EUROPEAN UNIVERSITY ASSOCIATION

BRIEFING

NextGenerationEU: What do National Recovery and Resilience Plans hold for universities?

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The European Commission is starting to transfer NextGenerationEU (NGEU) funds to member states across the EU. These payments are designed to address the pandemic's socio-economic impact, and support a transformative recovery. This briefing analyses the position of and opportunities for higher education in national recovery plans.

Universities have much to say and deliver in the policy areas established in NGEU. They can facilitate the green and digital transitions and contribute to smart and inclusive growth. Higher education institutions (HEI) play a leading role in education, upskilling and reskilling. Integrating them in national recovery and resilience plans will therefore support the long-term impact and effectiveness of these strategies.

But beyond the narratives, where are the real opportunities for universities to help achieve the national recovery and resilience plan objectives? What kind of support can they expect, and for which activities? Across Europe, the sector was involved to different extents in designing the plans, notably via national university associations. Some countries have seen a strong push towards upgrading campus facilities, while others focused on public-private research partnerships.

National recovery and resilience (NRR) plans are extremely diverse in terms of both their content and structure. The transverse nature of university activities also requires a holistic analysis that goes beyond purely "higher education" or "research and innovation" measures. Our analysis aims to cover the main national recovery and resilience plan topics relevant to universities, in order to enhance higher education institutions' awareness of of the opportunities available. It is crucial that universities contribute to delivering the plans as efficiently as possible, to be able to optimise their organisation and planning so that they are in the best possible position to seize and expand on the opportunities available. This briefing will also: highlight and share examples illustrating the diversity of options available to universities, underline potential complementarities with other funding schemes, and contribute to the plans' transparent implementation at national level by formulating key messages to universities and policymakers. Sound implementation of these measures is key for universities to fulfill their role in our long-term economic and social recovery.

1 NextGenerationEU in brief

Mid-2020, in response to the Covid-19 pandemic, European Union leaders agreed on an unprecedented financial support package, labelled "NextGenerationEU", on top of the usual seven-year EU budget. The additional €750 billion (2018 prices), which will complement the €1.074 billion 2021-2027 financial framework, is to be mobilised by the European Commission, which was newly authorised to borrow on the capital markets. All borrowing and payments to member states will take place over a limited five-year period running from 2021 to 2026, and following the achievement of agreed milestones. There is therefore a limited timeframe for investment in structural reforms supporting long-term resilience. Grants will be repaid via the EU budget as of 2028.

The Recovery and Resilience Facility (RRF), comprising loans and grants to member states issued in accordance with a specific distribution key, is the main element of the recovery package. Its goal is to "help member states address the economic and social impact of the COVID-19 pandemic whilst ensuring that their economies undergo the green transition and the digital transformation, becoming more sustainable and resilient."[1] National authorities drew up individual recovery and resilience plans allowing them to benefit from this facility. These plans are meant to outline how financial support will be spent, in a reform and investment matrix. National recovery plans are based on a set of criteria that: consider country-specific recommendations (from the European Semester) and include their effective contribution to green and digital transitions (national plans must allocate at least 37% of their budget to climate and 20% to digital measures).

Member states liaised with the European Commission over the first six months of 2021 and, all but Bulgaria and the Netherlands, submitted their plan by the summer. At the beginning of October 2021, the Council of the EU had endorsed 19 plans,[2] following their assessment by the European Commission. The resulting signed grant and loan agreements unlock 13% prefinancing to allow member states to carry out their planned measures, (unless these funds are not requested). While maximum amounts have been fixed, the amounts and financing methods set out in the submitted plans vary greatly, as shown in the visual below. Loans are seldom taken up, with the major exception of Italy.[3] Some plans integrate NGEU grants into national funding to support their reform and investment components, thus proposing a tightly-knit funding structure, while others tie them to other European funding instruments, notably European Structural and Investment Funds. This analysis focuses on the plans whose assessment by the European Commission was completed at the time of writing. It analyses the spectrum of funding opportunities for universities, and dives into a selection of national plans in greater detail. Section 3 explores how national plans support universities' main missions, and Section 4 provides an overview of what is a stake for university infrastructure, equipment and processes.

1 https://www.consilium.europa.eu/en/policies/eu-recovery-plan/
2 See Annex
3 Member states who requested a loan in addition to the allocated grants (at the time of writing): Italy (€122.6 billion), Romania (€14.9 billion), Greece (€12.7 billion), Portugal (€2.7 billion), Slovenia (€0.705 billion), Cyprus (€0.227 billion).

Section 5 covers framework reforms related to governance and funding. This briefing ends with observations and key messages for universities and policymakers.

Relative amounts granted (excluding loans) under endorsed RRF plans[4]

4 National RRF plans officially endorsed by the Council of the EU as of 05/10/2021. Not shown on visual: Luxembourg, €93.4 million and Malta, €316.4 million.

2 Diverse opportunities for universities

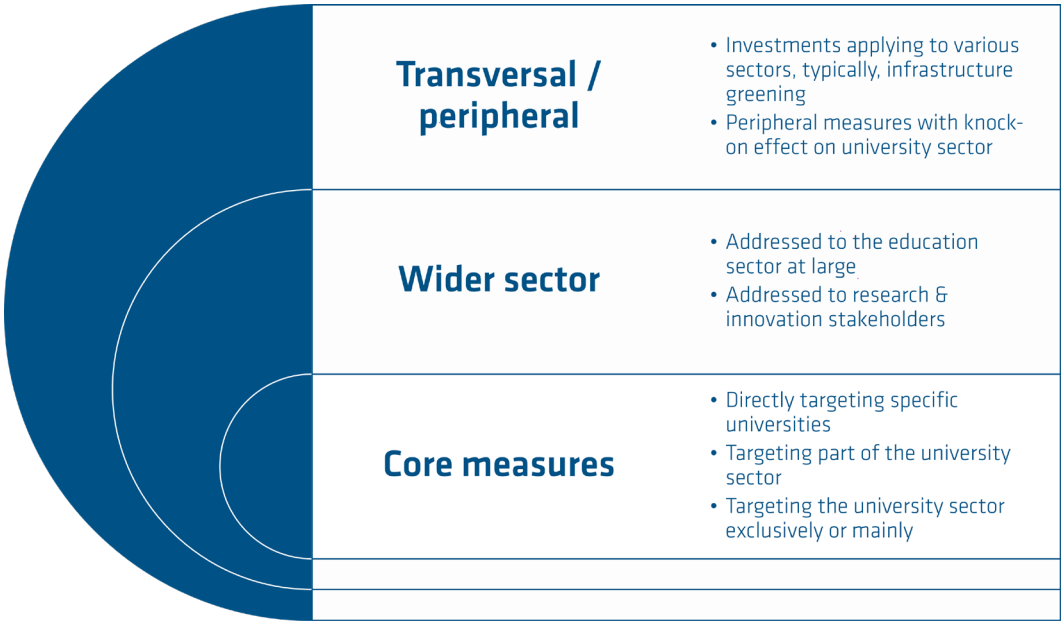
Both the reform and investment dimensions of the plans are relevant to universities. It is worth remembering that the degree of detail made publicly available also varies enormously between the countries. Opportunities for universities can be identified as part of a spectrum ranging from clearly defined measures directly targeting named/specific higher education institutions, to measures with potentially supportive knock-on effects.

Scope	Selected examples
Measures naming HEIs	**Austria**: Investment of €75 million in an Austrian Institute for Precision Medicine at the Medical University of Vienna. **Cyprus**: Upgrading renewable energy and smart grid testing infrastructure at the University of Cyprus. **Slovenia**: Investment in building and infrastructure renovation at the University of Ljubljana Faculties of Medicine and Veterinary Medicine.
Measures covering specific parts of the university sector	**Greece**: Investment of €14 million in higher arts education. **Ireland**: Support for the Technological Universities Transformation Fund, to aid the development and implementation of Technological Universities.
Measures (mainly or exclusively) for universities	**Romania**: Investment of €224 million in digitalisation and smart specialisation grants to universities made available through an open call for applications. **Slovakia**: Investment of €213 million to improve the performance of Slovak universities, support the implementation of reforms regarding funding, evaluation, accreditation and governance. **Sweden**:[5] Investment of €306 million to provide extra student places.
Measures for the wider education sector	**Germany**: Investment of €630 million in a "Digital Education Platform" and €205 million to develop the teaching staff's digital skills.
Measures for the wider research & innovation sector	**Denmark**: Investment of €94 million in research into green solutions, through public-private partnerships involving research institutions, private businesses, public authorities, and innovation actors.

5 The European Commission had not completed the assessment of the Swedish recovery and resilience plan for endorsement by the Council of the EU at the time of writing.

Scope	Selected examples
Measures that apply to universities and other sectors (transversal)	**France**: Investment of €4 billion to retrofit public administration real estate, including university campuses and student housing.
Measures supporting thematic research areas	**Italy**: Investments to promote R&D in the field of advanced digital technologies, including €1.6 billion for national research centres in key digital technologies. Support for R&I partnerships (€200 million) could include partnerships for key digital technologies and high performance computing. The plan describes €1.5 billion funding for approved and potential Important Projects of Common European Interest (IPCEI) and some of the funding is expected to support microelectronics and next generation cloud infrastructure and services.
Measures with a knock-on effect for universities	**Croatia**: reform amending the legislative framework for R&D tax incentives to promote private investment in R&D, remove administrative burden, simplify procedures and enhance transparency.

This wide range of opportunities suggest that diverse funding methods will apply: the plans may result in direct additional university funding, investments that benefit universities without channeling funds directly to them or competitive grants (whether exclusively for the sector or in competition with other organisations). More indirect benefits include tax reform and other regulatory changes. As a result, it is almost impossible to evaluate how much universities will benefit from NGEU funds, even under a single national recovery and resilience plan.



The following examples attempt to outline the most direct financial opportunities for universities under the Austrian, French and Italian national recovery and resilience plans.

Integration with national funding: the example of France

The French plan is presented in a way that combines EU and national funding. It is worth €100 billion, 40% of which is funded via NGEU grants. The French government announced that €6.5 billion will be dedicated to higher education, research and innovation under this framework.

- €5.5 billion will be channelled through the "Investment for the Future" programme as follows:
  - ◊ €2.2 billion for "acceleration strategies": investments in key technologies (AI, quantum, cloud, cyber), agricultural tech, digital health and bioproduction for innovative therapies, as well as a strategy to consolidate digital learning.
  - ◊ €3.1 billion for structural support to higher education, research and innovation ecosystems (at least partially competitive allocation): support for further concentration measures between HEIs and other R&I actors; financial support for large-scale labs and equipment, with a focus on biomedical research and health; additional incentives for innovation.
- Specific actions to support research:
  - ◊ €300 million to support R&I staff from the private sector, and to strengthen cooperations between private and public operators including universities and other research and technology organisations (RTO).
  - ◊ €400 million to be competitively allocated via the French National Research Agency, to increase the overall success rate to 25%.
- Specific higher education actions:
  - ◊ Undefined share of €4 billion for energy retrofitting of public buildings, including university & RTO infrastructure.
  - ◊ €35 million for digital and hybrid university equipment.
  - ◊ €180 million towards new student places at bachelor's degree level, and for paramedical and short degrees.
  - ◊ €32 million to strengthen the student loan guarantee fund, with a view to quintupling the number of potential beneficiaries.

Diverse opportunities for universities: the example of Italy

The Italian recovery plan requests the largest total amount of grants and loans (€191.5 billion), and is second only to Spain (€68.9 billion) in terms of the amount of grants requested. The Italian public authorities announced that the plan is worth €300 billion, including national funds for the 2021-26 period, and other EU funds (React-EU and the Just Transition Fund). EU Cohesion funds are also expected to be integrated. This massive plan is expected to tackle a wide array of structural reforms.

The following (rounded up) figures are taken from the Italian recovery and resilience plan, and list the investments most directly related to higher education.

- Higher education:
  - ◊ €1 billion for student housing.
  - ◊ €1.35 billion for student scholarships and increased tax relief for families.
  - ◊ €0.5 billion for advanced university teaching and skills, funding initiatives in the field of digital innovation, culture of innovation, and internationalisation.
  - ◊ €0.5 billion for professional training cooperations between universities and the local branches of professional associations.
  - ◊ €0.25 billion towards active guidance for high school students to increase the rate of transition to university.
- Research:
  - ◊ €1.6 billion for public-private partnerships (extended to universities, research centres, enterprises and funding for basic research projects).
  - ◊ €0.6 billion funding for young researchers, based on the European Research Council grants model.
  - ◊ €0.7 billion for "agreements for innovation" (supporting R&D projects for high-profile innovative solutions).
  - ◊ €1 billion for Important Projects of Common European Interest, and Partnerships in Research and Innovation (with a focus on companies).
  - ◊ €1.8 billion to support the national project funding scheme (PRIN), including incentives for partnerships between universities and research institutions and to encourage Italian participation in Horizon Europe.
  - ◊ €1.6 billion for constructions and research infrastructure, with a focus on Southern Italy.
  - ◊ €1.3 billion to finance the creation of 20 "Territorial champions of R&D", including universities.
  - ◊ €1.6 billion towards upgrading research facilities and creating "7 National champions of R&D" in Key Enabling Technologies.
  - ◊ €0.6 billion for innovative PhDs in business, and researcher placements at companies.
  - ◊ €0.48 billion for green PhDs, researchers and innovation.
- Other measures:
  - ◊ Inclusion and cohesion: €3 billion towards a New Skills Plan strengthening the provision of lifelong learning, including universities alongside other organisations.
  - ◊ Health: €0.9 billion to "Health, Environment and Climate. Ecological Public Health" including a plan to finance eight university grants in health/environment/climate for three cycles. €0.1 billion for the "Innovative Health Ecosystem" (collaboration between NHS, universities, business incubators, research centres, large businesses, SMEs and others, aimed at consolidating the innovation chain to engage in the competitive development of the health ecosystem).
  - ◊ Tourism and culture: €2.9 billion to promote interactions between schools, universities, businesses, and places of culture based on local strategies of intelligent specialisation.

Different types of measures: the example of Austria

Austria is entitled to grants of around €3.46 billion, but the total volume of planned measures is worth €4.5 billion. The plan includes actions in four priority areas, one of which is entitled "Knowledge-Based Development," and includes several investments relevant to universities.

- €75 million (1.7% of the total plan) for the Medical University of Vienna for the Institute of Precision Medicine (measure naming HEIs).
- €30 million (0.7%) for digital research infrastructures for the sustainable development of universities in the context of digitalisation (measure concerning several or all universities).
- €107 million (2.4%) for the promotion of quantum sciences (measures concerning the wider research & innovation sector).
- €250 million (5.6%) to research for participation in "Important Projects of Common European Interest on microelectronics and hydrogen). This is aimed primarily at business and industry, but universities may be able to contribute as well (measures concerning support to thematic research areas).
- €277 million (6.2%) to fund reskilling and continuing education measures (measures concerning the wider education sector).

This breakdown shows that 2.4% of the plan expenditure is exclusively assigned to the university sector, and 14.2% is earmarked for research, innovation and education in the broader sense. Universities could also benefit from a share of other funding, most likely in the area of quantum research. However, the actual amount that universities will receive from these broader measures cannot currently be calculated.

Austria's annual universities budget is €12.3 billion for the 2022 – 2024 period.

These three examples illustrate the plans' diverse scale, how the university sector may be affected from different angles, and the various funding methods considered (including loans in the case of Italy). All three plans combine NGEU funding with existing European and national funding sources, and publish a comparatively high level of detail about the described measures. These plans clearly show that NGEU is pushing the alignment of funding schemes to a new level, at least in the planning stage. It will therefore be very interesting to monitor plan implementation, notably at beneficiary level, to assess the levels of progress achieved.

3 Supporting universities' main missions

As illustrated by the various examples in this briefing, the national plans consider universities from a range of angles. Approaching opportunities from the angle of university missions, infrastructure, frameworks and university communities may give a better understanding of the stakes.

One of the national recovery plans' common themes is reforming and investing in higher education and research, with a direct impact on the various university communities.

As regards **learning and teaching**, this may mean funding for extra student places in specific disciplines (notably STEM subjects, related to digital and greening foci) or in general. For example, *France* earmarked €180 million to create new student places in 2020 and 2021. *Sweden* proposed investing SEK 3.12 billion over the 2020-2025 period to meet the demand for places at universities and colleges. *Finland* also plans similar investments (€15 million), notably in sectors where there is a shortage of skilled labour and in sectors consistent with the Sustainable Growth Programme for Finland. Various measures target students directly, either as the beneficiaries of personal IT equipment, increased scholarships (*Croatia, Slovakia*) or reduced tuition fees (*Spain*), or as users of renovated or newly built student accommodation (see below), or as part of the enhancement of the digital skills of a wider group of people. Some plans also include a focus on student mobility, at times specifically aiming to attract foreign students by increasing dedicated support (*Greece, Lithuania, Slovakia*).

Curricula redesign is a common feature of several recovery plans (*Belgium, Cyprus, Czech Republic, Greece, Portugal, Slovenia*). These reforms mostly target the digital and green transition and/or improved alignment with labour market needs.

Lifelong learning, vocational training, re-skilling and up-skilling are an important aspect of the recovery plans. While the terminology and focus are diverse, this activity is included in most plans, and is relevant to universities, even if they are often not the sole provider of such services. *Greece* will establish a new strategy for "lifelong skilling", including the improvement of the lifelong learning framework, the creation of Lifelong Skilling Accounts and a new national Eligible Training Provider list. *Austria* will invest €277 million in up- and reskilling opportunities for people who lost their jobs in the pandemic crisis. *Belgium* set aside €450 million to expand training to vulnerable groups. *Spain* plans to invest €2 billion to create 135,000 new vocational training places under measures to reinforce the country's economic and social resilience. This is in addition to the €3.6 billion dedicated to digital skills training. *Croatia* will implement a training and upskilling programme voucher scheme, notably for green and digital knowledge. Finally, *Ireland* wants to spend €114 million on developing additional educational and training programmes for the groups most affected during the pandemic, with a strong focus on green, digital and future-proof skills.

Academic staff are also directly affected by various plans for teaching and research. Several countries identify the need to reform academic careers (*France, Italy*), establish incentive schemes, attract researchers to STEM and ICT fields (*Croatia*), and enhance their abilities to work with/set up businesses (*Luxembourg*). Teacher training reform is included in, for example, *Cyprus* or *Italy's* plans. Digital training is also commonly foreseen for academic staff. Attracting foreign academics and researchers is another common objective.

Finally, several countries indicate they will invest in **research**, generally in targeted areas. For instance, the *Danish* plan outlines a €94 million investment in "research in green solutions," to be implemented via public-private partnerships, which will focus on four topics: carbon capture and storage; green fuels; environmentally friendly agriculture and the reuse of plastic waste. *Sweden* proposed investing SEK 2.41 billion in competitive research focused on digitalisation. *Italy* plans to invest €160 million in the research and development of hydrogen technologies. Some recovery plans (*France, Greece*) address doctoral candidates specifically.

National recovery and resilience plans include a notably recurrent focus on **innovation ecosystems**, academia-business collaboration and technology transfer. For instance, *Poland*[6] seeks to enhance science-business collaboration "by improving the planning system (a system of research programs for key areas of the economy financed under the Łukasiewicz Research Network established in 2019, gathering 32 research institutes), strengthening cooperation with entrepreneurs to define common challenges, introducing uniform rules for managing research infrastructure and implementing prototypes and strengthening intellectual protection, reforming the support system for joint projects (acceleration programme) and preparing procedures for intellectual property management."[7]

Portugal focuses on the expansion and consolidation of a network of "interface institutions" to support academia and business cooperations to enhance knowledge and technology transfer. In *Italy*, "the reform component planned to enhance the transfer of knowledge from research to business focuses on strengthening research and encouraging the dissemination of innovative models for basic and applied research carried out in synergy between universities and businesses. It also aims to support innovation and technology transfer processes, as well as reinforce research infrastructures, capital and skills necessary to support innovation."[8]

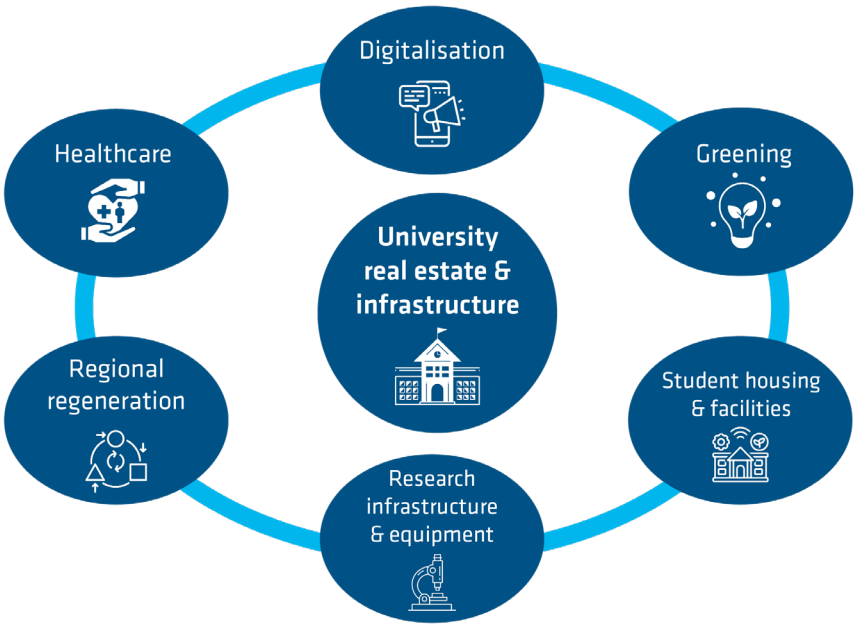
6 The European Commission had not completed the assessment of the Polish recovery and resilience plan for endorsement by the Council of the EU at the time of writing.
7 English translation of the Polish recovery and resilience plan, p.39, by the authors.
8 Maurizio Tira, "A change of pace for research and education funding in Italy", 7 July 2021, EUA Expert Voices, https://www.eua.eu/resources/expert-voices/234:a-change-of-pace-for-research-and-education-funding-in-italy.html

4 University infrastructure, equipment and processes

Infrastructure measures concern university real estate and facilities, which are most often looked at through the prism of greening. Major opportunities in this area include campus and student housing energy retrofitting (*France*). This may form part of a wider plan to enhance public buildings' energy performance (university buildings are national property in various European countries). *Croatia* outlines specific infrastructure building investments to consolidate universities and scientific institutions as part of its "boosting research and innovation capacity" programme. *Slovenia* earmarked funds to extend and build facilities for two faculties at the University of Ljubljana.

Infrastructure investment also answers more specific needs, such as upgrading healthcare facilities. This is the case in *Latvia*, where three universities (together with regional hospitals) will receive such funding. University infrastructure renovation and upgrades may also be considered as part of wider regional regeneration projects, as in *Cyprus*. Measures intended to revitalise the inner city area of Nicosia include repurposing specific buildings to benefit the University of Cyprus, and the conversion of exisiting facilities into additional student accommodation. Increasing the stock of affordable student housing is also a *Portuguese* and *Romanian* recovery plan objective, again designed to enhance equal access to higher education (by reducing barriers to students who need to move to other cities to attend university and by prioritising students from under-represented and disadvantaged socio-economic backgrounds). *Greece* also considers the campus renovation of the Agricultural University of Athens as part of the city's regional urban regeneration project.

Figure 1 *Areas of investment related to university property*



Focusing on university infrastructure may be closely linked to digitalisation, including measures to upgrade university IT infrastructure and equipment for operational, educational and research purposes. The *Austria* plan earmarks €30 million for digital research infrastructure. The more general need to upgrade university research infrastructure also features in various plans and may be addressed via large-scale investments in specific research themes.

Higher education and research measures are sometimes included in sections on green and digital transitions, for which there are fixed objectives (minimum 37% and 20% of the planned expenditures, respectively). For example, the *Croatia* recovery plan, includes opportunities for universities under: the green transition (energy efficiency), the digital transition (digitalisation of higher education) and under economic and social resilience (investments in education and research).

Digitalisation covers a variety of measures, whose scope often goes beyond the higher education sector. Resilience and recovery plans sometimes focus on the need to improve the digitalisation of public administration in general, or of education in particular. Increasing the effective use of technology and digital learning tools in schools and higher education institutions (for example, *Belgium, Croatia, France* and *Greece*) is a common measure.

Another important dimension of the digitalisation challenge is the need to upgrade everybody's digital skills. Addressing this requires a range of schemes and providers, which could include universities. *Luxembourg*, for instance, outlines employee training programmes that use vouchers to provide e-learning courses in digital skills. *Slovakia* included a national strategy for the development of digital skills through lifelong learning as a reform component under its plan. *Spain* has committed to spending €3.6 billion on digital skills training, focused on improving people's digital skills generally, on achieving the digital transformation of education, and on training more ICT specialists. *Finland* defines a comprehensive "Digivisio 2030" strategy (backed by €20 million), which includes the need to make academic courses more flexible using digitalisation, and to create "an open and acknowledged learning ecosystem" adapted to the learners' life situations and needs,"[9] thus addressing both sides of the challenge (the digitalisation of university operations and upgrading everyone's skills).

Digitalisation is therefore a good illustration of the multiple dimensions at play, it shows that universities act both as a recipient (in the case of IT infrastructure upgrades or newly funded student places in ICT-related degree programmes, as in Portugal) and a contributor (as a provider of digital skills).

9 Finnish recovery and resilience plan, English version, p.217

5 Enabling frameworks: governance and funding reforms

National recovery and resilience plans must include both investment and reform components, as shown in the preceding examples. A number of these reforms focus on, or are of direct relevance to universities. Often, they were already in the making, but slowed or were postponed during the pandemic. This section of the briefing explores reforms related to university governance and funding in more depth. These may include the creation or enhancement of specific regulatory/advisory bodies, overhaul of the regulatory framework, changes to the university funding model, and large-scale concentration measures such as mergers.

➤ **Regulatory/advisory/funding bodies**

Several countries have proposed the creation of new higher education, research and innovation bodies. *Luxembourg* will invest in a new Accreditation Agency which will help evaluate and promote the quality of courses. Bulgaria's plan includes the creation of a national research and innovation agency, which "will implement the policy in the field of interaction of research, innovation and technology and the associated reforms, providing the required coordination and ensuring the contribution of the other policies for attaining the objectives and priorities laid down."[10]

Other countries chose to reinforce the capacity of existing bodies. In *Romania*, the plan includes funds to modernise and enhance the professional services of the Romanian Rectors' Conference (€20 million), with a focus on digitalising the organisation. The organisation will also acquire a "pedagogical online platform" that will offer both academic staff and students a variety of services. France foresees upgrading the capabilities of its national research agency with a financial boost of €400 million, and the explicit objective of improving its competitive funding programmes' success rate.

➤ **Regulatory framework reform**

In line with the European Semester recommendations, member states were asked to include structural reforms that underpin their long-term economic and social resilience. Some of the recovery and resilience plans therefore accommodate sector-wide higher education reforms (as in Bulgaria, Hungary,[11] Latvia, and Slovakia). France included its ongoing multiannual research programming law as a reform component in the plan. This objective focuses on strengthening research funding and organisation, improving the appeal of scientific jobs and careers, and enhancing research interactions with the economy and society.

Acccording to the Commision's assessment, the *Latvia* plan "puts forward an ambitious reform in higher education that focuses on consolidation, modernising the governance and financing model of the higher education institutions". More specifically, this involves modifying the governance

10 Draft National Recovery and Resilience Plan of the Republic of Bulgaria, English version released in February 2021, p.38 (the latest available version was released in July 2021 and is available in Bulgarian only). The Bulgarian recovery and resilience plan had not yet been submitted to the European Commission at the time of writing.

11 The European Commission had not completed its assessment of the Hungarian recovery and resilience plan for endorsement by the Council of the EU at the time of writing.

model of Latvian universities, by "separating academic and strategic decision-making" and by including external members in governing bodies. The reform also concerns career paths and seeks to develop "a new and unified academic and scientific staff career model". This measure is supported by financial incentives for universities who prove willing to implement these changes.

In *Slovakia*, reform 4 of component 8, dedicated to improving the performance of Slovak universities (€213 million), focuses on university governance and plans to strengthen the powers of the rector and board of directors. It will also ease restrictions on the appointment of lecturers and professors. *Greece* plans to enhance its universities' autonomy, along with their research performance and the quality of university education. (The latter is primarily considered under relevance to labour market needs.)

Bulgaria wants to approve amendments to the Higher Education Act promoting the modernisation of higher education institutions and "providing conditions for active research activity, transfer and commercialisation of knowledge and technologies, rejuvenation of the teaching staff, improved quality of teaching and enhanced requirements to students".[12] The country also plans to revamp its legislative framework for R&I and draft a new Research and Innovation Act to frame the new common policy for the development of research, innovation and technology.

The proposed reforms have often been in discussion for several years. National university associations reported that their implementation was delayed by the pandemic. Recovery plans can therefore be seen as a tool to push stalled reform processes forward.

- **Funding model reform**

Sometimes paired with changes to university governance, higher education funding model reforms feature in several national plans. The general narrative is of a greater focus on the efficiency of public investment in higher education, research and innovation, through performance-based funding and competitive funding schemes.

As part of its wider focus on enhancing university performance, *Slovakia* plans to introduce performance-related contracts and revise the funding formula used to distribute financing to its higher education institutions. It wishes to move away from a model based on past activity to develop a system that supports strategic university profiling. While the proposed model is not described in detail, the plan includes potential indicators and mentions U-Multirank as a way to evaluate university performance. As for the implementation of the new model, the plan states that the Ministry of Education, Science, Research and Sport will consult the sector during 2021, and will carry out audits with a view to drafting performance-related contracts that would come into force as of 2023 and for a three-year period.

Croatia intends to pass a new, modernising, Science and Higher Education Act and a new law on quality assurance (component 3.1), but a major element appears to be the adoption of a new HEI funding model. The Croatian authorities want to develop a system of "programme agreements" focused on innovation, research and development to fund universities and research institutes. External experts will be invited to come up with a proposal to develop this contract-based model. Furthermore, a support scheme to deliver institutional funding for the universities and research institutes that have signed those agreements will be introduced.

12 Draft National Recovery and Resilience Plan of the Republic of Bulgaria (English version of February 2021), p.28

Latvia envisages a change in the funding model, together with university governance reform (component 5). The authorities particularly want to increase the share of performance-based funding to 20%. The Latvian government also seeks to introduce financial incentives to consolidate and implement joint study programmes (to reduce duplication and pool resources). The plan also specifies that funding will be distributed to programmes rated as "excellent" and "good" in the new accreditation cycle, and considering various indicators such as student results or internationalisation. Work is underway, and changes in the regulatory framework are planned for 2022.

Lithuania mentions funding under component 5 "Higher education, a coherent framework for stimulating research and innovation and high-value added business". Specifically, the Lithuanian authorities plan to improve higher education funding and student admission systems. The former will involve aligning the funding system with national strategic goals.

Spain aims to modernise its university system by adapting university course organisation to contemporary society and technological transformation. The plan introduces more performance-based elements into education and research institutions financing.

Bulgaria intends to "gradually increase the share of project financing in the budgetary structure of public research organisations and higher education institutions, thereby creating a sustainable platform for the introduction of mechanisms for monitoring and evaluation of their work and continuation of result-oriented financing"[13]. It also plans to introduce a distinction into the funding model that will favour newly labelled research universities. Research universities will be given research and innovation subsidies at the rate of 40% of the subsidy for education. The other higher education institutions will receive up to 10%. Through this differentiated approach, the country expects to sustainably enhance public R&D spending. The total planned resources for both programme components amount to BGN 318 million and the implementation period is 2021-2026.

- **Consolidation / concentration measures**

As part of its higher education reform, Latvia will incentivise internal and external "consolidation" among universities and research institutions, to reduce the number of higher education institutions and scientific institutes through mergers. Internal consolidation will lead to fewer sub-institutional units. The plan anticipates that up to ten HEIs/research institutions will accept these financial incentives and foresees that consolidations will be completed in three to five years. Previous EUA work[14] has shown that merger activity in the Latvian university sector has been primarily a top-down, asymmetric endeavour, with larger universities absorbing smaller and/or specialist institutions.

The *Slovakia* plan notes that the fragmentation of its higher education, research and innovation landscape hampers international visibility, interdisciplinary research opportunities and its general ability to tackle large-scale, multifaceted challenges. It therefore wants to move towards a greater concentration of outstanding educational and research capabilities. This programme includes at least two university mergers as of 2022, with investment support for strategic development, and a transitional period of five years to complete the integration process.

13 Draft National Recovery and Resilience Plan of the Republic of Bulgaria (English version of February 2021), p.39
14 Bennetot Pruvot, E., Estermann, T., Claeys-Kulik, A.-L., *Designing Strategies for Efficient Funding of Universities in Europe*, 2015, EUA, chapter 2

Other countries do not explicitly aim to reduce their number of universities and other HEIs, but seek to consolidate the sector by fostering greater profiling and differentiation. In certain cases, there is no merger potential, or a consolidation programme has already been completed.

Bulgaria seeks to create a national model for research university development, to allow higher education institutions to migrate to the next level of their development and become full members of the research and innovation ecosystem. These institutions will be funded using a different model.

Greece wants to develop "Universities of Excellence", which will be selected for special support to upgrade and improve their research and educational infrastructure, expand into new research areas and improve the training offered. The objective is to reinforce promising universities and departments of applied sciences and technology, and to enhance their position in the international rankings.

Ireland will use NGEU funds to reinforce its Technological Universities. These were created in 2018 as an incentive for Institutes of Technology to merge and gain critical mass to address socio-economic needs at regional level and to engage in industry-focused research.

Lithuania will refine the respective missions of its universities and colleges in order to improve "the efficiency of the higher education network".

6 Observations and key messages

At the time of writing, national recovery plans included varying degrees of detail. In many cases, analysis had to be carried out using the European Commission assessment of the plan, in conjunction with the plan in its original language. In some cases, a specific action was described in little more than a line; in other cases, a single investment was detailed over dozens of pages. While a section on education and research outlining various components' reforms and investments was often included, other sections on the economy and society are also relevant to higher education. It is striking that such major reform and investment agendas (in many cases worth several billion Euros) had to be developed in such a relatively short time, and that so little information is available to stakeholders and the general public. Comparative analysis remains highly challenging, despite the European Commission guidelines and templates given to national authorites to help them draft their plans.

Not only is the scale of funding very different from one country to the other; complexity is added by the fact that some member states chose to request loans in addition to grants. Some of the plans make the link between NGEU grants and additional EU or national funding clearer than others.

Higher education and research agendas also come in various sizes and lengths. Universities may: be covered by specific aspects (public-private research partnerships in a given area, for instance), be considered as one stakeholder among many (competing for project funding against other organisations like RTOs), be directly subject to large-scale reform. Countries that carried out major reforms to their higher education system in the last decade did not tend to have major university agendas under NGEU. However, where regulatory and/or funding frameworks were considered outdated, or in need of revamp, these plans were included for additional support. EUA's annual Public Funding Observatory[15] recently showed that expected changes to funding models to universities in some countries had been shelved or postponed. NGEU is an opportunity for public authorities to re-open these processes.

It is also remarkable that narratives underpinning the proposed changes to the funding model tended to coincide across plans. Nevertheless, greater emphasis on public investment efficiency, and more extensive use of performance-based and competitive funding schemes come with opportunities and risks, as has been described at length in previous EUA work.[16] Expectations for these mechanisms are often too high and they should therefore be used with caution. Reflection about the entire funding model is a crucial step that must involve stakeholders.

Countries planning governance reforms do not give extensive descriptions of the changes planned, and sometimes refer simply to broad goals such as enhanced university autonomy. EUA therefore calls for clarity and transparency, and invites public authorities to use the Autonomy Scorecard tool, which allows them to measure the impact of such reforms on institutional autonomy.

15 http://efficiency.eua.eu/public-funding-observatory

16 Bennetot Pruvot, E., Estermann, T., Claeys-Kulik, A.-L., *Designing Strategies for Efficient Funding of Universities in Europe*, 2015, EUA

However, the recovery plans do serve as an important, transversal tool to strengthen the integration of, and/or synergies between European and national funding. Member states had to consider the financial support for each measure in a way that generates sustainability and avoids duplication. Concrete examples include investing in Important Projects of Common European Interest (on microelectronics and hydrogen, in the case of the *Austria* plan), or the use of NGEU funds to support recipients of the European Commission's Seal of Excellence, as in *Greece*.

In certain cases, the university sector has been relatively successful at ensuring universities are seen as agents of change and contributors to the plans. As the European Commission now starts making the first payments, the sector must keep public authorities accountable as the measures are implemented. In this regard, there is still a major need for greater transparency about the concrete opportunities for universities and other actors. EUA calls on member states to make the information readily available, to ensure that everyone is able to work towards the long-term recovery and resilience of our societies.

KEY MESSAGES TO UNIVERSITIES

- While university involvement in drafting the recovery and resilience plans was highly important, there are now various opportunities in the implementation phase. The sector should monitor and engage with opportunities at national level, beyond the measures specifically labelled as for "universities", education and research.
- Some types of measures, notably framework reforms, require coordination from the sector representatives, while others, such as competitive funding opportunities, can be monitored efficiently at institutional level.
- Universities should consider how to organise these monitoring tasks internally, particularly considering the transversal nature of the plans, which requires attention to a vast array of topics.
- Universities and sector representatives should consider the impact of NGEU support, and advocate for complementarity and follow-up during the normal national budget process.

KEY MESSAGES TO POLICYMAKERS

- Efficient and sustainable reforms and investments require continuous stakeholder involvement in the design, implementation, and evaluation of measures. This means making the information easily accessible to all, to allow players to identify opportunities and monitor progress.
- Integrating and aligning funding schemes creates additional firepower. This is clearly demonstrated in some of the national plans covered. However, this process also tends to create additional complexity. Public authorities must finance reforms and investments in a holistic way. NGEU support cannot be a reason to reduce university core funding under any circumstances.
- The lack of milestones or indicators for the implementation and assessment of proposed university reforms can be a cause for concern. EUA has defined the core principles for sound reform design and implementation. The Autonomy Scorecard, for instance, provides a unique tool for assessing progress in university autonomy.
- The European Commission has a role to play in promoting this integrated approach and in helping member states to make the best use of existing EU funding streams, notably by reducing the barriers to complementary use of these funds, and further enhancing simplification.

Annex: National recovery and resilience plans

Member state	Maximum grant allocation in current prices (€ billion)	Loans requested	Total	% Climate (European Commission figures)	% Digital (European Commission figures)
AT	3.5	0	3.5	59%	53%
BE	5.9	0	5.9	50%	27%
BG	6.3		6.3	Not submitted (planned October 2021)	
CY	1	0.227	1.227	41%	23%
CZ	7.1	0	7.1	42%	22%
DE	25.6	0	25.6	42%	52%
DK	1.5	0	1.5	59%	25%
EE*	1		1	42%	22%
ES	69.5	0	69.5	40%	28%
FI*	2.1		2.1	50%	27%
FR	39.4	0	39.4	46%	21%
GR	17.8	12.7	30.5	38%	23%
HR	6.3	0	6.3	40%	20%
HU	7.2		7.2	Pending assessment	
IE	1	0	1	42%	32%
IT	68.9	122.6	191.5	37%	25%
LT	2.2	0	2.2	38%	32%
LU	0.093	0	0.093	61%	32%

Member state	Maximum grant allocation in current prices (€ billion)	Loans requested	Total	% Climate (European Commission figures)	% Digital (European Commission figures)
LV	1.8	0	1.8	38%	32%
MT	0.3		0.3	54%	26%
NL	6		6	Not submitted	
PL	23.9		23.9	Pending assessment	
PT	13.9	2.7	16.6	38%	22%
RO*	14.2	14.9	29.1	41%	21%
SE	3.3		3.3	Pending assessment	
SI	1.8	0.705	2.505	42%	21%
SK	6.3	0	6.3	43%	21%

** The plans submitted by Estonia, Finland and Romania were positively assessed by the European Commission and their endorsement by the Council of the EU was pending at the time of writing.*

Own elaboration (valid 05/10/2021) based on:

https://ec.europa.eu/info/files/recovery-and-resilience-facility-grants-allocation-member-state_en

https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

All of the national recovery and resilience plans are available here:

https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#national-recovery-and-resilience-plans

EUROPEAN UNIVERSITY ASSOCIATION

The European University Association (EUA) is the representative organisation of universities and national rectors' conferences in 48 European countries. EUA plays a crucial role in the Bologna Process and in influencing EU policies on higher education, research and innovation. Thanks to its interaction with a range of other European and international organisations, EUA ensures that the voice of European universities is heard wherever decisions are being taken that will impact their activities.

The Association provides unique expertise in higher education and research as well as a forum for exchange of ideas and good practice among universities. The results of EUA's work are made available to members and stakeholders through conferences, seminars, websites and publications.

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