INVESTMENT SUPPORT FOR ECOSYSTEMS CONSTRUCTION

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The construction ecosystem includes activities that take place during the whole lifecycle of buildings and infrastructures, including the design, construction, maintenance, refurbishment and demolition of buildings and infrastructure such as residential and non-residential buildings and civil engineering projects (e.g., roads, railways, airports, utility networks, sewage, pipelines).[1] It represents about 10% of the EU value added, with 25 million people employed in more than 5 million firms of which almost all are SMEs accounting for 90% of employment and 83% of the total value added of the ecosystem.

The pandemic affected several key nodes of the ecosystem, such as movement of workers, health and safety, availability of construction materials, implementation of contracts, revenues of construction companies, demonstrating more than ever the ecosystem's need to undergo a digital and green transition. As a result, the construction sector output suffered a sudden decline in Q2 2020. However, the decline was short-lived and by Q2 2021, the output reached its pre-pandemic level (Q4 2019), according to Eurostat production data.

The construction ecosystem is covered in all of the Recovery and Resilience Plans (RRPs) [2]. Construction represents an important factor to stimulate the overall recovery and serves as an enabler for various measures of the RRPs, as physical support for measures linked to energy efficiency, digitalisation, and mobility, among others.

The ecosystem faces several challenges, including the need to decarbonise the building stock in Europe, if it is to fulfil the targets of the European Green Deal. These challenges are analysed in detail in the Commission SWD 'Scenarios for a transition pathway for a resilient, greener and digital construction ecosystem", which features also a comprehensive description of the ecosystem and the relevant legislation. In addition, in the short term the rapid global recovery in manufacturing is causing shortages and price increases of raw materials, while also contributing to a sudden increase in energy prices. Moreover, the asymmetric developments of the pandemic across the globe are straining supply chains and affecting punctuality and predictability of deliveries.

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1   A more detailed explanation on the methodology is provided in Annex 1 and in the Commission SWD 'Scenarios for a transition pathway for a resilient, greener and digital construction ecosystem".
2   Based on the the 22 plans approved by the Commission and endorsed by the Council in 2021.

In the medium-long term, the ecosystem needs to address its lack of labour attractiveness and low level of digitalisation. It has to develop new high quality job profiles to attract new entrants and address the shortage of skilled labour force in innovative green solutions and digital tools. Recognition of qualifications would facilitate the availability and mobility of workforce across borders. Additionally, construction generates 36% of EU waste and consumes around half of Europe's natural resources, therefore it should adopt circular approaches and embrace the associated business opportunities. Construction also needs to address its life cycle greenhouse gas emissions in line with the EU's climate neutrality targets.

Finally, regulatory and administrative processes such as permitting and procurement need to evolve. A better collection and use of information and data from construction will be key to modernize the ecosystem and to increase transparency.

Main figures and findings:

Number of national RRPs analysed: 22 (approved plans); all of them have measures at least indirectly related to the construction ecosystem.

€186.6bn are devoted to measures related to construction, comprising 41% of the total RRF allocation. Out of this amount, **€56.4bn provide direct support to the ecosystem,** adding up to 12.7% of the total allocation for the 22 plans.

€50.8bn are devoted to the policy area for "building renovation and construction.[3]"

Please note that all figures on construction within this fiche are based on GROW tagging methodology and ecosystem definition and take into account the 22 plans approved by the Commission and endorsed by the Council in 2021.

All the RRPs have measures that are at least indirectly related to the ecosystem. A large number of these measures concern economic and financial support for operators in the sector. In particular, looking at composition of national allocations, the share of value of RRP measures directly aimed at the construction ecosystem averages 12.7% across the 22 approved plans while the median is 9.7%.

From the perspective of the construction ecosystem, the RRPs have the potential to stimulate an enabling framework that fosters investments and strengthens resilience as a prerequisite for the twin transition. The Recovery and Resilience Facility (RRF) Regulation defines resilience as the "ability to face economic, social and environmental shocks or persistent structural changes in a fair, sustainable and inclusive way". [4] The main strategic dependencies addressed by the RRPs concern the sourcing of construction and raw materials. In order to achieve such an enabling framework in the construction ecosystem, a number of challenges need to be addressed. Here follows a list examples of how specific RRPs measures tackle these challenges.

A key challenge addressed in the plans is streamlining and evolving regulatory and administrative

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3   Based on the pillar tagging methodology for the Recovery and Resilience Scoreboard and corresponds to the measures allocated to the policy area "Building Renovation and Construction" as primary or secondary policy areaof the policy pillar "Smart, sustainable and inclusive growth including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong SMEs"

4   Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility

processes such as permitting and procurement. The better collection, organisation and use of information and data from construction is key to modernise the ecosystem and increase transparency. To this end, Greece intends to reform urban policy consisting of the preparation of urban plans across 750 municipal units with the aim of addressing weaknesses and gaps in zoning and land use in order to promote sustainable economic activity and protect the environment (estimated cost EUR 5.3m). Likewise, Cyprus will reform the license permitting process for RES projects by establishing a digital one-stop shop for technical and financial support to accelerate the energy renovation of buildings (estimated cost EUR 500.000).

National recovery measures should also help to reinvigorate demand for buildings' renovation and revitalise the ecosystem, while applying high health, safety, and environmental standards. For example, **France** will subsidise the thermal renovation of 28.75 million m2 of floors in public buildings by 2024, aiming to reduce energy consumption to tertiary building by 40% by 2030 (estimated cost EUR 3.8bn). Similarly, **Spain** will invest in a rehabilitation programme for economic and social recovery in residential environments. The objective is to support 510 000 energy efficiency renovation actions in at least 355 000 unique dwellings, to achieve on average a primary energy demand reduction of at least 30% verified by energy performance certificates (estimated cost €3.42bn).

Another central challenge the measures of the RRPs seek to address in the construction ecosystem is to boost the confidence of property owners, public authorities and investors to direct resources in the green and digital transition of the built environment. Italy, for instance, will reform student housing regulation to encourage further private investments in student accommodation, with the objective to increase the available place for students from 40 000 to over 100 000 by 2026 (estimated cost EUR 960m). The Ministry of University and Research will contribute a portion of the renting revenues for the first three years of operation of the structures. **Portugal** will establish a support programme to safeguard decent and adequate housing for 26 000 households with the greatest needs and for the most vulnerable group (estimated cost EUR 1.2bn).

Being a highly labour-intensive industry, coordination of national approaches regarding sanitary measures and recognition of qualifications would facilitate the availability and mobility of workforce across borders, a key pillar of the single market. Proactively addressing the shortage of skilled labour force within the construction ecosystem and developing new high quality job profiles in innovative green solutions and digital tools is central in achieving this goal. **Croatian** reforms will develop a framework for ensuring adequate skills in the context of green jobs necessary for post-earthquake reconstruction through improvement of existing and development of new education and training programmes (estimated cost EUR 5.3m). **Austria** will advance a reform for raising awareness of building culture that will establish a framework for 'Baukultur' combining high quality architecture and built environment taking into account social, ecological, economic and cultural components.

Circular techniques such as design for deconstruction and reuse of components require different approaches than the traditional linear model and necessitate further development of the European sustainability indicators. Slovakia aims to address its low recycling rates by reforming the management legislation on construction and waste to increase the potential of the circular economy in construction and demolition waste. The reform will require that at least 70% of non-hazardous construction and demolition waste generated on construction is prepared for re-use or sent for recycling. In addition, the reform will introduce mandatory selective standards for recycling from construction and demolition waste, mandatory green public procurement for the contracting of construction works, and improve data collection systems for construction waste.

The construction ecosystem can be supported via a larger set of tools: reforms (national, implementation of EU initiatives) as well as investments (national funds, EU resources - structural funds, React-EU, Just Transition Fund, InvestEU, CEF, TSI, etc.). A list of sources of funding is available in the Commission Staff Working Document _"Scenarios for a transition pathway for a resilient, greener and digital construction ecosystem"_ and the 2022 Annual Single Market Report.

ANNEX I – Description of the Construction Ecosystem

The construction ecosystem includes activities that take place during the whole lifecycle of buildings and infrastructures, including the design, construction, maintenance, refurbishment and demolition of buildings and infrastructure. The activities included in the ecosystem are:

- On site construction, renovation, refurbishment and demolition:
- Development of building projects (e.g., buying land, project initiation, obtaining permits).
- On-site construction of building and infrastructure projects: residential buildings, non-residential buildings (e.g., offices, warehouses.) and civil engineering projects (e.g., roads, railways, airports, utility networks, sewage, pipelines).
- Specialised activities: site preparation, electrical, plumbing and other installation, roofs, and other forms of building completion and finishing.

Other services include engineering and architectural services, and activities supporting the operation of buildings, including facility management and landscaping activities.

When measures in the RRP require significant input from such activities, they are tagged as related to the construction ecosystem. This means that all the measures linked to the construction or renovation of physical assets are included. In addition, it includes open-air infrastructure (energy, transport, digital) and reforms aimed at simplifying construction procedures (land use, permitting, licensing) and preparatory work, such as land restoration.[5]

In addition to being related to the construction ecosystem, some measures have been identified as aimed mainly at improving the construction ecosystem. Such measures include investments directly aimed at enhancing the housing stock and the built environment stock or involve urban requalification (including brownfield investments) and business parks.

The share of resources devoted to the construction ecosystem in RRPs varies depending on the definition used. The two types of measure classification provide different insights for policy makers.

As for the first classification, the amount and scope of measures related to the construction ecosystem as a productive input can provide information concerning possible delays, cost overrun or bottlenecks due to exogenous shocks in the ecosystem, such as raw material shortages, problems in the global logistics infrastructure, export restrictions or productive limitations in sourcing countries. These potential risks would not directly affect the Commission budget because the RRF is a performance-based instrument whose committed amounts indicate the maximum that the Commission will disburse for the achievement of milestones and targets, irrespective of the actual costs moving up or down during the implementation period. However, it can affect the capability of MS to respect their timeline or tip the cost-benefit analysis of specific investments with a significant construction component.

The second type of measures are instead directly aimed at the enhancement of the ecosystem in itself. As such, they provide an idea of the level of ambition in the RRPs in addressing the challenges of the ecosystem itself, both in terms of efficiency (e.g., reforms in licensing and land planning) and in terms of twin transition (e.g., renovation wave and digital identity of buildings).

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5   Measures are not included when they refer to purchase of equipment such as computers, laboratories, purchase of machineries, smart meters or vehicles.