficient housing, but also the energy renovation of the existing building stock.

Recommendations:

1. The European Affordable Housing Plan should strike the right balance between **new construction** and **renovation** or **repurposing** of existing buildings.
2. The Plan should complement the objectives enshrined in the Energy Performance of Buildings Directive (EPBD), Energy Efficiency Directive (EED), and the Renewable Energy Directive (RED). The Plan's provisions on building renovation should drive **deep energy renovation** of buildings in the EU, to achieve the **rate of 3% per year**.

(5) Do not overlook indoor comfort and safety.

In the effort to combat the housing crisis it is necessary to not lose sight of the safety and comfort of the provided housing. The quantity and speed of delivery of new housing is crucial, but the new living spaces provided must offer adequate standards of **indoor air quality, thermal** and **acoustic** comfort, and **fire safety**. As made painfully evident by fire disasters such as the 2017 Grenfell Tower Fire in London and the 2024 Valencia residential complex fire, fire safety of buildings continues to be a critical challenge. While extreme weather conditions become more frequent in many parts of Europe, leading to severe fire risks, ensuring the fire safety of our buildings needs to be given the utmost importance.

Using appropriate construction materials help achieve that goal. Lightweight construction systems using gypsum help protect buildings from fire thanks to the natural fireproof properties of gypsum. These systems also offer excellent acoustic insulation properties. They involve a combination of different materials (e.g.

gypsum boards and insulation materials), making it possible to achieve high-quality acoustic performance for a variety of use cases. Moreover, these systems also help maintain stable indoor temperature by reducing heat transfer through walls and ceilings.

Recommendations:

1. The EU must secure the domestic supply of raw materials with unique characteristics with regards to fire safety, such as gypsum.
2. The best practices encouraged via the European Affordable Housing Plan should represent high standards of fire safety, indoor air quality, thermal and acoustic comfort.

Conclusion: A holistic approach to the housing crisis

The European Affordable Housing Plan is urgently needed to alleviate the severe housing shortage in Europe and improve the affordability of housing. With innovative, resource- and energy-efficient methods and building solutions it is possible to combine **affordability** with **sustainability** and high **quality** of EU's housing.

- Using **domestic resources**, such as gypsum, allows to cut the supply chains, reduce dependence of foreign resources and strengthen EU industries.
- Lightweight construction solutions are more **resource and energy-efficient**, allowing to cut production and transport costs, as well as reduce related emissions.
- Offsite, modular construction methods are less labour intensive, allow to **significantly cut project times** and produce less waste. They are more **cost-effective** and promote high-skilled jobs in the construction sector.
- Vertical extensions, renovation and repurposing of existing buildings allows us to **make use of already existing building structures** – creating new housing without the need for purchasing new building land.

Lightweight construction with gypsum-based products can significantly reduce overall building costs. Plasterboard is a very affordable building material, and its ease of installation helps lower labor expenses for installation. Faster on-site assembly reduces indirect costs, while the low weight of gypsum solutions minimizes the need for costly structural reinforcements and transport expenses. Together, these factors make gypsum-based construction a smart and cost-effective choice for affordable housing.