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Analysis of the recovery and resilience plan of France

Accompanying the document

Proposal for a COUNCIL IMPLEMENTING DECISION

on the approval of the assessment of the recovery and resilience plan for France

{ COM(2021) 351 final }

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1. EXECUTIVE SUMMARY

France was one of the Member States most severely hit by the COVID-19 crisis. GDP fell by 8.1% in 2020 and is expected in the Plan to grow by 5% in 2021 and by 4% in 2022. The impact of the fall in activity on the labour market has been largely mitigated by important policy support measures. After falling by 0.9 p.p. in 2020, total employment is expected to increase by 0.4 p.p. in 2021 in the Plan. The general government deficit reached 9.2% of GDP in 2020 mainly due to the sharp contraction in economic activity and to the discretionary policy measures taken in response to the COVID-19 crisis, amounting to 3.3% of GDP. The deficit is planned to decrease to 9.0% in 2021 and 5.3% of GDP in 2022, mainly due to the unwinding of temporary emergency and support measures and the expected economic recovery. In this context, the financial contribution allocated to France under to Recovery and Resilience Facility is EUR 39 368 318 474 in non-repayable financial support, corresponding to 1.6% of GDP (2019). France did not request any loans.

France's recovery and resilience plan pursues the general objective of the Facility to promote the Union's economic, social and territorial cohesion and focuses on three key priorities: the green transition, competitiveness, and social and territorial cohesion. The Plan is structured along nine components, which are meant to tackle the structural challenges facing the French economy, exacerbated by the COVID-19 crisis. The Plan includes large-scale investments and reforms addressing the ecological transition, continuing efforts to bring businesses, administration, and the health system into the digital age, ensuring that workers' skills are in line with business needs, promoting innovation, fostering labour market integration and improving the framework for public finances and efficiency of public spending. The recovery and resilience plan fits into the larger EUR 100 billion recovery strategy at national level "France Relance".

France's Plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the country-specific recommendations or in other relevant documents officially adopted by the Commission under the European Semester. These challenges relate notably to the sustainability of public finances, the resilience of the health system, improving labour market integration and skills, supporting employment, investing in the green and digital transitions as well as research and innovation. The Plan also helps address the imbalances identified in macroeconomic imbalances procedure (high public indebtedness and low competitiveness), as well as the Draft Council Recommendation on economic policy in the euro area¹ (especially supporting recovery, sustainable growth, and strengthening institutions).

¹ Pending final adoption by the Council, after endorsement by the European Council. The text agreed by the Eurogroup on 16 December 2020 is available at: <https://data.consilium.europa.eu/doc/document/ST-14356-2020-INIT/en/pdf>.

France's recovery and resilience plan covers in a comprehensive manner the six pillars structuring the scope of application of the Recovery and Resilience Facility, with an appropriate overall balance between pillars. The green and digital pillars are well covered by the Plan, respecting the minimum allocations set in the Regulation. The Plan prioritises competitiveness, cohesion, and employment as axes for recovery, which contribute to the “smart, sustainable, and inclusive growth”, “social and territorial cohesion” and “policies for the next generation” pillars. Finally, the pillar on resilience is also well addressed, notably by strengthening the resilience of the healthcare system and of businesses through competitiveness-enhancing measures.

A large share of the investments put forward by the French recovery and resilience plan are directly devoted to fostering growth potential and strengthening economic, social and territorial resilience. The support to research, innovation and technology should strengthen potential growth in the medium term and economic resilience to shocks, while offering new employment opportunities. Dedicated reforms presented in the Plan should reinforce the long-term sustainability of public finances, as soon as economic conditions allow. The Plan also includes many measures aimed at addressing social and employment challenges, identified in previous country reports, country specific recommendations and monitored through the Social Scoreboard. Measures to modernise health and long-term care infrastructure across the territory have a potential to improve access to care also in relatively underserved areas. All these measures are likely to have an impact on strengthening social cohesion, health and social protection system, including through policies for youth and by reducing social vulnerabilities.

The green transition is a key priority of France's recovery and resilience plan, with four components dedicated to environmental and climate action. The proposed actions are in line with the strategic orientations set by the European Green Deal, and highlight both the environmental and economic benefits of the green transition to foster recovery and resilience. The plan addresses many challenges France is facing as regards the green transition. A significant part of the investments proposed in the plan focus on the climate and energy transition and aim to contribute to France's 2030 targets and to its transition to climate neutrality by 2050. The plan also contains actions to accelerate the transition towards a circular economy as well as dedicated measures to support biodiversity protection and restoration. At 46.0%, the plan exceeds largely the 37% target of funds dedicated to the green transition with the main contributions coming from investments in the energy renovation of public buildings, support to the railway sector, and support to the development of the hydrogen sector. No measure in the plan is expected to ‘do no significant harm’ to environmental objectives within the meaning of Article 17 of Regulation (EU) 2020/852.

France's recovery and resilience plan is expected to contribute to the digital transition of the country with a broad and cross-cutting approach. Investments in digital areas target the public administration, improving e-identity, businesses, in particular SMEs, the health and cultural sector, as well as education and training institutions. Investments are also planned to strengthen key digital capacities, such as cybersecurity, cloud, quantum and 5G and to boost their use in the private and public sector. A number of measures seek to improve digital education and skills and digital inclusion. Overall, these investments have the potential to increase productivity growth in the long term. The roll-out of next generation access networks, in particular optic fibre on the national territory should bridge the gap in terms of connectivity, especially in rural areas and the outermost regions. At 21.3%, the plan dedicates more than 20% of its total allocation to the digital transition. The three most important investments contributing to reaching this target are the digitalisation of the health system, support to innovation in key digital technologies and the digitalisation of the State and territories.

The implementation of investments and reforms planned by France in its recovery and resilience plan is expected to have a lasting impact and to bring structural change in a number of areas leading to a significantly positive impact on the economic, social and institutional resilience of the country. In particular, measures aimed at bolstering the skills of the labour force, the digital transition and the innovation system are expected to have a positive impact on long-term productivity and labour force employability.

The implementation and monitoring process of the French recovery and resilience plan is ensured at the highest level of the French Government by the Monitoring National Committee, attached to and chaired by the Prime Minister. It is assessed as adequate to ensure effective monitoring and implementation of the plan, including the envisaged timetable, milestones and targets, and the related indicators. The number of milestones and targets as well as their overall quality are deemed satisfactory. Milestones and targets tracking the implementation of reforms are clear and realistic. The performance of investments will be mainly captured by the achievement of targets monitored by each public entity in charge of implementing the measures, although some milestones are also foreseen, usually for the earlier stages of implementation.

The justification provided by France on the amount of the estimated total costs of the recovery and resilience plan is to a medium extent reasonable, plausible, in line with the principle of cost-efficiency and is commensurate to the expected national economic and social impact. France provided sufficient information and evidence that the amount of the cost of the reforms and investments to be financed under the Facility is not covered by existing or planned Union financing. The fact that sometimes the methodology used is not sufficiently well explained and the link between the justification and the cost itself is not fully clear precludes a rating of addressing this assessment criterion to a high extent. France's recovery and resilience plan describes in an appropriate way the arrangements to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the Facility.

The audit and control systems, coordinated by the Interministerial Commission for the Coordination of Controls, are assessed as adequate.

Finally, France’s recovery and resilience plan presents strong coherence both internally and with other policies at national and European levels. The nine components build a coherent package of investments and reforms, supporting the objectives to stimulate the recovery of the economy, to contribute to the twin transition and to increase France’s resilience to meet the challenges of the twenty-first century on the path of sustainable and inclusive growth.

Table 1 details the assessment criteria ratings developed in this Staff Working Document that led to the approval of the French recovery and resilience plan under the Recovery and Resilience Facility Regulation.

Table 1. Summary of the French recovery and resilience plan assessment for the 11 criteria set by the Recovery and Resilience Facility regulation.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Balance d Respons e	CSR s	Growth , jobs...	DNS H	Green target	Digit al target	Lasting impact	Milestones and Targets	Costing	Control System s	Coherenc e
A	A	A	A	A	A	A	A	B	A	A

2. RECOVERY AND RESILIENCE CHALLENGES: SCENE-SETTER

2.1. Macroeconomic outlook and developments since the 2020 country report

The plan assumes that the fall in economic activity in 2020 will be followed by a gradual recovery, with a return to pre-crisis levels in 2022. GDP fell by 8.1% in 2020, with a sharp decrease in all the components of domestic demand and a negative contribution of net exports. According to the macroeconomic scenario in the plan, the rebound in 2021 is expected to be gradual, with GDP growing by 5% in 2021 and by 4% in 2022, catching up with and slightly exceeding pre-crisis levels in all domestic demand components. The rebound projected in the plan for 2021 is expected to be driven by domestic demand, with a negative contribution of net exports to growth. In 2022, net exports' contribution to growth is projected to be slightly positive. Inflation is expected to remain low: slightly above 1% in 2021 and somewhat below that level in 2022. According to the Commission 2021 spring forecast, French GDP growth will reach 5.7% in 2021 and 4.2% in 2022. Compared to the scenario in the plan, the Commission forecast projects a higher contribution of net exports to growth in both 2021 and 2022. Inflation is projected at 1.4% in 2021, before falling to 1.1% in 2022. The macroeconomic and fiscal outlook continue to be affected by high uncertainty related to the COVID-19 pandemic and its economic consequences.

The negative impact on the labour market was largely mitigated by important policy support measures. After falling by 0.9% in 2020, the plan projects total employment to increase by 0.4% in 2021, broadly in line with the Commission 2021 spring forecast, thereby remaining below the level of 2019. According to the Commission forecast, the unemployment rate is set to increase to 9.1% in 2021, before declining to 8.7% in 2022, still slightly above its 2019 level.

While the resilience of the labour market is helping to curtail negative social consequences of the crisis, falling employment will increase poverty for some groups, as well as inequality. Overall, France performs relatively well in terms of social conditions, ranking better than the average of the European Union for most of the indicators². The gender employment gap continues to decline and the share of early leavers from education and training decreased from 8.2% to 8.0% in 2020. The pre-existing social safety net and the emergency policy measures taken to support businesses and short-time work schemes during the COVID-19 crisis, cushioned about 84% of the shock in household incomes in 2020, with more than half of the effect due to the monetary compensation schemes³. However, other indicators have recently deteriorated, such as the share of people at risk of poverty or social exclusion, which has increased from 17.0% to 17.9% between 2017 and 2019, contrary to the decreasing trend in the EU (from 22.4% to 20.9%). While the youth employment rate had been improving prior to the outbreak of the

² Eurostat, <https://ec.europa.eu/eurostat/web/european-pillar-of-social-rights/indicators/social-scoreboard-indicators>.

³ Christl, M, De Poli, S., Figari, F., Hufkens, T., Leventi, C., Papini, A. and Tumino, A., The cushioning effect of fiscal policy in the EU during the COVID-19 pandemic, JRC Working Papers on Taxation and Structural Reforms No 02/2021, 2021 (forthcoming)

COVID-19 crisis, access to the labour market is still more difficult for specific groups, particularly for low-skilled people with a migrant background and in the outermost regions.

After reaching 9.2% of GDP in 2020, according to the plan the general government deficit is planned to gradually narrow to 3.2% of GDP in 2026. The sizeable deficit increase in 2020 is mainly due to the sharp contraction in economic activity and to the discretionary policy measures taken in response to the COVID-19 crisis, amounting to 3.3% of GDP. According to the macroeconomic scenario in the plan, France's general government deficit is planned to decrease from 9.0% in 2021 to 5.3% of GDP in 2022, mainly due to the unwinding of temporary emergency and support measures and the expected economic recovery. Thereafter the general government deficit is projected to gradually diminish to 3.2% by 2026, mainly thanks to the expected economic recovery. The debt-to-GDP ratio rose sharply to 115.7% of GDP in 2020 due to the combined effect of shrinking GDP and fiscal stimulus, and it is set to rise further, to almost 118% in 2021, remaining above that level in 2026.

The crisis risks worsening some structural weaknesses of the French economy. France was experiencing macroeconomic imbalances before the outbreak of the COVID-19 crisis, related in particular to the high level of public debt and weak competitiveness dynamics in a context of low productivity growth⁴. The crisis had a negative impact on these imbalances, especially on public debt. Moreover, private indebtedness also rose sharply, compounding the risks stemming from high public debt. Despite positive recent developments, the COVID-19 shock has brought about a temporary deterioration in competitiveness, with an increase in unit labour costs and a large drop of exports in crucial sectors, such as tourism and aeronautics. The COVID-19 impact on cost competitiveness is expected to be partially reversed in the coming years, but longer-lasting consequences of the crisis represent a negative risk. The medium-term impact of the crisis on productivity is uncertain. This crisis has encouraged the use of new technologies, which may contribute positively to productivity trends, but it has also increased the need to reallocate resources across economic sectors and companies. Moreover, the surge in corporate debt may affect investment decisions in the future negatively.

The high general government debt-to-GDP ratio poses significant fiscal sustainability risks for France. According to the Commission Debt Sustainability Monitor 2020⁵, France faces high sustainability risks in the short and medium term, mainly due to the high debt (debt requirement), while the contribution of the projected increase in age-related expenditure is limited. Financial market conditions for sovereign borrowing remain favourable, with low spreads and stable credit ratings. The average maturity of total outstanding debt is high at 8.2 years in 2020, and gross financing needs are expected to decrease from 26.5% of GDP in 2020 to 25.2% of GDP in 2021 and 23.5% of GDP in 2022. The Recovery and Resilience Facility is expected to be a mitigating

⁴ Commission Staff Working Document of 2 June 2021, in-depth review for France in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances.

⁵ See: https://ec.europa.eu/info/sites/default/files/economy-finance/ip143_en.pdf.

factor to the identified debt sustainability risks, as it should support growth potential through investments and reforms.

The macroeconomic scenario presented in the plan relies on plausible macroeconomic assumptions, and is slightly more prudent than the Commission's forecast. The Commission 2021 spring forecast anticipates a slightly higher growth rate in 2021 and 2022 than expected in the plan, with a somewhat different growth composition. This leads to a level of activity almost one percentage point above the scenario underlying the plan in 2022. However, these differences remain limited given the range of uncertainty regarding this forecast exercise. For the general government deficit and debt, the Commission forecasts broadly similar developments to the recovery and resilience plan until 2022. Years beyond 2022 are currently not covered by the Commission forecast.

Table 2. Comparison of macroeconomic developments and forecast

	2019	2020		2021		2022		2023	2024	2025	2026
	COM	COM	RRP	COM	RRP	COM	RRP	RRP	RRP	RRP	RRP
Real GDP (% change)	1.5	-8.1	-8.2	5.7	5.0	4.2	4.0	2.3	1.6	1.4	1.4
Employment (% change)	1.1	-1.1	-0.9	0.3	0.4	1.2	1.0	0.2	0.1	0.2	0.2
Unemployment rate (%)	8.4	8.0	n.a.	9.1	n.a.	8.7	n.a.	n.a.	n.a.	n.a.	n.a.
HICP inflation (% change)	1.3	0.5	0.5	1.4	1.1	1.1	0.8	1.2	1.5	1.8	1.8
General government balance (% of GDP)	-3.1	-9.2	-9.2	-8.5	-9.0	-4.7	-5.3	-4.4	-3.9	-3.5	-3.2
Gross debt ratio (% of GDP)	97.6	115.7	115.7	117.4	117.8	116.4	116.3	117.2	118.0	118.3	118.2

COM: Commission 2021 Spring Forecast.

RRP: Stability Programme 2021.

2.2. Challenges related to sustainable growth, cohesion, resilience and policies for the next generation

The COVID-19 crisis and related restriction measures have had a considerable impact on French firms' activities. According to the Banque de France, activity levels for industry and services during the worst of the pandemic decreased by more than 30% compared to the levels expected in absence of the crisis⁶. Industries in sectors such as transport, clothing and metallurgy were particularly strongly affected, with estimated capacity utilisation rates in April 2020 of less than 40%. In services, the food service industry as well as other sectors related to tourism such as

⁶ <https://www.banque-france.fr/statistiques/conjoncture/enquetes-de-conjoncture/point-de-conjoncture>.

accommodation were the most strongly hit, with decreases in activity of around 80%⁷. Thanks to the crisis support measures, bankruptcies in 2020 decreased by 39%⁸, while they remained flat in Q1 2021 compared to the previous three-month period⁹. However, the slowdown in firm birth rates which occurred in the first part of 2020 (March to May) is likely to have an incidence on the potential of future high-growth enterprises with some persistent effect on aggregate employment in France¹⁰.

Reinforcing competitiveness and productivity growth are key to ensuring sustainable growth of the French economy. Cost-competitiveness improved in recent years in France thanks to moderate growth in unit labour costs compared to most other euro area and EU countries. Private investment was high and export market shares remained broadly stable, although competitiveness losses accumulated over the first decade of the 2000s had not yet been regained. In fact, after some gains since 2013, export market shares declined in 2019. Productivity growth significantly slowed down during the last decade and remained weak in general due to, among others, structural change towards more services, weak business dynamism in services, skills gap and technology adoption and diffusion gaps^{11,12}. The positive trend in competitiveness halted with the outbreak of the COVID-19 pandemic, which led to a sharp increase in unit labour costs and a large drop of exports in crucial sectors.

While reforms in recent years aimed to improve the business environment and competitiveness, a number of regulatory restrictions in services remain to be addressed. The level of such restrictions remains higher in France than in other EU countries, particularly in business services, regulated professions and retail. Those restrictions act as entry barriers and have led to low competition, high profit margins and prices, harming the competitiveness of the whole economy.

The performance of the research and innovation ecosystem has significant margin for improvement. French R&D intensity remains below the 3% GDP target for 2020 and the level

⁷ https://www.banque-france.fr/sites/default/files/media/2020/06/10/point-conjoncture_avril-2020.pdf. To compare these figures with figures on the impact of the COVID-19 crisis on the ecosystems at the EU level, see the Annual Single Market Report 2021, SWD(2021) 351 final, 05.05.2021

⁸ <https://www.banque-france.fr/statistiques/defaillances-dentreprises-jan-2021>.

⁹ <https://www.banque-france.fr/statistiques/defaillances-dentreprises-avr-2021>.

¹⁰ Benedetti Fasil, C., P. Sedláček and V. Sterk, EU start-up calculator: impact of COVID-19 on aggregate employment. Scenario analysis for Denmark, Estonia, Finland, France, Latvia, Lithuania, Portugal and Sweden, 2020, JRC122318. <https://op.europa.eu/en/publication-detail/-/publication/b53f74f0-1805-11eb-b57e-01aa75ed71a1/language-en#>

¹¹ Bauer, P., Fedotenkov, I., Genty, A., Hallak, I., Harasztosi, P., Martinez Turegano, D., Nguyen, D., Preziosi, N., Rincon-Aznar, A. and Sanchez Martinez, M., Productivity in Europe: Trends and drivers in a service-based economy, 2020, JRC119785. <https://publications.jrc.ec.europa.eu/repository/handle/JRC119785>

¹² Conseil National de Productivité, Productivité et compétitivité: où en est la France dans la zone euro? Premier rapport du Conseil National de Productivité, 2019. <https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/cnp-premier-rapport-10-juillet2019.pdf>

of R&D investment from the business sector is lagging behind other Member States. Innovation has been a decisive factor in mitigating the negative effects of the COVID crisis on businesses: in 2020, innovative companies' income dropped by half compared to that of non-innovative companies¹³. Regional disparities remain very important in terms of R&D expenditure and innovation performance. With R&D expenditure of 4.75 % of GDP in 2015, Midi-Pyrénées is the only region that exceeds the 3% target. Outermost regions are at the low end of the scale. The performance of France in research and innovation is still hampered by the complexity of the research and innovation ecosystem and low levels of efficiency of public support schemes. Firms' automation and dissemination of technologies remain insufficient. There is scope to promote private investment in R&D and closer cooperation between public and private actors.

The French labour market is experiencing skill mismatches and significant labour shortages in some sectors. These include the ICT, health care, engineering and construction sectors. This calls for continuous investments in up and re-skilling, together with bolder measures to accompany the necessary transformations linked to the green and digital transitions (see Section 2.3). The French government is rolling out a number of measures aimed at improving access to training and guidance for the unemployed, and tackling skills mismatches.

The COVID-19 crisis has reversed the positive labour market developments observed in recent years. After decreasing from 10.0% to 8.5% between 2016 and 2019, the unemployment rate dropped by 0.5 percentage points to 8.0% in 2020. Long-term unemployment fell from 4.6% in 2016 to 3.4% in 2019 and declined further, by 0.5 percentage points, in 2020. Although employment was to a large extent protected by the widely used temporary short-time work scheme, sectors such as tourism, restaurants, entertainment and home care services were more strongly affected. Despite the relatively contained effect on unemployment, the measured labour market slack (halo) has increased significantly. In 2021, unemployment is projected to increase to 9.1% of the labour force, according to the Commission 2021 spring forecast. Despite the improvement foreseen in 2022, the unemployment rate is set to remain above its 2019 level.

The COVID-19 crisis is aggravating the existing structural weaknesses in the integration of vulnerable groups. Low-skilled, young people, people with a migrant background (especially women), and persons with disabilities had high unemployment rates and their situation further deteriorated in 2020. The unemployment rate of non-EU born workers stood at 15.6% in Q3 of 2020, nearly double the rate of EU-born workers (8.2%). The effect of the COVID-19 crisis also increased the segmentation of the labour market: workers on temporary contracts, especially interim contracts, as well as the self-employed have been among the most affected by the crisis.

¹³ Marques Santos, A., Haegeman, K., Moncada-Paternó-Castello, P., Impact of COVID-19 and earlier crises on firms' innovation and growth: a comparative analysis, 2021 (forthcoming), JRC125490 .
<https://ec.europa.eu/jrc/en/rhomolo/publications>

Moreover, vulnerable groups are likely to be more exposed to the increasing risk of poverty and social exclusion.

The 2019 Country Report highlighted the large economic disparity between outermost regions and metropolitan France. The 2020 Country-specific recommendations called for targeted actions towards these regions to address the risk of growing disparities in the context of the pandemic. These regions should benefit from specific support and access to EU programmes and funds in line with Article 349 TFEU.

High and rising public and private debt present challenges to fiscal sustainability and financial stability. Public expenditure rose to 62.7% of GDP in 2020, up from 55.6% in 2019 and still the highest in the EU. The persistence of the high level of public expenditures in France raises concerns in terms of utility and efficiency, justifying a comprehensive approach to enhance its efficiency and contain its dynamics in a context of high public debt. Private debt has steadily increased since 2000 for both households and non-financial corporations, reaching 153% of GDP in 2019. The COVID-19 crisis has led to a surge in private indebtedness to 175% of GDP, mainly due to the contraction in economic activity. The public guarantee scheme set up by the state played an important role in the crisis to support lending, especially to SMEs. Both household and non-financial corporation debt is now in excess of prudential thresholds. The banking sector's solvency has remained relatively solid but profitability has dropped.

The pension system remains complex. More than 40 different pension schemes co-exist in France. These schemes apply to different groups of workers and functions according to different sets of rules. The Government engaged into a reform to progressively unify the rules of these schemes, with a view to simplifying the functioning of the pension system notably to improve its transparency, fairness and efficiency. The reform was put on hold by the COVID-19 crisis.

The COVID-19 crisis has highlighted shortcomings of the traditionally well-performing French health system. The first wave of the COVID-19 pandemic highlighted difficulties to ensure adequate numbers of health workers, critical supplies and personal protective equipment. The management of the health crisis (notably concerning the supply of masks, respirators, intensive care beds, tests, vaccination) also revealed problems in terms of coordination, e.g. between healthcare providers at territorial level and between private and public actors. Challenges are aggravated by persisting regional disparities, with insufficient availability of certain health services in underserved regions, in particular the outermost regions. In the digitalisation of health services France has traditionally lagged behind other Member States, although the take-up of e-health, in particular the use of electronic medical records (EMRs) and telemedicine, has increased in recent years.

France is facing challenges in improving educational outcomes for vulnerable groups, such as those from lower socio-economic or migrant backgrounds. Educational outcomes are strongly impacted by the socio-economic background of students, and early school leaving rates show significant regional disparities, with particularly high rates in the outermost regions (21.3%

in 2018 versus 8.9% in mainland France). Distance teaching has highlighted the need for a high-performing digitalised education system, built upon effective teacher training and equal access to quality digital education and its learning environment. It is estimated that 6% of pupils in primary education and 10% in secondary education experienced difficulties following classes during lockdowns¹⁴.

2.3. Challenges related to the green and digital transition

Green dimension

The recovery and resilience plan should contribute to the green transition and at least 37% of the financial allocation needs to contribute to climate objectives. The measures in the plan shall contribute to achieving the 2050 climate neutrality objective, and the 2030 energy and climate targets, taking into account Member States' national energy and climate plans. They should also contribute to meeting environmental targets for waste, water, pollution control, sustainable mobility, biodiversity protection and restoration, marine and water resources, and support the transition to sustainable food systems as well as to a circular economy as appropriate, while ensuring that nobody is left behind.

Climate and energy policies

In sectors not covered by the EU Emissions Trading System (ETS), France will most likely reach its 2020 greenhouse gas (GHG) emissions reduction target, while risking to fall short of its 2030 target, in the absence of additional measures. France's National Energy and Climate Plan (NECP), which was notified to the Commission on 17 April 2020, sets out a national target of a 37% greenhouse gas emissions reduction in those sectors by 2030 compared to 2005. With existing measures, the Commission estimates that France would fall short of this 2030 target by 11 percentage points. This is mostly due to the transport, building and agriculture sectors which together account for 64% of the country's greenhouse gas emissions. Compliance with the 2030 target in sectors not covered by the Emissions Trading System could however be possible, should France comply with the carbon budgets included in the national low-carbon strategy (*Stratégie Nationale Bas Carbone*, SNBC, revised in March 2020), and take relevant additional measures to implement the scenario to achieve France's objective of climate neutrality by 2050.

Greenhouse gas emissions in the transport sector (roughly a third of all emissions) should drop by 28% compared to their 2015 level by 2030 to accommodate the climate neutrality scenario. However, transport is the only sector where greenhouse gas emissions have increased over the last 30 years. Meeting climate targets in transport will require in particular accelerating

¹⁴ Direction de l'évaluation, de la prospective et de la performance ("DEPP"), note 20.26 of July 2020.

the electrification of vehicles and road infrastructure, and expanding the use of alternative fuels, including advanced biofuels and low-carbon and renewable hydrogen. There will also be a need to accelerate the modal shift towards cleaner transportation modes in freight and passenger transport, through ensuring their promotion.

The current pace of renewable energy deployment is not enough to meet France's 2020 and 2030 targets. France is set to miss its 2020 renewables target of a share of renewable energy sources in final energy consumption of 23%, likely by at least 5 percentage points. The share of renewables in the energy mix increased from 9.6% in 2005 to 17.2% in 2019 and France's proposed objective for 2030 is to reach 33%. However, challenges remain to bridge the 2020 gap and to achieve the 2030 target. Challenges include simplifying the regulatory framework to implement large-scale energy projects – costs to access the grids are high and the lead time for licensing and permitting, including for grid connections, is long. The deployment of enabling energy infrastructure such as charging stations for electric vehicles, upgrades to transmission and distribution systems, heat pumps and district heating, and cooling networks based on renewable energy and waste heat, is progressing slowly.

France is falling short of its energy efficiency targets for 2020 and faces the major challenges of decarbonising and increasing the energy performance of the building sector. France's energy consumption levels remain above the expected levels under the Energy Efficiency Directive for 2020 (see table 3 below). In its National Energy and Climate Plan, France envisages a 20% reduction of its energy consumption by 2030 compared to 2012 levels, which is considered in line with the EU's 2030 targets¹⁵. The decarbonisation and upgrade of the energy performance of the building stock (which represents 45% of final energy consumption and 25% of greenhouse gas emissions) represent major challenges. According to its National Energy and Climate Plan, France will need to invest annually an additional EUR 15 to 25 billion until 2030 into the renovation of buildings.

The electricity grid is relatively well-connected to neighbouring countries, but challenges remain to further enhance connections and develop new infrastructure. According to the National Energy and Climate Plan, France targets a 16.5% interconnected capacity by 2030, up from the 2019 level of 11.4%, and above the EU recommendation of 15%. Given the planned reduction of the share of nuclear in the energy mix and with a view to integrating the rising share of renewable energy into the electricity system by 2030, enhanced and more flexible grid connections will be necessary in the country and across borders, in particular with the Iberian Peninsula. In addition to the charging infrastructure for electrical vehicles, the transition of industry and heavy-duty transport will require new infrastructure to produce and distribute new energy carriers such as hydrogen.

¹⁵ For a detailed assessment, see: Economidou, M., Ringel, M., Valentova, M., Zancanella, P., Tsemekidi Tzeiranak, S., Zangheri, P., Paci, D., Ribeiro Serrenho, T., Palermo, V. and Bertoldi, P., National Energy and Climate Plans for 2021-2030 under the EU Energy Union, 2020, JRC122862.

France needs EUR 45 to 85 billion of additional investments per year to be on a trajectory towards carbon neutrality, according to the estimate in the National Energy and Climate Plan for the period of 2019 to 2032. This includes around EUR 15-25 billion for the energy efficiency of buildings, EUR 20-50 billion for clean transport and EUR 10 billion for renewable energy and electricity grids.

Environmental policies

While the legal framework is in place to transition to a circular economy, France has not yet implemented all necessary steps, especially as regards waste management. France has put in place an ambitious national circular economy roadmap, a National Pact on Plastic packaging, and legislation to tackle waste and promote the circular economy (with pioneering provisions regarding planned obsolescence, durability for products including a Reparability Index, extending producers' responsibility, and new prohibitions on single-use plastics and destruction of unsold food and non-food products). Nevertheless, many provisions remain to be implemented, and their enforcement may prove challenging. Some efforts are necessary to meet the new recycling targets. The municipal waste recycling rate of 44% is below the 2025 target of 55%. Investments needed to reach the EU recycling targets for municipal and packaging waste are estimated at EUR 4.6 billion.

The negative effects of climate change are increasingly felt. There have been increased floods of river basins (Loire, Rhône) and coastal areas (Atlantic regions), and increased cyclone risks in outermost regions, highlighting the importance of investments to promote climate change adaptation, risk prevention and disaster resilience.

Despite progress in increasing nature protection, there is still considerable room for improvement, notably on implementing conservation measures effectively and better integrating nature protection into other policies. This would in turn help build resilience to threats such as climate change, food insecurity or disease outbreak. In France, only 28% of the species of community interest and 22% of the habitat types of community interest are in a favourable conservation status. France assessed the total costs of conservation and management of the Natura 2000 network for 2021-2027 at EUR 4.6 billion.

France does not meet all air quality standards, especially in its largest agglomerations. France is facing high levels of particulate matter (PM₁₀) and nitrogen dioxide (NO₂) and needs to take action to reduce the exceedance of limit values in line with Directive 2008/50/EC, as requested by the EU Court of Justice regarding emissions of nitrogen dioxide¹⁶, by reducing the main sources of emissions from transport, energy production and heat generation.





Specific tax measures such as tax reductions or exemptions largely contribute to the attractiveness of fossil fuels. As pointed out by the Institute for Climate Economics report on

¹⁶ Judgment of the Court of Justice of 24 October 2019, case C-636/18.

the draft budget 2020¹⁷, most of the unfavourable spending takes the form of tax spending (EUR 16 billion out of 17). Four tax measures alone imply that 25% of national greenhouse gas emissions are little or not taxed: (i) exemptions of excise duties on kerosene, (ii) reduced excise rates for heavy-load vehicles, (iii) reduced tax rates for non-road diesel, and (iv) reduced tax rates for road diesel compared to gasoline. The government recently announced a gradual phase out of reduced rates for non-road diesel, to be finalised by 2022. France also announced the removal of the ‘malus’ ceiling applied to new privately-used vehicles (currently the penalty for vehicles exceeding 172g CO₂/km is limited to EUR 12 500), to strengthen the market signal towards cleaner vehicles. France is among the Member States willing to open a debate at EU level on the taxation of kerosene for planes and marine fuel for boats.

The table below gives an overview of France’s objectives, targets and contributions under Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

Table 3. France’s objective, targets and contributions under the Governance of the Energy Union and Climate Action.

	National targets and contributions	Latest available data	2020	2030	Assessment of 2030 ambition level
	Binding target for greenhouse gas emissions compared to 2005 under the Effort Sharing Regulation (%)	-14%	-14%	-37%	As in the Effort Sharing Regulation
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	17.2%	23%	33%	Adequate (33% is the result of the Renewable Energy Sources formula in the Regulation (EU) 2018/1999)
	National contribution for energy efficiency:				
	Primary energy consumption (Mtoe)	239.5	219	202.2	Modest
	Final energy consumption (Mtoe)	148.9	131.4	120.9	Sufficient
	Level of electricity interconnectivity (%)			16.5%	N.A.

Source: Assessment of the final national energy and climate plan of France, SWD (2020) 909 final.

¹⁷ <https://www.i4ce.org/download/a-first-360-degree-climate-assessment-of-frances-state-budget/>.

Digital dimension

The recovery and resilience plan should contribute to the digital transition and at least 20% of the financial allocation needs to contribute to digital objectives. The measures in the plan should, inter alia, contribute to the digital transformation of the economic and social sectors (including public administration, public services, and the justice and health systems). The objective of the measures in the plan should be to improve not only the competitiveness, but also the resilience, agility and security of companies and public actors, all while ensuring inclusiveness.

France ranks 15th in the European Commission’s Digital Economy and Society Index (DESI) for 2020¹⁸. It is improving its performance in digital, in line with the EU average; the gap with the EU’s top performers however remains.

France ranks 18th in connectivity, and fast broadband (next generation access) network coverage in rural areas and in the outermost regions remains low. This is despite significant progress in very-high capacity network roll-out and in fixed broadband uptake. France is notably deploying fibre-to-the-home through its *France Très Haut Débit* plan (THD), backed by EUR 3.3 billion of public investment. In early 2020, France announced a new target with the objective of reaching 100% fibre-to-the-home coverage by 2025. Fast broadband (next generation access) coverage reached 69% in 2020, improving by 7 p.p., but still remaining well below the EU average of 87%. While digital connectivity is significantly improving, fixed very-high capacity network coverage in rural areas stands at 18.4% of all households, which is below the EU average of 27.8%. France achieved significant progress in 4G coverage as a result of the “new deal for mobile” of 2018. 4G coverage reached 99.8% in populated areas in France. France has a 5G readiness 2020 DESI index above EU average, resulting from the completion of the 700MHz band and the 3.4 - 3.8 GHz auctions. France is in the phase of 5G deployment, including 5G corridors, nation-wide and cross-border.

France ranks 17th in the human capital 2020 DESI index, with the share of people with “above basic digital skills” remaining low and below the EU average. In recent years, France introduced the national Investment Plan in skills 2018-2022 (“*Plan d’investissement dans les compétences*”). However, France continues to show a low level of digital skills of the population. In 2019, 43% of the population between 16 and 74 years old lacked basic digital skills (against the EU average of 42%), including about 26% with no digital skills. Low digital skills were also identified as a country-specific weakness¹⁹ to explain France's low productivity growth. This hinders the development of a digital economy and society (e.g. home schooling, e-learning, e-

¹⁸ See: <https://digital-strategy.ec.europa.eu/en/policies/desi-france>.

¹⁹ https://ec.europa.eu/info/sites/default/files/economy-finance/en_1errapportcnp-10july-final.pdf.

commerce, e-health, etc.) and has led to exclusion during the COVID-19 pandemic. The educational offer of advanced digital technologies by French universities is on average slightly above the EU: the proportion of masters' programs teaching artificial intelligence, high-performance computing and data science is 4.1%, 1.5% and 5.9% respectively for France (against 3.9%, 1.2% and 4.6% respectively in the EU)²⁰. However it remains very far from the frontrunners in this area (US and UK), which have on average 10 times the number of courses in these areas compared to France and offer the same amount of courses as the whole EU27.

Despite large improvements in the integration of digital technology by businesses, firms still have a comparatively low uptake of information and communication technologies. The 2019 National Productivity Board report pointed out the low uptake of information and communication technologies in firms and the low degree of automation and digitalisation as country-specific factors explaining weak productivity growth. Despite progress accomplished over the past years, the percentage of companies having high levels of digital intensity in France (13.4% in 2020) remains below the EU average (15.4%). The share of companies employing ICT specialists is also lower in France (18%) than it is in the EU (19.3%). In the EU landscape of artificial intelligence (AI), France hosts 14.8% of all EU economic agents (firms, research and government institutions), and 15.1% of all EU artificial intelligence firms. The number of artificial intelligence firms per EUR billion of GDP reaches 0.71, against 0.84 for the EU (JRC AI TES Dataset 2020)²¹. Furthermore, a much higher percentage of growing French companies (36-38%) view digital security, regulation and lack of skills as significant barriers to their digitalisation, which compares to EU averages of between 17-21%²².

France performs above the EU average in digital public services, ranking 12th. This is thanks to continuous progress in public administrations' digital modernisation and by improving the provision of digital public services for business. Over the past years, France has made significant improvements in the domain of digital public services, reflected in a better performance in DESI for digital public services and in digital post and electronic documents. However, France scores below the EU average on cross-border electronic identity (eID) services according to the 2020 eGovernment Benchmark report²³. Only 8% of people living or coming from abroad can use electronic identity to access and use online services provided by public authorities such as obtaining a permit for moving or contesting a fine. Only 23% of foreign

²⁰ Righi, R., López-Cobo, M., Alaveras, G., Samoil, S., Cardona, M., Vázquez-Prada Baillet, M., Ziemba, L.W., and De Prato, G., Academic offer of advanced digital skills in 2019-20. International comparison, 2020, JRC121680. <https://publications.jrc.ec.europa.eu/repository/handle/JRC121680>

²¹ AI TES Dataset 2020, European Commission, Joint Research Centre, 2021. <https://data.jrc.ec.europa.eu/collection/id-0126>

²² Benedetti Fasil, C., Domnick, C., del Rio, J-C, Fákó, P., Flachenecker, F., Gavigan, J. P., Janiri, M. L., Stamenov, B. and Testa, G., High Growth Enterprises in the COVID-19 Crisis Context demographics, environmental innovations, digitalization, finance and policy measures, 2021, JRC124469. <https://publications.jrc.ec.europa.eu/repository/handle/JRC124469>

²³ <https://digital-strategy.ec.europa.eu/en/library/egovernment-benchmark-2020-egovernment-works-people>.

businesses can use electronic identity for cross-border services such as requesting a refund of value-added tax. Concerning e-health, France could benefit from stronger digital services helping prevention and preparedness. The COVID-19 crisis has highlighted shortcomings in the health system's preparedness to address pandemic outbreaks and digital services should help in making better use of e-health in such cases. In the justice system, digitalisation could help reduce the average time needed to resolve civil cases, which is currently long (over 400 days in 2019)²⁴.

Concerning digital-related investment in R&D, France benefits from an attractive and resilient network of start-ups. The French tech start-up ecosystem attracted record investments in recent years, notably EUR 5.4 billion in investment in 2020, despite the COVID-19 crisis. Among numerous initiatives, French Tech plays a major role in building a framework for start-ups to scale up. The landmark 'DeepTech Generation Plan' (*Plan Génération Deeptech*) was launched in 2019, with EUR 1.3 billion in funding over 5 years (2019-2023) to support disruptive innovation.

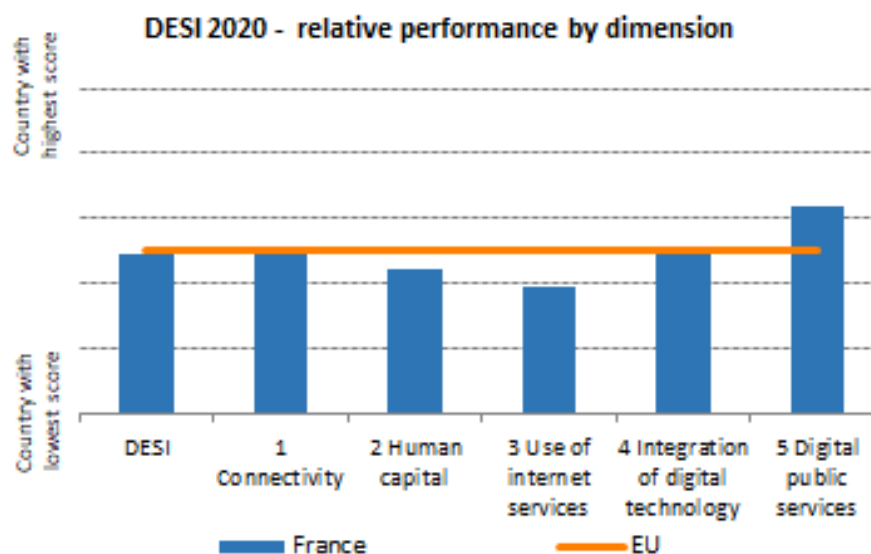
France is committed to strengthening the EU's capacities related to advanced digital technologies. France is a pioneer in cloud computing, hosting the major European cloud provider, in microprocessors and is committed to increasing the use of digital applications for public administrations both at central and local level. It is active in the Euro-HPC Joint Undertaking and has a national strategy on quantum. France has also a cybersecurity strategy to boost the offer of cybersecurity products and services and encourage the uptake of innovative solutions by the economy and the public administration. France is also revising its Artificial Intelligence strategy, first launched in 2018, encouraging the development of human-centric solutions and tools for artificial intelligence uptake by businesses. France is therefore in a strong position to reinforce its industrial capacities in advanced technologies such as next-generation cloud, microelectronics, 5G or cybersecurity.

On the greening of the digital sector, the French government has put in place proactive policies and measures to support the growth of the digital clean tech sector. Innovative start-ups and SMEs play a critical role in developing and adopting clean digital technologies. The global French start-up ecosystem is made up of more than 18 000 start-ups, over 370 000 employees, 240 incubators, and 50 accelerators. The French government published a roadmap to make the tech sector greener in February 2021. The aim of this national strategy is to improve knowledge of the various impacts of digital technology on the environment, to control them and to put the potential of digital innovation at the service of the ecological transition. It focuses both on analysing the impact of digitalisation on the environment and also on how to use digital solutions to boost the green transition. The roadmap includes a number of existing and new measures, such as the establishment of an environmental barometer for digital actors or the support for artificial intelligence projects for ecology.

²⁴ Figure 8, 2021 EU Justice Scoreboard.

As a leader in the digital domain, France has the potential to contribute significantly to cross-border and multi-country projects. Due to the size of its economy and central position, France's investments in digital capacities could strongly orient other Member State's joint investments, potentially on cloud and data infrastructure, microelectronics, and 5G corridors.

Graph 1. Relative performance of France compared to EU average for the five DESI 2020 dimensions



Note: EU aggregate corresponds to EU28, based on 2020 DESI report.

Box 1: Progress towards the Sustainable Development Goals

In this figure, the United Nations' Sustainable Development Goals are represented under a specific Commission guiding principle for competitive sustainability from the 2021 Annual Sustainable Growth Strategy, to which they are strongly associated. It should be noted that most Sustainable Development Goals contribute, to varying degrees, to several guiding principles.



The objectives of the Sustainable Development Goals (SDGs) are integrated in the European Semester since the 2020 cycle. This provides a strong commitment towards sustainability in coordination of economic and employment policies in the EU. In that respect, this section outlines France's performance with respect to Sustainable Development Goals with particular relevance for the four dimensions underpinning the recovery and resilience plans (green transition, fairness, digital transition and productivity, and macroeconomic stability), indicating possible areas where investments and reforms in line with the objectives of the Facility could further accelerate the progress on the Sustainable Development Goals.

Green transition

France performs well in the green transition goals by, for instance, recording low greenhouse gas emissions per capita (7th lowest in the EU) and per unit of GDP (2nd lowest in the EU), with a strong decreasing trend in the past years. The circular economy (SDG 12) is also well developed with the third highest circularity rate in the EU. On biodiversity (SDG 15), France took actions to limit the artificial conversion of soil, which had been increasing consistently since 2006. The share of renewable energy in gross final consumption (17.2% in 2019) is however below objectives (23% by 2020) and the EU average (19.7%).

Fairness

France performs better than the EU average in nearly all the indicators related to inequalities for SDG 1 - No poverty (e.g. 9th lowest rate of people at risk of poverty), SDG 5 - Gender equality (e.g. first in the EU for women in senior management), and SDG 10 - Reduced inequalities (e.g. income inequalities well below EU average).

However, the employment rate of recent graduates does not follow the positive EU evolution in recent years. Regional inequalities between the mainland and its outermost regions persist, in particular with Mayotte, the region in the EU with the lowest GDP per capita.

Digital transition and productivity

On SDG indicators related to R&D (e.g. R&D expenditure, R&D personnel, employment in knowledge-intensive manufacturing and services) France performs slightly above the EU average. In respect to quality education (SDG 4), France ranks 9th in the EU with 49.4% (2020) of people aged 30-34 graduated from tertiary education.

Macroeconomic stability

The high rate of long-term unemployment hampers the performances of France in SDG 8 - Decent Work and Economic Growth. Investment, as share of GDP, is however high (23.6% in 2019). France has been making progress in SDG 16 - Peace and justice while still recording a high rate of perceived violence (4th in the EU).

3. OBJECTIVES, STRUCTURE AND GOVERNANCE OF THE PLAN

3.1. Overall strategy of the plan

The investments and reforms planned under the French recovery and resilience plan are part of a broader recovery plan called “France Relance”, adopted by the French Parliament under the 2021 budget bill, and currently being deployed. The Recovery and Resilience Facility should provide about 40% of the funding for the EUR 100 billion investments planned under “France Relance”. France submitted a plan with estimated costs amounting to EUR 40 950 000 000 while its maximum financial contribution is EUR 39 368 318 474, calculated in accordance with Article 11 and stated in Annex IV to the Recovery and Resilience Facility Regulation

(including the horizontal support line). The estimated total cost of the Plan corresponds to 104% of the maximum financial contribution.

France's recovery and resilience plan focuses on three key priorities: the green transition, competitiveness, and social and territorial cohesion. The plan is structured along nine components, which are meant to tackle the structural challenges facing the French economy, exacerbated by the COVID-19 crisis. The plan includes large-scale investments and reforms addressing the ecological transition, continuing efforts to bring businesses and administration into the digital age, ensuring that workers' skills are in line with business needs, promoting innovation, continuing to reduce unemployment and improving the efficiency of public spending.

The nine components are organised as follows:

- **Component 1: Renovation of buildings.** It includes investments on energy efficiency in public buildings (at EUR 3.8 billion, one of the biggest measures of the plan), private residential buildings, social housing and SMEs; and reforms of housing policy and environmental rules for the construction of new buildings. This component aims to increase the rate and depth of building renovation, and to contribute to the green transition of the building sector.
- **Component 2: Biodiversity, circular economy, agriculture and forestry.** It includes measures for fighting the artificial conversion of natural soil, mitigating seismic risk in outermost regions, improving drinkable water supply and sewage networks, preserving biodiversity and protected areas, decarbonising industrial production processes, developing the circular economy, accelerating the agricultural transition and restoring forests. It also features the Climate and Resilience law as a key reform.
- **Component 3: Green infrastructures and mobility.** It includes investments to foster the development of sustainable transport, therefore aiming at reducing the carbon and environmental footprint of transport. The measures, covering a large spectrum over different transport modes, concern a support plan for the rail sector (the biggest measure of the plan at EUR 4.4 billion), developing projects for public transport in urban areas (tram, buses, metro, rail), support to the deployment of electric vehicle charging points, improvements of the inland waterways infrastructure, greening projects in ports, development of road infrastructure reserved for public/shared transportation, and support schemes for the purchase of zero- or low-emission vehicles. It also includes support for improving the resilience of energy infrastructures at distribution level in rural areas.
- **Component 4: Green energy and technologies.** It aims to foster innovation policies in key green technologies, also having in mind their economic potential. It includes a broad scheme to finance innovative projects in priority green areas (renewable or low-carbon hydrogen, industry decarbonisation, sustainable agricultural systems, recycling, innovative buildings, mobility, biosourced products) and specific measures to develop value chains for decarbonised hydrogen and to support the green transition of the aeronautics sector.

- **Component 5: Business support.** It includes an investment (financial instruments) to strengthen SMEs' equity and a reform aimed at simplifying the regulatory environment. It also includes a reform to ensure that companies benefiting from public support respect other criteria, such as the social and environmental dimensions that are essential for the recovery.
- **Component 6: Technological sovereignty.** It includes measures to support employment in R&D and to finance innovative projects in strategic digital technologies (e.g. cybersecurity, quantum technologies, cloud, education technology, 5G and the cultural and creative sectors) and in space technologies. It also includes a reform to improve sustainable funding for public research, to enhance the attractiveness of scientific careers, and to increase knowledge transfers between public research and businesses.
- **Component 7: Digitalisation of the State, territories, businesses and support to the cultural sector.** It includes several detailed measures to digitalise the functioning of schools and the State, including the Ministry of Interior, and to accelerate investment in cybersecurity. Fostering digitalisation of SMEs is done through boosting existing support mechanisms such as "France Num" complemented by investment support in the adoption of new technologies in the framework of the industries of the future scheme. The component also aims at supporting (1) cultural heritage to renovate historic monuments, make them more sustainable and promote local tourism eco-systems; (2) artistic education and creation as well as (3) the resilience of strategic cultural sectors mostly affected by the current crisis. Moreover, this component includes reforms aimed at strengthening the public governance framework and enhancing the quality of public spending.
- **Component 8: Employment, Youth, Disability, Professional training.** It includes a variety of measures relating to employment, supporting youth, persons with disabilities, financing trainings and skills development - from secondary and tertiary education to lifelong learning and professional training (including digital skills).
- **Component 9: R&D, health, territories.** It brings together public investment in various areas (healthcare, research, territorial cohesion and connectivity). Investment projects presented under the research section cover a very broad scope from early childhood education to higher education and research.

Table 4: The nine components of the French recovery and resilience plan and associated costs

Component	Costs million) (EUR
I: Renovation of buildings	5 825
II: Biodiversity, circular economy, agriculture and forestry	2 086
III: Green infrastructures and mobility	7 030
IV: Green energy and technologies	5 295
V: Business support	250
VI: Technological sovereignty	3 215
VII: Digitalisation of the State, territories,	2 101

businesses and support to the cultural sector	
VIII: Employment, Youth, Disability, Professional training	7 478
IX: R&D, health, territories	7 671
Total	40 950

3.2. Implementation aspects of the plan

In terms of consistency with the national energy and climate plan (NECP) presented by France in 2020, the recovery and resilience plan partly translates the orientation taken in the NECP in components 1, 2, 3 and 4 and responds to several Commission recommendations²⁵. In particular, the plan puts a strong focus on energy efficiency and clean mobility. It also targets further diversification of the French energy mix by supporting innovation in hydrogen. France is expected to participate in planned Important Projects of Common European interest (IPCEI) in cooperation with other Member States to promote hydrogen technology.

As regards cohesion policy, several components of the French plan are priorities for REACT-EU and will remain for the 2021-2027 cohesion policy as well. The Partnership Agreement for the period 2021-2027, for the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+) and the European Maritime and Fisheries Fund (EMFF) is expected to ensure complementarity and synergy with the Facility. The various French authorities in charge of cohesion policy will avoid double funding of the same costs of projects and ensure complementarity between the different sources of EU funding. The national and regional managing authorities, in charge of preparing the programmes 2021-2027 and, for some of them, the just transition plans, will ensure complementarity with the Recovery and Resilience Facility. The partnership agreement, the 21-27 programmes including for some of them the just transition plans are expected to be officially submitted to the Commission during the second part of 2021.

The French recovery and resilience plan contains key measures addressing agricultural transition, biodiversity, climate change and disparities in rural areas (in components 2, 3 and 9) which will complement those included in the current Rural Development Programmes supported under the European Agricultural Fund for Rural Development (EAFRD). The strategic Common Agricultural Policy (CAP) Plan for the 2023-2027 programming period is expected to be submitted officially before 31 December 2021, depending on the adoption of CAP reform by the Council and the European Parliament: French authorities will ensure avoidance of double funding and synergies between CAP funds and the Facility.

²⁵ European Commission Staff Working Document (2020) 909 final - Assessment of the final national energy and climate plan of France

Several measures of component 8 of the French recovery and resilience plan are consistent with the Council recommendation of 30 October 2020, 'A Bridge to Jobs – Reinforcing the Youth Guarantee'. The package of measures “#1 jeune #1 solution”, several of which are featured in component 8, contributes to these objectives. The plan also includes measures to support employment and training for young people. As an additional measure to complement the effect of the recovery and resilience plan, France is also working towards developing a Universal Guarantee for Youth to respond to the respective Council’s recommendation.

France’s recovery and resilience plan contains some measures that are expected to effectively address the country’s challenges in the area of gender equality and equal opportunities for all. These include reforms and investments supporting education (from early childhood), vocational training and access to employment of youth, including for children and youth from disadvantaged background. These also include specific measures to promote recruitment of workers with disabilities, including in the public service. The plan also draws the lessons from the crisis with reforms and investments supporting older persons, be they dependent or not, to improve their quality of life and care. As regards gender equality, the key measures relate to the transformation of the public service with quantitative objectives for women in management positions and to pay transparency obligations for companies. Moreover, the measure setting out how companies benefitting from recovery and resilience plan funds should contribute to economic, social, and environmental transformations includes the obligation for companies to publish an index measuring progress in the area of gender equality.

The French recovery and resilience plan is broadly consistent with the challenges and priorities identified in the most recent Draft Council Recommendation on economic policy in the euro area²⁶ (EAR). The plan contributes to EAR 1, ensuring a policy stance which supports the recovery, as it implements measures contributing to the resilience of the health and social security system, in particular by strengthening the healthcare and socio-medical sectors (component 9 R&D, health, territories), as well as social measures supporting employment (component 8 Employment, Youth, Disability, Professional training). Actions focused on the qualification of the labour force (Component 8) help to mitigate the social and labour impact of the crisis. The quality of the country’s public financial management should, among others, be strengthened by the digitalisation of the public administration and fiscal structural reforms (Component 7 Digitalisation of the State, territories, businesses and support to the cultural sector).

²⁶ Pending final adoption by the Council, after endorsement by the European Council. The text agreed by the Eurogroup on 16 December 2020 is available at: <https://data.consilium.europa.eu/doc/document/ST-14356-2020-INIT/en/pdf>.

Concerning EAR 2 to further improve convergence, resilience and sustainable and inclusive growth, components 1 to 4 promote the climate transition. Components 6 to 9 include investments to promote the digital transformation. Component 7 should support educational and pedagogical innovation through digitalisation and modernisation. Measures to strengthen vocational education and training and reskilling and upskilling (component 8) should enhance productivity, employment and labour market integration.

The plan addresses EAR 3 on strengthening national institutional frameworks, mostly through component 5 – Business support. This component aims at simplifying the regulatory environment for companies and reduce administrative burdens. Digitalisation measures in component 9 are expected to boost the digital transition of the national health system.

On EAR 4 on ensuring macro-financial stability, reforms and investment, component 5 includes financial instruments to strengthen SMEs' equity and component 7 addresses the quality of public finance. In addition, component 5 includes a reform to ensure that companies benefiting from public support respect other criteria, such as the social and environmental dimensions that are essential for the recovery.

Some elements of the French recovery and resilience plan should contribute to EAR 5 on completing the Economic and Monetary Union and strengthening the international role of the euro. Generally, measures in components 5 should have a positive impact on the business environment and the removal of bottlenecks to investment. Component 7 includes reforms that will introduce a multiannual expenditure rule that should ensure consistency between the annual budget bills and the multi-year objectives, and that introduce an annual assessment of measures taken, enhancing the quality of public spending. These measure contribute to the resilience of the Economic and Monetary Union as a whole.

The French recovery and resilience plan has been prepared by the Ministry of Economy, Finance and Recovery, in coordination with the Ministries responsible for policy areas developed in each component.

The “France Relance” plan, which includes the investments part of the recovery and resilience plan, has been subject to several consultations. The consultation process, driven by the Ministry of Economy, targeted associations representing employers and unions, professional associations and companies for the measures related to businesses and employment; economists and institutions for the cohesion and balance of the plan; and non-governmental organisations and think tanks for the measures related to climate change. Regional and local authorities were involved in the preparation of the plan, to ensure coherence with cohesion funds and raise the needs of territories, closer to the economic and social realities on the ground. The Economic, Social and Environmental Council was also consulted several times. A National Monitoring Committee on the Recovery Plan, chaired by the Prime Minister and composed of representatives of local and regional authorities, heads of public institutions, economists, members of Parliament, senators, members of the European Parliament and social partners, is responsible for ensuring that the timetable for undertaking the measures is properly implemented and maintained. A second meeting of the Committee on 8 February 2021 provided an initial

review of the implementation of “France Relance” six months after its adoption. To ensure ownership by the relevant actors, it is crucial to involve all local authorities and stakeholders concerned, including social partners, throughout the implementation of the investments and reforms included in the plan.

To ensure swift implementation of the plan, a General Secretariat for the recovery and resilience plan has been set up under the dual authority of the Prime Minister and the Minister of Economy, Finance and Recovery. It will monitor the implementation of the recovery plan, measure by measure, in close contact with the prefects of regions and the officials of each ministry.

The implementation of the recovery and resilience plan is also monitored in particular by the Directorate-General for the Treasury, the Budget Directorate, the Directorate-General for Public Finance and the Social Security Directorate. At local level, the prefects of regions and departments are responsible for ensuring the application of the recovery and resilience plan. Regional monitoring committees including State services, representatives of local authorities and social partners are in charge of monitoring progress on projects in the regions, identifying and resolving possible bottlenecks. Information on the progress of each measure in the plan must be submitted on a monthly basis to the Secretariat-General responsible for the recovery and resilience plan. As regards the reforms presented in the plan, their effectiveness is monitored specifically by each ministry concerned. Attached to each Minister, an adviser is specifically responsible for monitoring and implementing reforms. Inter-ministerial coordination is carried out by the General Secretariat for European Affairs (SGAE), which will collect and centralise, together with the Ministry of the Economy, Finance and Recovery supporting documents demonstrating the achievement of the milestones related to the reforms included in the plan. The achievement of the targets included in the plan will be monitored regularly and centrally by the Secretariat-General responsible for the recovery and resilience plan on the basis of the information collected from the relevant ministries. Inter-service technical meetings will be organised at least twice a year by the General Secretariat for European Affairs (SGAE) to identify any risks in achieving targets and milestones and decide on corrective measures to address the risks identified.

The French government has prepared a national communication strategy on the recovery and resilience plan to ensure the visibility of its benefits to citizens. First, a specific logo has been created and will be attributed to all projects financed by the “France Relance” plan, including the projects part of the plan. A specific logo “Financed by the European Union – NextGenerationEU” will be used for projects financed with the support of the Recovery and Resilience Facility, in compliance with article 34 of the Regulation establishing the Recovery and Resilience Facility. Second, the recovery and resilience plan is published on the Ministry of the Economy, Finance and Recovery’s website. A scoreboard allows the deployment of the plan to be followed. Third, a communication plan will also be dedicated to the French Parliament, local authorities and unions.

The plan contains a security self-assessment for investments in digital capacities and connectivity for three measures: the ultrafast broadband plan, the digitalisation of the State and

Territories, and mobility and teleworking in the Ministry of Interior. Technical and strategic measures of the EU 5G toolbox are also relevant for the measures in the fourth '*Programme d'Investissements d'Avenir*' related to 5G, where calls for projects or calls for interest are still take place. Strategic measures mentioned in the security self-assessment would need to be closely monitored during the implementation of the plan.

State aid and competition rules fully apply to the measures funded by the Recovery and Resilience Facility. Union funds channelled through the authorities of Member States, like the Recovery and Resilience Facility funds, become State resources and can constitute State aid if all the other criteria of Article 107(1) TFEU are met. When this is the case and State aid is present, these measures must be notified and approved by the Commission before Member States can grant the aid, unless those measures are covered by an existing aid scheme or comply with the applicable conditions of a block exemption regulation, in particular the General Block Exemption Regulation (GBER) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 TFEU. When State aid is present and it requires notification, it is the duty of the Member State to notify State aid measures to the Commission before granting them, in compliance with Article 108(3) TFEU²⁷. In this respect, the State aid analysis carried out by France in the recovery and resilience plan cannot be deemed a State aid notification. In as far as France considers that a specific measure contained in the recovery and resilience plan entails *de minimis* aid or aid exempted from the notification requirement, it is the responsibility of France to ensure full compliance with the applicable rules.

Irrespective of whether they comply with the EU's State aid regime, measures taken under this framework should be compatible with the EU's international obligations, in particular under World Trade Organization rules.

²⁷ Commission Regulation 651/2014, OJ L 187, 26.6.2014, p. 1

4. SUMMARY OF THE ASSESSMENT OF THE PLAN

4.1. Comprehensive and adequately balanced response to the economic and social situation

The French recovery and resilience plan features 70 investments and 22 reforms, for a total of EUR 40.95 billion (the maximum financial contribution for France is EUR 39.4 billion). These are a subset of the national plan “France Relance” and are spread out over nine components that each have a particular focus (see Section 3.1).

France’ recovery and resilience plan covers in a comprehensive manner the six pillars structuring the scope of application of the Facility (Article 3): (i) green transition, (ii) digital transformation, (iii) smart, sustainable and inclusive growth, (iv) social and territorial cohesion, (v) health and economic, social and institutional resilience, and (vi) policies for the next generation. The coverage of the French plan’s components toward the six pillars is summarised in Table 5. All pillars are covered by at least one component, while a component may contribute to several pillars.

Table 5. Coverage of the six pillars of the Facility by the French recovery and resilience plan components.

Pillars:	Green transition	Digital transformation	Smart, sustainable and inclusive growth	Social and territorial cohesion	Health, and economic, social and institutional resilience	Policies for the next generation
Component 1 – Building renovation	●		○	○		
Component 2 – Biodiversity, circular economy, agriculture and forestry	●		○			
Component 3 – Green infrastructures and mobility	●		○	○		
Component 4 – Green energy and technologies	●		○			
Component 5 – Business support			●		○	
Component 6 – Technological sovereignty		●	●		○	
Component 7 – Digitalisation of the State, territories, businesses and support to the cultural sector	○	●	○	○	●	○
Component 8 – Employment, Youth, Disability, Professional training		○	○	●	○	●
Component 9 – R&D, health, territories	○	●	○	●	●	○

Key: “●” investments and reforms of the component significantly contribute to the pillar; “○” the component partially contributes to the pillar

The range of actions of the plan corresponds to the one of the Facility with an appropriate overall balance between pillars. Allocations to the green and digital transitions exceed the requirements of the recovery and resilience facility Regulation (respectively 37% and 20%), and the plan therefore contributes to these pillars significantly. The French plan (as well as “France Relance”) also prioritises competitiveness and cohesion as axes for the recovery. The former can be associated to the “smart, sustainable, and inclusive growth” pillar while the latter corresponds to the “social and territorial cohesion” and “policies for the next generation” pillars. Finally, the pillar on resilience is also well addressed, notably by strengthening the resilience of the healthcare system and of businesses through competitiveness-enhancing measures.

Green transition

France’s plan focuses significantly on supporting the green transition, with four components (1 to 4) dedicated to this pillar, representing a total of EUR 20.2 billion. In particular, EUR 5.8 billion of costs are estimated for the renovation of buildings; EUR 2.1 billion to biodiversity, circular economy, agriculture and forestry; EUR 7.0 billion to green infrastructures and mobility; and EUR 5.3 billion to green energy and technologies. The French authorities estimate that these investments would contribute to directly reducing 60 million tonnes of CO₂ over the next 40 years.

The construction and use of buildings represent 25% of all greenhouse gas emissions in France, and the investments in the renovation of buildings are expected to yield significant energy savings and reductions in greenhouse gas emissions. The flagship investment under the component 1 on building renovation is the renovation of public buildings (EUR 3.8 billion), which is targeted to result in average energy savings and reductions in greenhouse gas emissions of more than 30% compared to the situation prior to the renovation. Investments under the component also include the renovation of social housing, private housing, and buildings owned or operated by SMEs and micro enterprises.

Under component 2 on biodiversity, circular economy, agriculture and forestry, the plan foresees measures that combat the artificial conversion of natural soils; support the circular economy; mitigate seismic risks in the outermost regions and secure drinking water and wastewater networks; decarbonise industry; accelerate the agricultural transition; and restore forests. A “Climate and Resilience law” with the objective to contribute to the greenhouse gas emissions reduction target for 2030 and resulting from consultations with citizens is also part of this component.

The purpose of component 3 on green infrastructures and mobility is to foster the development of modes of transport alternative to road and to accelerate the transition of the road transport sector to cleaner vehicles. According to the plan, carbon emissions from the transport sector represented 38% of all greenhouse gas emissions in France in 2017. 96% of these emissions come from road transport, and should be reduced by investing in cleaner vehicles and alternative modes of transport. The plan provides notably for a very significant

investment to support SNCF Réseau (EUR 4.05 billion), the railway infrastructure manager in France, to modernise the railway network. Further investments aim to improve public transport in urban and rural areas. The component also features investments to foster the development of charging points for electric vehicles, to improve the infrastructure of inland waterways, to support projects aimed at greening ports, to support the development of road infrastructure reserved for public or shared transportation, and to support schemes for the transition to clean road vehicles. It also includes support for improving the resilience of energy infrastructures at distribution level in rural areas.

Component 4 on green energy and technologies provides for investments in developing innovative technologies for the green transition. It includes a specific focus on decarbonised hydrogen (EUR 1.9 billion), e.g. supporting research in and industrialisation of electrolysis and fuel cells. It also includes investments in the aeronautics sector (EUR 1.7 billion) to support R&D projects towards the development of a wide range of zero-emission aircraft technologies and solutions, and to support projects aimed at greening, modernising and digitalising production processes. Investments will also contribute (EUR 1.7 billion) to the French '*Programme d'Investissements d'Avenir*', which will support research and innovation projects relating to hydrogen, decarbonisation of industry, sustainable agricultural systems, recycling and reincorporation of recycled materials, innovative buildings, mobility, and bio-based products and biofuels (see also section 4.5 for a detailed assessment of the green components).

In addition, component 7 investment supporting artistic education (EUR 113 million) will also contribute to increasing the energy efficiency of art schools and libraries. Some measures of component 9 on R&D, health, territories contribute to the green transition by focusing on the renovation of buildings in the medical sector and of residential care homes for the elderly.

Digital transformation

The development of key digital technologies is supported by the Investment Programme for the Future ('*Programme d'Investissements d'Avenir*') in component 6 (EUR 1.8 billion) and includes, among others, cybersecurity, quantum computing and cloud computing. Measures to support the digitalisation of education and cultural and creative sectors will also be supported. In quantum computing, the objective is to have a complete prototype of a first-generation general quantum computer by 2024, master quantum technologies (including accelerators, simulators and quantum computers, business software for quantum computing, sensors, communication systems) and to have a complete industrial production chain for Silicon 28, in particular to enable the possible production of qubits. In cloud computing, France aims to create competitive cloud solutions in technological segments (infrastructure, platforms and software), with the purpose of supporting France and Europe's autonomy over this strategic technology. The expected impacts are the development of a supply of trusted cloud services aimed at reducing the carbon footprint and the construction of a data-driven economy. See also section 4.6 for a detailed assessment of the digital components.

Under component 7, the plan includes investments for the digitalisation of several sectors. Investments include EUR 1 billion for the digitalisation of the State and territories. (including equipment for the digitalisation of schools and higher education institutions, digital identity cards, digitalisation of the administrative services) and EUR 385 million for SMEs and mid-caps (support for the creation of a website, digitalisation of management process and adoption of new technologies).

The recovery and resilience plan also includes investments in digital skills, as part of the measures targeting general skills development. These measures, included in component 8, will support financing training courses for workers (e.g. for employees in short-time work schemes (EUR 800 million) as well as topping up individual learning accounts for digital training courses (EUR 25 million), distance learning opportunities for the unemployed (EUR 160 million)) and investing in digital platforms to develop distance learning courses, including immersive modules based on virtual reality (EUR 304 million). Moreover, hiring subsidies for apprenticeships (EUR 2.3 billion) shall increase the digital skills of youth, as the apprenticeship programmes have the purpose of preparing employees for future challenges, in many cases with a focus on digital skills. Dedicated resources will therefore be devoted to reskilling and upskilling in digital areas and to digital inclusion.

The ultrafast broadband plan (*‘France Très Haut Débit’*) will be boosted by an additional EUR 240 million to improve connectivity in particular in rural areas. The ultrafast broadband plan invests in infrastructures with the aim of accelerating the rollout of next generation access internet, including based on optic fibre, across the territory of France. The government’s overarching goal is to generalise next generation access, in particular optic fibre, by 2025.

Component 9 includes EUR 2 billion for the health system (national infrastructure, digital medical records, interoperability, secure exchange of data, training of health professionals). Investments in the digitalisation of the State and of the territories should increase the performance of the public administration through technological upgrades and contribute to more inclusiveness.

Smart, sustainable and inclusive growth

Several measures spread across different components aim to strengthen France’s competitiveness and productivity, as well as to improve research, development and innovation.

Component 2 includes EUR 300 million of support to industrial decarbonisation, an important competitiveness factor for industry in the medium term. Component 4 includes innovation support of EUR 1.7 billion for aeronautics, a flagship sector for France, with support for the development of clean airplanes using hydrogen or biofuels, and the set-up of a fund that will invest in industrial research and the modernisation of the aeronautics industry. It also

contains a EUR 1.4 billion investment in R&D to support the development of key green technologies for aircraft decarbonisation. (See previous sub-section on the green transition).

SMEs' competitiveness and capacity to invest in the long term are supported in component 5 ("business support"). It contains a EUR 250 million investment under which Bpifrance will set up a fund to invest in regional investment funds that will, in turn, take equity positions in SMEs alongside private investors. Component 5 also includes the ASAP law reform (acceleration and simplification of public action). The ASAP law serves to facilitate access to the administration and to reduce administrative and regulatory burdens for firms and citizens (see Section 4.3).

Component 6 includes EUR 3.2 billion worth of measures that support key digital technologies and R&D, and thereby also contribute clearly to productivity and competitiveness of French companies. The amount is made up of the strands of the investment programme for the future dedicated to key digital technologies (EUR 1.8 billion, described under the previous sub-section) and innovative businesses (EUR 750 million), support to the space sector of EUR 365 million, and a scheme to preserve R&D employment of EUR 300 million. The EUR 750 million for the Investment Programme for the Future included in this total has a strong focus on start-ups and SMEs. It seeks to finance feasibility studies and industrial research, to commercialise research and to help young researchers start companies. The EUR 300 million investment in R&D seeks to preserve employment and improve cooperation between public and private research by promoting mutually beneficial exchange programmes. The support to the space sector includes support for R&D (EUR 170 million) and is expected to allow the provision of high-speed internet coverage by satellite to the most remote areas ("zones blanches"), which is critical for improving productivity. The reform of the multiannual research law included in this component aims at promoting and facilitating R&D&I (see Section 4.3).

Components 7 and 9 include funds for supporting the digitalisation of SMEs and increasing the budget of the national research agency to improve the success rate of calls for projects (EUR 385 million and EUR 428 million respectively).

Component 8 includes investments and reforms which have the potential to foster economic growth in an inclusive manner. Students are notably supported through the creation of additional places in higher education (EUR 256 million) and workers through access to training, in line with pre-identified skills needs, increasing their mobility on the labour market (EUR 1.7 billion). This component also aims at fostering the labour market integration of unemployed through guidance and access to training.

Component 9 further includes estimated costs of EUR 750 million to strengthen the ecosystems of education, research, valorisation and innovation. This is done by supporting the transition of universities towards a more active role in the innovation process and more generally in the economy. The ambition is to have universities fit for purpose in training the next generation of citizens, active in the society and the economy, and at the centre of innovation

ecosystems (linking with local businesses, start-ups, public authorities, and civil society). This dimension will include funding to support the transformation of universities (see next sub-section).

Social and territorial cohesion

Component 1 contributes to improving social cohesion by reducing energy poverty and by supporting investments in the renovation of social housing (EUR 0.5 billion).

Important reforms and investments to strengthen territorial cohesion are also included in component 7. Territorial cohesion is boosted by the 4D law (differentiate, deconcentrate, decentralise, reduce complexity – “*decompléxifier*”) and the draft constitutional law on the “right to differentiation”, both of which partially allows for transfer of powers from the State to local communities (further discussed in Section 4.3). Investments related to cultural heritage (EUR 280 million), artistic education (EUR 113 million) and supporting and modernising strategic cultural sectors most affected by the current crisis (EUR 309.5 million) also improve territorial cohesion as they should benefit local stakeholders and provide targeted support to local territories.

In addition, the cross-cutting reform of public service, through revised recruitment procedures and reinforcement of the equal treatment and opportunity principle, is expected to further contribute to the social cohesion.

Component 8 is dedicated to social and territorial cohesion through investments earmarked to fostering worker mobility on the labour market through access to training, in line with current and future skills needs, as well as to supporting the labour market integration of the youth and persons with disabilities. It contains investments targeting youth employment (EUR 4.5 billion), professional training (EUR 1.7 billion) and the employment of persons with disabilities (EUR 58 million). Besides the apprenticeship programmes and the training of employees in short-time work schemes (see sub-section on digital transformation), flagship investments include EUR 800 million of subsidies for companies hiring young people under 26 years old, amounting to up to EUR 4000 per person hired and with an expected impact on 660 000 young people in total. The resources of ‘France Compétences’ are topped-up by EUR 750 million, which will be used mainly to support apprenticeship and professionalisation programmes. Inequalities in the education system are targeted through renovation and creation of further places in boarding schools for excellence (EUR 50 million), as well as mentoring programmes by university students to help disadvantaged youth expand their horizons and define their professional ambitions (EUR 10 million).

Component 9 foresees investments in health (EUR 6 billion), research and education (EUR 1.2 billion) and support to local territories (EUR 500 million) that serve to further strengthen social and territorial cohesion. Flagship measures include a EUR 2.5 billion investment in the health system, where a generally high indebtedness is weighing on health institutions’ ability to invest. Part of the investment is allocated specifically at the regional level, by regional health agencies (ARS). The investments support the modernisation of the health

system, e.g. by allowing for the renovation of buildings, and serve to improve the resilience and quality of care, e.g. by supporting the integration of hospital and outpatient care or by ensuring the availability of proper equipment. EUR 1.5 billion is invested in the renovation of residential care homes for the elderly (EHPAD), e.g. to improve the private facilities available to residents and to create spaces for accommodating residents with cognitive difficulties (such as sensory stimulation rooms).

EUR 750 million under component 9 is allocated to supporting the transformation of higher education institutions and research in the education system. It finances the transformation strategy of higher education institutions to reach excellence and international standards and of school education through innovation and new forms of organisation and management. It provides financing for alternative funding mechanisms, laboratories, equipment, research programmes, and strengthening technological transfer in line with the research programming law (further described in Section 4.3). These measures, together with a EUR 428 million increase in the budget of the national research agency (ANR), should increase the attractiveness of the research profession and lead to higher employment of researchers.

Health, and economic, social and institutional resilience

Several measures contribute significantly to increasing economic resilience. Under components 5 and 6, such measures include strengthening the equity of SMEs, investing in innovative companies and key digital technologies, and the ASAP law reform (see sub-section on smart, sustainable and inclusive growth). Under component 7, a reform of the public finance governance framework aims to reinforce budgetary commitments and to stabilise and reduce public debt when economic conditions allow. The reform will introduce a multiannual expenditure rule that should ensure consistency between the annual budget bills and the multi-year objectives, and will extend the responsibilities of the French High Council of Public Finances (Haut Conseil des Finances Publiques). Moreover, component 7 also embeds a reform aimed at enhancing the quality of public spending and introducing an annual assessment of the measures taken, also in compliance with the expenditure trajectory of the public finance programming law. The contribution of these reforms to debt reduction in the medium to long term will depend on the degree of ambition of the expenditure rule and of the evaluation of spending, whose parameters are to be defined in the implementation phase. If implemented successfully, these reforms should provide the larger fiscal space needed to enhance France's capacity to counter possible negative shocks.

Regarding social resilience and the social protection system, several measures in component 8 and 9 are expected to contribute to the implementation of the principles of the European Pillar of Social Rights and the Porto declaration adopted on 7 May 2021, translating into improvements of the indicators of the Social Scoreboard accompanying the Pillar (see Section 4.3).

Measures under component 8 oriented towards employability and enhancing skills (EUR 7.2 billion in total) are expected to contribute to strengthening social resilience. The main

measures are discussed in the sub-section on social and territorial cohesion. As part of these measures, France is suggesting to pursue a number of policies in line with the Commission Recommendation on Effective Active Support to Employment (EASE). While emergency short-time work schemes helped France to preserve jobs during the pandemic, the Effective Active Support to Employment policies proposed by France are expected to have a positive impact in the longer run, translating into a more inclusive recovery.

The resilience, effectiveness and accessibility of the health and long-term care sectors should be strengthened by the investments and reforms contained in component 9, with EUR 6 billion dedicated to these sectors. The amount is made up of the EUR 4 billion dedicated to medical establishments described in the previous sub-section and the investment in the digitalisation of the sector (EUR 2 billion) described in the sub-section on the digital transformation. It also contains also contains EUR 2.9 million for suicide prevention. The reforms in the health sector should increase the resilience, effectiveness and accessibility of the system, notably through the national strategy of reform of the healthcare system aimed in particular at upgrading the careers of health personnel, rebalancing the supply of health care in the country and organising local care.

Finally, institutional changes are taking place with the transformation of the public service reform along with the modernisation and digitalisation of public services, as well as the digitalisation of central and local administrations, schools and health institutions.

Policies for the next generation

The sixth pillar is also duly addressed by measures and investments proposed mainly in component 8. Youth employment is one of the priorities of the plan, with a large number of measures amounting to EUR 4.5 billion intended to facilitate young people's integration into the labour market (notably through hiring subsidies for apprenticeships and professionalisation contracts and recruitment of young people under 26 years old) and to provide training towards future-oriented sectors and to help those who are far from the labour market by offering reinforced and personalised support. Further details are provided in the sub-section "Social and territorial cohesion".

Other measures in component 8 aim to address inequalities in education, albeit in a more limited manner given the smaller scale of the measures. Measures supporting youth in initial education include the creation of additional places in the vocational and tertiary education system (EUR 256 million), investments in renovating and creating additional boarding school places (EUR 50 million), the prevention of early school leaving and academic guidance (EUR 83.5 million). In order to help alleviate the financial constraints on higher education students, the plan includes an increase in State-guaranteed student loans (a targeted increase in loans supported to EUR 580 million, expected to translate into loans for 100 000 students, at a cost of EUR 32 million).

Measures in components 6, 7 and 9 aim to improve educational outcomes and digital skills of young people and contribute to the transformation of the education and training systems. Investments are planned to strengthen the digital skills of young people through key

digital capacities in education (component 6) and digital equipment to education institutions (component 7). Research projects will reinforce school education through innovation and new forms of organisation and management, and support the transformation strategy of higher education institutions to reach excellence and international standards (component 9) (see also human capital).

Conclusion

Overall, the measures proposed in the plan pursue the general objective of the Facility by promoting the Union's economic, social and territorial cohesion, structured in the six pillars of Article 3 of the RRF Regulation. Significant investments in key green technologies, sustainable transport, building renovation and more address the green transition. Investments in key digital technologies, R&D and the digitalisation of the administration, education and SMEs, among others, contribute to the digital transformation. The full implementation of the Plan would contribute to a decisive impulse towards more sustainable and inclusive growth, including by raising France's potential growth in the medium term, by strengthening economic resilience and by reinforcing public finances. Social and territorial cohesion as well as health and social resilience are addressed through investments in education, training, employment and health services, with several of the employment measures targeting youth specifically.

Taking into consideration all reforms and investments envisaged by France, its recovery and resilience plan is expected to represent to a large extent a comprehensive and adequately balanced response to the economic and social situation, thereby contributing appropriately to all six pillars referred to in Article 3 of the Recovery and Resilience Facility Regulation, taking the specific challenges and the financial allocation of France into account. This would warrant a rating of A under the assessment criterion 2.1 in Annex V to the Recovery and Resilience Facility Regulation.

4.2. Link with country-specific recommendations and the European Semester

According to the Regulation, the recovery and resilience plan is expected to contribute to effectively addressing all or a significant subset of challenges addressed to France identified in the relevant country-specific recommendations, including fiscal aspects thereof and recommendations made pursuant to Article 6 of Regulation (EU) No 1176/2011 where appropriate, or challenges identified in other relevant documents officially adopted by the Commission in the context of the European Semester.

Assessment by challenges

Table 6 presents the mapping of the selected challenges, the associated country-specific recommendations (CSRs) and the nine components of the French Plan. The table does not include the challenges identified in section 2 that are not backed by a CSR (e.g. circular economy, air quality, advanced digital technologies, etc.). These will be covered in the dedicated green and digital sections.

France received in 2020 a recommendation to front-load mature public investment projects (CSR 2020 3.2) and another to promote private investment to foster the economic recovery (CSR 2020 3.3). Having set up a national recovery plan (“France Relance”) in September 2020 and participating in the Facility confirms that France aims at using investment to boost the economic recovery. Public investment will be front-loaded in various sectors such as education, culture, health, research, public transport, digitalisation of administration, and energy renovation of public buildings. These investments should benefit all the territory including the outermost regions. The recovery and resilience plan aims also at stimulating private investment in the short and medium term. Notably, the equity base of firms will be strengthened to preserve firms’ capacity to invest. Private investment will be supported in many sectors including but not limited to energy transition, building renovation, agriculture, decarbonisation of industry, sustainable transport, circular economy, aeronautic industry, and key digital technologies (cloud, quantum, electronics, etc.).

Table 6. Mapping of country challenges, 2019-2020 country-specific recommendations, the Macroeconomic Imbalances Procedure (MIP) and the nine French recovery and resilience plan components

Country challenges (as identified in Section 2)	Associated CSR (2019-2020) and European Semester recommendations	C1	C2	C3	C4	C5	C6	C7	C8	C9
Public finances										
Public debt sustainability	2019.1, 2020.1.1, MIP							●		
Expenditure savings and efficiency gains	2019.1.3							●		
Complex pension system	2019.1.4									
Competitiveness and innovation										
Firms access to finance	2020.3.1					●	○			
Regain competitiveness	MIP	○	○	○	○	●	●	○		
Regulatory environment and administrative burden	2019.4, 2020.4					●		●		
Invest and simplify R&D	2019.3.1, 2020.3.8				○		●			●
Labour market integration and skills										
High unemployment	2019.2, 2020.2						○		●	
Labour market integration (vulnerable groups)	2019.2.1, 2020.2.3								●	
Skills mismatches	2019.2.2, 2020.2.2							○	●	
Education for vulnerable groups	2019.2.1							○	●	
Health										
Resilience of the healthcare system	2020.1.2									●
Green dimension										
Ensure long-term greenhouse gas reduction target	2019.3.2, 2020.3.5	●	○	●	●		○			○
Decrease emissions in the transport	2020.3.4			●	●					

sector										
Accelerate renewable energies deployment	2019.3.2, 2020.3.5				○					
Increase energy efficiency	2019.3.2, 2020.3.5	●	○							○
Develop energy infrastructures and interconnections	2019.3.2, 2020.3.6			○	○					
Digital dimension										
Improve connectivity across the territory	2019.3.3, 2020.3.7									●
Boost digital skills of population	2019.2.2, 2020.2.2							●	●	○
Foster digitalisation of firms	MIP						○	●		

Key: “●” investments and reforms of the component significantly address the challenge; “○” the component partially addresses the challenge

Public finances

The recovery and resilience plan contains two reforms under component 7 that address the CSRs on public finances. First, a reform on the governance of public finance will introduce a steering multiannual expenditure rule, which will ensure consistency between the annual budget bills and the multi-year objectives, and will extend the prerogatives of the Fiscal Council (HCFP) (CSRs 2019.1, 2020.1.1, Macroeconomic Imbalances Procedure). It should help France adopt and implement a fiscal policy trajectory ensuring the long-term sustainability of public finances as soon as economic conditions allow. Second, a reform on the evaluation of the quality of public expenditure, thus addressing the recommendation to achieve public expenditure savings and efficiency gains (CSR 2019.1.3). The measure will include the stock taking of the outcome of the reforms on the effectiveness of public action over the Presidential term, the publication of an audit report on public finances by the Court of Audit and the inclusion of the evaluation of public expenditure in upcoming budgetary laws. The public expenditure impact assessments will be strengthened in connection with the entry into force of the new public finance programming law from 1 January 2023, once the health crisis has passed. The assessment of the quality of public spending will be made a regular practice and will be assessed annually.

The French pension system (CSR 2019.1.4) is costly but expenditure is not projected to rise in the long term as a percentage of GDP. The envisaged reform (centred on the unification of more than 42 regimes) is discussed in part I (main objectives and coherence) of the recovery and resilience plan, where the French authorities explain that they plan on resuming the suspended parliamentary discussions on the pension reform with the aim of creating a more equitable

universal system. The reform of the pension system is not included in a measure of the French plan and thus not associated to a deliverables (milestone or target) under the Recovery and Resilience Facility. In view of its key importance for labour mobility and productivity, the planned pension reform will be closely monitored, including its implications in terms of fairness and sustainability.

Competitiveness and innovation

On supporting the access to finance of firms (CSR 2020.3.1), the recovery and resilience plan contains the dedicated component 5 aimed at reinforcing the equity of SMEs. It includes an investment measure setting up a "fund of funds" managed by Bpifrance, which will invest in regional investment funds alongside private investors to take equity positions in SMEs. The purpose is to strengthen supported SMEs' competitiveness and capacity to invest in the long term. This measure is a coherent complement to several schemes implemented in response to the crisis (and outside of the plan) whereby the State provides guarantees on loans, participating loans or subordinated debt, in order to provide emergency liquidity support to businesses. Component 6 also includes a measure (Support to innovative businesses) amounting to EUR 750 million that will partially be used to grant innovation aid to start-ups to help them strengthen their R&D activities.

The Plan addresses competitiveness (identified as an imbalance under the Macroeconomic Imbalances Procedure) through different levers. First, one of the axes of the plan is oriented toward technological sovereignty (component 6) by investing in research and innovation in key digital and health technologies, such as quantum computing, cybersecurity and 5G, as part of the investment measure "Innovate for the resilience of economic models". Second, the plan supports innovation in a flagship sector for France: aeronautics (component 4). Third, the digitalisation of SMEs (component 7), which was highlighted as a country-specific weak point in the National Productivity Board 2019 report, will be encouraged. Fourth, several reforms of the recovery and resilience plan tackle **administrative complexity** (CSRs 2019.4 and 2020.4) that could impede the swift implementation of reforms and investments. These include laws such as the ASAP law (acceleration and simplification of public action) and the 4D law (differentiate, deconcentrate, decentralise, decomplexify). However, the French recovery and resilience plan does not include any measure to reduce the regulatory restrictions in the services sector (CSRs 2019.4.2 and 2020.4.1), in particular on regulated professions and retail, except the facilitation of the on-line sales of medicines by pharmacists. Lastly, firms are supported in their green transition, notably by fostering building renovation of SMEs (component 1) and developing decarbonisation of industrial processes (component 2). The national recovery plan "France Relance" (outside the plan) includes a significant measure to cut taxes on production by EUR 10 billion per year as of 2021, which will contribute to improving the competitiveness of French businesses and address CSR 2019.4.1.

Research and innovation (CSRs 2019.3.1, 2020.3.8) constitutes a significant part of the recovery and resilience plan, with a comprehensive package of investments and reforms aimed at strengthening both the public and private segments of the research and

innovation ecosystem, whilst fostering business-academia cooperation. R&D is supported in key green and digital technologies, aeronautics and space via the components 4 and 6, while the national research agency sees its capacity increased (EUR 428 million) in component 9. The measures support the whole innovation cycle, from basic research to the deployment of new technologies, and target both the public and private sectors. The multiannual law for research (component 6) aims at reforming public researchers' careers and fostering public-private cooperation. On the latter, the measure on preservation of private R&D jobs (component 6) works also in this direction.

Labour market integration and skills

The recommendation on labour market integration (CSR 2019.2), is adequately covered by the employment support measures of component 8. Targeted and time-limited hiring subsidies help boost the employment prospects of selected groups (youth under 26, persons with disabilities, young unemployed people between 26 and 29). It also includes early school leaving prevention measures and the creation of additional places in the tertiary and vocational education system, which can help prevent further unemployment. Moreover, job seekers will overall be better accompanied in these times of crises through the time-bound hiring of additional employment counsellors to provide tailored support. To limit the extent of unemployment in the research & development field, targeted support will be provided to new researchers, including during their doctoral studies (component 6).

The plan includes a strong targeting on the youth, including the most vulnerable. For instance, the “personalised pathway” measure in component 8 will target 16- to 18-year-olds not in education, employment or training (NEET). It will provide them with a four-month integrated programme to discover employment opportunities, build up soft skills and benefit from personalised counsel, aiming to help their insertion into the labour market or in a relevant training programme that will increase their employment outcomes in the long run. Similarly, the “youth guarantee” (EUR 233 million) provides structured support to NEET youth (ages 16 to 25) and several short-term professional immersion experiences and trainings over a period of 12 months. Moreover, as sports can also provide a means to integrating into the labour market, youth (under 26) will benefit from public support during their first year of contract within an associative sports structure, if hired on a newly created post.

Still in component 8, further support to labour market integration for youth takes the form of support to apprenticeships, both through support of employers and competence operators which help organise the apprenticeship offer (EUR 750 million). Similarly, professionalisation contracts will be supported at higher levels over the first year of contract for a total of EUR 800 million. Finally, the subsidised contracts for the youth (“Parcours Emploi Compétences and Contrat Initiative Emploi”) will provide to some extent a focus on urban deprived neighbourhoods through reinforced financial support to young people living in these areas.

Skills mismatches will be addressed through several training measures, also in light of the green and digital transitions. For instance, FNE-Formation (‘Fonds National de l’Emploi’) and Pro-A will provide training opportunities for employees benefitting from short-time work schemes, to equip them better for new opportunities on the job market. Distance learning courses and platforms will be more available to unemployed persons through the opening of 30 000 new distance training opportunities, which happen to be especially well-suited to the wider uncertainty linked to sanitary restrictions. Further support to distance learning will be provided by equipping training centres with digital platforms and supporting the development of hybrid training modules, incorporating new technologies such as virtual reality. Individual training rights will be topped up (EUR 25 million) to offer 25 000 persons with training for digital skills and reorientation towards digital careers.

Some measures have the potential to contribute to reducing inequalities in education. For instance, the opening up of additional places in the “excellence boarding schools” aims at providing young students, mostly living in a disadvantaged environment, with better and more structured opportunities for learning. Moreover, a programme specifically aimed at widening the professional horizons of 185,000 youth, mainly from underprivileged or rural areas will be financed for EUR 10 million. To help alleviate the financial constraints weighing on tertiary education students, the availability of state-backed loans will increase significantly, potentially benefitting up to 56 000 students in both 2021 and 2022, up from 11 500 in 2020.

The employment measures presented as part of the French recovery and resilience plan are expected to mitigate the employment impact of the crisis, including by improving the mobility on the labour market of affected workers, through access to training. The employment, training and education actions are expected to foster the labour market integration of all, with a particular focus on the youth. The combined impact of these measures should help in addressing skills mismatches and boosting growth potential.

Health

The French recovery and resilience plan is expected to contribute significantly to the resilience of the national healthcare and long-term care systems (CSR 2020.1.2). It has potential to improve the effectiveness, accessibility and quality of care through better facilities and equipment (including digital means), as well through better coordination and integration between the various actors in hospital care, outpatient care and long-term care, including at regional and local level. In particular, massive investments included in component 9 will be carried out for the modernisation of healthcare in territories (EUR 2.5 billion), medico-social real estate (EUR 1.5 billion) and e-health (EUR 2 billion). They will be accompanied by several reforms aiming at improving the healthcare system: improvement of the health system (‘*Ségur de la santé*’), reform of elderly care and autonomy and a fifth branch of the social security.

Green dimension

Long-term greenhouse gas emissions reduction (CSRs 2019.3.2, 2020.3.5) is tackled by the recovery and resilience plan to a significant extent, as the Plan dedicates four components to the green transition. The two biggest greenhouse gas emitting sectors – transport and buildings – each benefit from a dedicated component (3 and 1, respectively). The French plan also features a reform measure on the new ‘Climate and Resilience’ law. An in-depth analysis is proposed in section 4.5.

Decreasing emissions in the transport sector (CSR 2020.3.4) is mainly tackled by component 3. The approach followed in the recovery and resilience plan is comprehensive as it plans to invest in both public and private sectors and covers various transport modes (road, rail, inland waterways, and maritime) and addresses urban mobility improvements. The set of measures is consistent as it will contribute to decreasing the emissions in the most polluting modes (e.g. electrification of road transport) while it will support the development of and transition to the less polluting modes (e.g. rail, inland waterways). The aeronautics sector is covered in component 4 with investments in R&D to support the energy transition of the sector. Moreover, investments for the development of decarbonised hydrogen in component 4 may also contribute in the medium to longer term to the decrease of emissions of the transport sector as hydrogen is considered the main solution for the decarbonisation of heavy vehicles (trucks, aircraft, and vessels). Finally, the mobility law will reform the sector to make it cleaner in order to reach climate objectives.

The challenge related to energy efficiency (CSRs 2019.3.2, 2020.3.5) is well addressed in the plan, notably with substantial investments in building renovations (component 1) across different sectors: private and social housing, public buildings and SMEs. The reform on thermic regulation of new buildings (RE2020) will enshrine good practices in the domain (see also Section 4.5). Measures on the decarbonisation of industrial processes and circular economy (component 2) will also make a decisive contribution to a more efficient and sustainable use of energy.

France’s recovery and resilience plan does not contain direct support measures to increase the production of renewable energy (CSR 2019.3.2, 2020.3.5). The most relevant investment related to the consumption of renewables is the ‘decarbonised hydrogen’ measure (component 4) for EUR 1.925 billion (as part of a larger national strategy of EUR 7 billion until 2030). The measure aims at fostering renewable and low-carbon hydrogen production and use, notably through planned Important Projects of Common European interest (IPCEI). It will therefore increase the demand for renewable energy, which calls for additional renewable energy generation capacity to match this demand. In addition, the recovery and resilience plan makes reference to the ASAP law, which contains elements to facilitate administrative requirements for the deployment of renewables. The plan mentions that investments integrated in the recovery and resilience plan do not encompass all green policies put in place by France, and notes that renewable energy development is notably supported in France outside the Recovery and Resilience facility by green bonds (*‘OAT vertes’*) (See also section 4.5 for further analysis on renewable energy).

Component 3 includes actions to develop energy infrastructures (CSRs 2019.3.2, 2020.3.6) notably reinforcing the resilience of electric distribution networks and developing charging stations for electric vehicles. The recovery and resilience plan does not contain any initiative on cross-border electricity interconnections. However, it mentions that some large-scale interconnection projects are foreseen outside the Recovery and Resilience Facility, in particular with Ireland and Spain.

Digital dimension

Digital connectivity across the French territory (CSR 2019.3.3, 2020.3.7) has been developed since 2013 by the plan ‘France Très Haut Débit’. The recovery and resilience plan will fuel the plan with an extra EUR 240 million in order to reach a new goal of covering the national territory including rural areas with next generation access networks, in particular with optic fibre by 2025 (component 9).

The recovery and resilience plan aims at improving the digital skills of the population, with a focus on basic digital skills (CSRs 2019.2.2, 2020.2.2) mainly through components 8 and 9. A detailed analysis of the digital measures aiming at investing in the human capital is presented in section 4.6.

The digitalisation of firms, in particular SMEs (Macroeconomic Imbalance Procedure - competitiveness), is directly promoted via component 7. The ‘France Num’ scheme will help 200 000 SMEs in their digital transition, while the Industries of the Future Scheme will invest in 3 320 SMEs and mid-caps to support their medium / long-term digitalisation strategy with the adoption of new technologies.

Component 6 fosters innovation in breakthrough digital technologies. Public investments (“*Programme d’Investissements d’Avenir*”) support strategies in the area of cybersecurity, quantum technology, 5G, digital education, cloud, and in the cultural sector. In conclusion, the recovery and resilience plan addresses a vast majority of the challenges and CSRs addressed to France in the field of digitalisation.

Response to the economic and social situation

To tackle the economic challenges of the country, the French recovery and resilience plan focuses on boosting investments in sectors of the future. A significant part of the investments will be oriented to the green and digital transitions, health and R&D with a view of enhancing the competitiveness of French businesses. Many measures are dedicated to businesses (access to finance, digitalisation, support to innovation, administrative simplification) in line with the will of the French authorities to regain competitiveness and industrial sovereignty.

The weak productivity growth observed before the crisis will be addressed by investing in human capital with many measures aiming at supporting skills (in particular digital ones), the digitalisation of businesses and investing in innovation. In this respect, the recovery and resilience Plan aims at reinforcing private-public cooperation in research and the intersectoral mobility of researchers, which is critical for skills development. Those measures are deemed

relevant since they will tackle the country-specific weaknesses identified by the National Productivity Board (weak skills and technology adoptions by businesses).

The reforms in the area of public finance aim at a better control of the French debt trajectory and of the quality of public expenditures. These reforms should help reduce public debt gradually when economic conditions allow by setting consistent targets and prioritising high-quality expenditure.

The fight against unemployment is tackled by the French authorities both by implementing emergency measures during the crisis but also supporting the recovery with a strong component dedicated to employment in the Plan (component 8). The approach focuses on youth with measures on apprenticeship, training, skills, and active labour market policies. Associated reforms, such as the reform of unemployment benefits, which includes measures aiming at addressing the challenge of labour market segmentation, are likely to bring a lasting positive impact. Several inclusion measures are also presented in the plan: support to persons with disabilities, youth, elderly care, and digital inclusion as well as support to education. The plan also contains several measures relating to territories and regions, especially in the domains of digital, health and mobility.

Boost the growth potential in a sustainable manner

The French recovery and resilience plan is expected to address several important barriers to growth and investment. Based on the European Investment Bank investment surveys²⁸, the three main impediments to investment are labour market regulations, business regulations and skills mismatches. Concerning labour market, the recovery and resilience Plan will continue implementing a major reform of the unemployment benefits, strengthening incentives for employment and providing more legal stability to employers, among others. On business regulations, several reforms targeting administrative complexity will take place under the Facility such the ASAP law (‘Accélération et simplification de l’action publique’), the 4D law (decentralisation, differentiation, deconcentration, decomplexification) and the transformation of public action. The high level of regulatory restrictiveness in the services sectors is however not addressed. The issue of skills mismatches is addressed through ambitious investments, notably in digital skills, vocational training, and youth employment.

In general, the recovery and resilience plan can be expected to have a positive impact on productivity and competitiveness of the country with large investments in favour of technologies of the future (green and digital transitions). Productivity may increase by addressing two of the main weaknesses of France in the domain: low skills of the workforce (investments in skills in the component 8) and low adoption of ICT technologies by firms

²⁸ <https://www.eib.org/en/publications/econ-eibis-2020-france>.

(digitalisation of SMEs in the component 7, investments in key digital technologies in the component 6). The orientation of support toward businesses and R&D is expected to foster growth and employment during the recovery but also in the long term, beyond the Facility's timeframe. In conclusion, the French recovery and resilience plan may boost growth potential in a sustainable manner.

The seven flagship areas identified in the 2021 Annual Sustainable Growth Strategy are largely addressed by the French plan. The hydrogen-related measures in component 4 contribute to the flagship area *Power up*, while component 1 as well as some measures related to the energy renovation of health buildings in component 9 address the *Renovate* flagship, and component 3 contributes to the *Recharge and refuel* flagship. Components 7 and 9 address the *Modernise* flagship (digitalisation of public services and health system) while the plan 'France Très Haut Débit' (component 9) tackles the *Connect* area. The *Scale-up* flagship is supported by sizeable investments in R&D for key digital technologies (component 6). Finally, component 8 includes measures (digital skills, vocational training, and lifelong learning) in line with the flagship *Reskill and upskill*.

Conclusion

Overall, the plan constitutes a comprehensive package of reforms and investments directed at addressing the challenges identified in the country-specific recommendations, with a few gaps that are partially tackled via measures outside the Facility. The plan addresses well the recommendations and challenges in the areas of business environment, employment, health, green and digital transitions. The plan includes a commitment to strengthen the sustainability of public finances when economic conditions allow and reforms to support that goal. However, the commitment to resume discussions on the reform of the pension system is not accompanied by milestones and target for the implementation of the reform. In addition, further measures may be required to address the labour market challenges faced by vulnerable groups other than young people (CSR 2019.2). There are also gaps regarding investment in renewables and developing electricity interconnections, which are not fully covered by the recovery and resilience plan but for which action is underway outside the framework of the Facility. The plan does not include measures to reduce regulatory restrictions in services (CSR 2019.4.2 and 2020.4.1), in particular on regulated professions and in the retail sector, which would have complemented competition-enhancing measures introduced in 2019 concerning driving schools, sales of automotive parts, real estate management, online sale of medicine, medical analysis labs, and fintechs. The recovery and resilience plan includes several reforms aiming at simplifying administrative procedures.

Taking into consideration the reforms and investments envisaged by France, its recovery and resilience plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the country-specific recommendations, or challenges in other relevant documents officially adopted by the Commission under the European Semester, and the recovery and resilience plan represents an adequate response to the economic and social situation of

France. This would warrant a rating of A under the assessment criterion 2.2 in Annex V to the Recovery and Resilience Facility Regulation.

4.3. Growth potential, job creation, economic, institutional and social resilience, European Pillar of Social Rights, mitigating the impact of the crisis, and social territorial cohesion and convergence

Fostering economic growth and jobs

Around 50% of the investments put forward by the French recovery and resilience plan are targeted to fostering French competitiveness and supporting growth (see table 4). Support to research, innovation and technology is key to strengthening potential growth in the medium term and increasing economic resilience to shocks, while offering new employment opportunities. Investments to strengthen the equity base of SMEs should help businesses continue to invest.

Investments aimed at supporting research and innovation should ultimately imply a long-lasting positive effect on net exports, potential growth and domestic employment. Investments in research and innovation, such as quantum computing, green technologies, and cybersecurity, whereby France envisages to reinforce its strategic autonomy in line with the EU update of the 2020 new industrial strategy²⁹, are expected to have a positive effect on technological progress and thus on total factor productivity. Likewise, the expected innovation support for EUR 1.7 billion in aeronautics should enhance the resilience and the expansion of a flagship sector in France. Fostering innovation and diffusion of best practices among firms could also reduce the increasing gap between the most and least productive firms.

The research programming law will strengthen public-private cooperation in research and foster the creation and development of businesses from academic research. The 2020 Country Report highlighted the need to improve the links between public research and businesses by promoting entrepreneurship in researchers' careers. EUR 25 billion will be invested over 2021-2030 for the benefit of research organisations, universities and other research and innovation actors, thus ensuring predictability and sustainability of public R&D funding. Several measures aim to increase the attractiveness of the research profession. Also, the investments earmarked to reinforce the education system in the areas more closely linked to technological R&D, investments in digital equipment, State guarantees on student loans or the support to training ecosystems via the Future Investments Programme (PIA), will help create favourable conditions for research and innovation in key technological areas in the future. However, although instrumental, the overall envelope of investments aimed at fostering research and innovation (around EUR 8.5 billion, including an increased capacity of the National Research Agency of EUR 428 million) will remain insufficient to attain the target of 3% of GDP.

The French Plan is a step forward compared to the already existing 'France Très Haut Débit' plan in terms of improving connectivity throughout the territory and widening access to fast fixed and mobile networks. Despite the large coverage of French households

²⁹ See European Commission, Updating the 2020 New Industrial Strategy, COM(2021) 350 final, 05.05.2021.

with fixed broadband, digital connectivity remains low or of bad quality in rural areas and in the outermost regions. The level of digital intensity of French firms is lower than the EU average³⁰. Regarding e-commerce, only a small share of around 15% of French SMEs sell online compared to nearly 45% of large companies. Hence, the investments aimed at deepening the integration and absorption of digital technologies by firms, especially SMEs, are key to improving firms' productivity and competitiveness.

The investments aimed at enhancing the digital skills of young people and the overall workforce have the potential to reduce the low uptake of information and communication technologies and overall technology adoption. According to the National Productivity Board, they are some of the reasons behind the relatively weak productivity growth in France. More broadly, the issue of low skills and skills mismatches arising in France are addressed by the recovery and resilience plan via measures in up-and re-skilling training in jobs for the future, digital skills and youth employment. Measures providing hiring subsidies and access to training are likely to foster the labour market integration of (young) unemployed and to improve workers' mobility on the labour market, subsequently boosting jobs and growth potential. In addition, the reform of the public employment services will reinforce the adequacy of guidance offered to job-seekers. A number of education measures are also likely to contribute to growth potential and especially through youth labour market integration by fostering access to tertiary and vocational education. These measures have the potential to contribute to the implementation of Chapter I of the European Pillar of Social Rights.

The law for the acceleration and simplification of public action ('ASAP') contains some measures that simplify the regulatory environment, as outlined below. The ASAP law foresees that industrial and construction projects will remain subject to the regulations in force at the time the project application is submitted, even if those regulations were to change during the examination period. It also provides for a simplification of the rules applicable to the online sale of medicines by pharmacists. Another section of the ASAP law is dedicated to simplifying administrative procedures, for example by streamlining consultative commissions. These reforms could simplify some administrative procedures for businesses. Nevertheless, the plan does not propose reforms to reduce regulatory restrictions in services, a sector with low productivity growth that could benefit from a reduced level of regulatory barriers.

In sum, the investments and reforms in the recovery and resilience plan, including in green, research, innovation and digitalisation projects, are set to bring about an immediate positive effect on GDP growth. Moreover, beyond their short-term effects on growth derived from higher investment expenditure, the measures in the plan in the areas of digitalisation and research and innovation are expected to entail positive effects on total factor and labour productivity and thus on overall potential growth. In turn, the sizeable investments envisaged for

³⁰ 24% in France compared to 26% in the EU on average (European Commission Country Report France 2020).

green projects are set to imply an immediate impact on GDP growth, with also potentially positive effects on potential growth. Higher potential growth is expected to also be translated into an improvement in French competitiveness via a higher contribution of net exports to growth. However, the macroeconomic impact of the investments included in the recovery and resilience plan is expected to be moderate (an increase in GDP of 0.66 pp at its peak in 2021). Some reforms could be expected to have an additional impact although difficult to quantify. The cut in production taxes enshrined in “France Relance” (not funded by the plan) complements the measures in the plan aimed to ameliorate the competitiveness of French firms.

Box 2. Stylised Next Generation EU impact simulations with QUEST – France

Model simulations conducted by the Commission using the QUEST model show that the economic impact of the Next Generation EU in France could lead to an increase of GDP of between 0.6% and 1.0% by 2024.^[1] After 20 years, GDP could be 0.2% higher. Spill-overs account for a large part of such impact.

According to these simulations, this would translate into up to 157 000 additional jobs. Cross border (GDP) spill-overs account for 0.4 pps in 2024, showing the value added of synchronised expenditure across Member States (line 2). Even assuming that half of the expenditure is not productive still leads to a significant impact. (line 3).^[2]

Table 1: QUEST simulation results (deviation of real GDP level from non-Next Generation EU case, linear disbursement assumption over 4 years)

Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040
Baseline	0.6	0.9	1.0	1.0	0.8	0.5	0.5	0.5	0.4	0.4	0.2
<i>of which spill-over</i>	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0
Low productivity	0.4	0.6	0.6	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.1

This stylised scenario does not include the possible positive impact of structural reforms, which can be substantial. A model-based benchmarking exercise shows that undertaking structural reforms that would result in halving the gap vis-à-vis best performers in terms of indicators of structural reforms could raise France’s GDP by 12% in 20 years time, in line with findings for the EU average.^[3]

Due to the differences in the assumptions and methodology (including about spill-overs, reforms and the types of spending), the results of this stylised assessment cannot be directly compared to the numbers reported in chapter 4 of France’s RRP.

^[1] RRF amounts to roughly 90% of NGEU, which also includes ReactEU, Horizon, InvestEU, JTF, Rural Development and RescEU.

^[2] Technically, the low productivity scenario considers a significantly reduced output elasticity of public capital.

^[3] Varga, J, in 't Veld J. (2014), “The potential growth impact of structural reforms in the EU: a benchmarking exercise”, European Economy Economic Papers no. 541.

http://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp541_en.pdf.

The recovery and resilience plan submitted by France includes measures aiming at addressing social and employment challenges, identified in previous country reports, country specific recommendations and monitored through the Social Scoreboard (see Box 3). These measures are likely to have a medium impact with regards to the strengthening of social cohesion and social protection system, including through policies for the youth, by reducing social vulnerabilities, contributing to the implementation of the principles of the European Pillar of Social Rights in these areas and contributing to improving the levels of the indicators of its Social Scoreboard.

To address increasing risks of exposure to poverty or social exclusion in the context of the COVID-19 crisis, the French plan dedicates financial support to workers whose activity has been negatively affected by the crisis through access to training and adequate employment guidance. Access to up-and re-skilling will also be improved through the implementation of a digitalisation strategy, and additional investments will be implemented to support digital inclusion and the improvement of the population's basic digital skills. The plan is also expected to address the challenge of energy poverty for tenants of social housing through investments in infrastructure.

The plan will invest in measures aimed at improving the inclusiveness of education and therefore access to higher education and the labour market integration of the youth. Such measures include investments in favour of early school leaving prevention, academic guidance and support. The plan will also target young people in initial education through hiring subsidies for apprentices and the creation of additional places in the tertiary and vocational education system. Labour market integration of students will also be improved through measures aiming at improving the coordination between universities and the business environment. The plan is also expected to address the challenge of the labour market integration of young people neither in employment nor in education or training through targeted employment and social guidance and hiring subsidies for young people, including through work-study programmes. A limited focus will be given to young people living in urban deprived neighbourhoods, through reinforced financial support in subsidised contracts.

More broadly, jobseekers are also supported by a time-limited reinforcement of the main public employment service, *Pôle Emploi*. An increase in resources enhances its capacity to cope with the impact of the economic crisis on the number of jobseekers while it implements its new strategy, including the new diagnostic and guidance methodology, and the expansion of the combined employment and social guidance planned in the context of the national strategy to prevent and fight poverty.

Overall support specifically targeted at vulnerable groups other than young people is low compared to other investment areas of the plan. This holds inter alia for people with a migrant background, especially women, low-work intensity and single-parent households, children and atypical workers, particularly affected by the crisis. A notable exception are investments in favour of persons with disabilities and elderly people. **Significant investments will be made in healthcare, long-term care and their digital transformation.** Projects to support better integration of healthcare and cooperation between hospitals and outpatient care, as

well as to reinforce community health centres, will strengthen cohesion and access to care, including in underserved regions including the outermost regions. Investment in digital service infrastructure, the interoperability and security of software, in equipment and the roll-out of nation-wide eHealth services – including namely the electronic health record (*dossier médical partagé*) and the electronic health data space (*espace numérique de santé*) – can improve resilience, accessibility and efficiency of care. The French recovery and resilience plan is also expected to strengthen suicide prevention by the creation of a national suicide prevention number and a corresponding messenger service. Significant investment is furthermore planned for the modernisation of French long-term care (mainly elderly homes) and hospital infrastructure, but their effect on social and territorial cohesion will depend on the conditions and geographical location of the projects. *Reducing vulnerability and increasing resilience*

Investment measures in the recovery and resilience plan, in particular in the areas of digitalisation and research and innovation are expected to entail positive effects on total factor and labour productivity and thus on overall potential growth. They should translate into an improvement in French competitiveness via a higher contribution of net exports to growth. In this regard, the French plan addresses directly one the main vulnerabilities and imbalances of the French economy, namely low competitiveness in a context of low productivity growth.

The reform of the public finance governance framework and the quality of public spending should enhance the resilience of the French economy by allowing a wider fiscal space. The reduction of public expenditure and debt would provide France with a wider fiscal space to adopt countercyclical policies to offset eventual negative shocks on activity and employment. This is key to enhancing the resilience of the French economy.

The French recovery and resilience plan contains many measures aiming to improve the resilience of several economic and social structures and institutions. The industrial sector benefits from dedicated measures that will prepare it to the climate and digital transitions, helping it to fit in the economy of the future. The COVID-19 crisis and the disruption of global value chains unveiled weaknesses of the global economy and a risk of dependence on crucial raw materials, components or equipment in the EU. The French government set industrial sovereignty and resilience as priorities of action. Several measures of the plan, such as significant investments in innovation, green and digital transitions, should help businesses acquire a higher degree of autonomy concerning processes, energy, raw materials, value chains, and expertise.

The healthcare system, whose limits have been tested by the COVID-19 pandemic, also benefits from significant resilience-enhancing measures. The plan devotes EUR 6 billion on investment in modernisation (including digitalisation and infrastructures) and reforms. Elderly care also benefits from important reforms and investments.

In the area of employment, the main public employment service, ‘Pôle Emploi’, will be reinforced through the temporary recruitment of additional counsellors and an associated reform of its service offer (component 8). It should help mitigate the impact of the crisis on

employment and reinforce the structure in the longer term. In coherence with this investment and reform, the unemployment benefits reform will introduce new eligibility rules and a new calculation methodology which is likely to improve the resilience of the system in time of crisis. In addition, the reform of the short time work scheme has the potential to improve the resilience of the French labour market, by helping firms adjust quickly to a changing economic context.

In the area of education and training, investments will finance digital equipment in the secondary and tertiary education system (component 7). Investments are also planned in the digitalisation of the training offer and material for unemployed persons (component 8), which will ensure pedagogical continuity in hybrid and/or digital forms in times of crisis.

Public research institutions will be reinforced in the long term with the 2021-2030 research programming law. It aims at enhancing public funding for research and innovation, strengthening public-private linkages and boosting the attractiveness of public research careers. It targets annual spending on research and development of 3% of GDP by 2030, including a public expenditure target of 1% of GDP. The national research agency is also refinanced to increase its project funding capacity, which should allow the French research ecosystem to be better positioned to tackle the challenges of the future.

Support to the cultural and creative sectors, strongly affected by the crisis, will preserve employment and develop economic resilience.

Finally, several governance institutions will be reformed to improve their resilience and agility. In particular, the plan proposes a decentralisation effort (giving more power to local communities and decentralised administrations) via the 4D law and a reform of the public service.

Cohesion and convergence

Cohesion is well addressed in the French recovery and resilience plan since it constitutes, with green transition and competitiveness, the third priority of the recovery plan. The cohesion part is made of components 8 and 9, dedicated to employment, education, youth, vocational training, research, health, digital connectivity and support to territories including rural areas.

The plan aims to strengthen territorial cohesion through investments in digital connectivity and digital inclusion measures. The plan also provides for investments in the green transition and energy renovation throughout the territory, including through investment support for local and regional authorities. The same applies to investments in transport (rail, daily mobility). Investment in health infrastructure and institutions is also spread throughout the territory. The plan includes investments for the renovation of hospitals and long-term care institutions. The ongoing reform of the healthcare system is adapted to the needs revealed by the COVID-19 crisis. A reform of care for the elderly and independent living is under preparation.

These investments will be accompanied by reforms at territorial level. The 4D draft law (decentralisation, de-concentration, differentiation, de-complexification) seeks, inter alia, to transfer additional powers from the State to territorial communities in some policy areas

(ecological transition, transport, housing, social cohesion and health), with specific competencies to be transferred on a voluntary basis, i.e. differentiated by territorial community. By “de-complexifying”, the draft law also seeks to consolidate crisis management measures, with streamlined decision making to increase the resilience of public policy. The “right to differentiation” concerns a draft constitutional law that would similarly transfer powers to local territories, for example in roads or water management, upon the request and initiative of those territories.

Conclusion

Taking into consideration all reforms and investments envisaged by France, its recovery and resilience plan is expected to have a high impact on strengthening the growth potential, job creation, and economic, social and institutional resilience of France, on contributing to the implementation of the European Pillar of Social Rights, including through the promotion of policies for children and youth, and on mitigating the economic and social impact of the COVID-19 crisis, thereby enhancing the economic, social and territorial cohesion and convergence within the Union. This would warrant a rating of A under the assessment criterion 2.3 in Annex V to the Recovery and Resilience Facility Regulation.

Box 3. Employment and social challenges in light of the Social Scoreboard accompanying the European Pillar of Social Rights.

Social Scoreboard for FRANCE						
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24) (2020)					
	Youth NEET (% of total population aged 15-24) (2020)					
	Gender employment gap (2020)					
	Income quintile ratio (S80/S20) (2019)					
	At risk of poverty or social exclusion (in %) (2019)					
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64) (2020)					
	Unemployment rate (% population aged 15-74) (2020)					
	Long term unemployment (% population aged 15-74) (2020)					
	GDH per capita growth (2019)					
	Net earnings of a full-time single worker earning AW (2019)					
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction (2019)					
	Children aged less than 3 years in formal childcare (2019)					
	Self-reported unmet need for medical care (2019)					
	Individuals' level of digital skills (2019)					
Critical situation	To watch	Weak but improving	Good but to monitor	On average	Better than average	Best performance
Update of 29 April 2021. Member States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the Joint Employment Report 2021; NEET: neither in employment nor in education and training; GDH: gross disposable household income.						

The Social Scoreboard supporting the European Pillar of Social Rights points to a comparatively good performance of France overall, while some employment and social challenges persist. The COVID-19 crisis put an end to the overall improvement in labour market conditions observed since 2016. The unemployment rate rose from below 8% at the onset of the pandemic to 8.7% in Q3 of 2020. The significant measures taken by the French government, and in particular the long-term and short-term partial unemployment schemes, effectively supported workers and firms affected by the crisis. In-work poverty is low, but labour market segmentation persists. The risk of poverty or social exclusion (AROE) and income inequalities (S80/S20) are below the EU average. However, vulnerable groups remain at a disadvantage in the labour market and face greater social risks, amplified in the context of the crisis.

The employment situation of young people and vulnerable groups is a challenge. Already prior to the crisis, in 2019, the unemployment rate was high for the youth (19.5% vs. 15% for the EU) and vulnerable groups such as non-EU born (18.2% vs. 14.9% for the EU). The COVID-19 crisis risks further aggravating these challenges, with the youth unemployment rate already increased to 20.2% (16.8% in the EU) and the rate of NEETs at 11.4% (11.1% in the EU) in 2020. These challenges combine with skills mismatches and high inequalities in the education system. The labour market is highly segmented with a high share of workers on temporary contracts (15.3% vs 13.6% EU), particularly hit by the crisis, and one of the lowest levels of transitions from temporary to permanent contracts in the EU (12.0% in 2019).

The level of poverty remains below the EU average, but the crisis may fuel the slow increase observed over the past years (from 17% in 2017 to 17.9% in 2019, against the general EU trend). Similarly, material and social deprivation continued to rise (13.1%) and was above the EU average (12.4%). In the context of the crisis, poverty is of particular concern, in particular for vulnerable groups including the youth, low skilled, non-EU born, single-parent households and people on temporary contracts. Severe housing deprivation of tenants is high (9% vs. 6.3% for the EU).

The French plan includes significant investments to address the challenge of labour market integration of young people through targeted hiring incentives, including for apprenticeship contracts, and reinforced guidance provided by the public employment service, which also benefits more broadly all unemployed. It is also addressing the challenge upfront through early school leaving prevention measures and the creation of additional places in the tertiary and vocational education system. Besides the youth, the plan has a more limited targeting on other vulnerable groups or deprived areas and addresses to a limited extent the impact of socio-economic inequalities on the educational outcomes of pupils.

The plan also foresees significant investments in health and long-term care. Besides improving the systems' resilience, effectiveness and efficiency, they also have the potential to further strengthen access to care.

Workers affected by the COVID-19 crisis are being provided with up- and re skilling opportunities in line with current and future skills needs, fostering their mobility on the labour market in the long term, particularly in the perspective of the twin-transition and contributing to addressing the challenge of skills mismatches. The training offer is however less accessible to atypical workers, particularly affected by the crisis, and there is no specific targeting on the low qualified, who tend to have a lower access to the training offer.

The exposure to social risks of some vulnerable groups is not directly addressed in the plan, nor is its potential impact on child poverty. This concerns the low-skilled, people with a migrant background (particularly women) and single parent households, workers on temporary contracts and atypical workers. The challenge of access to affordable housing in the context of an above-average level of severe housing deprivation is not directly addressed either.

4.4. The principle of ‘do no significant harm’

France’s recovery and resilience plan includes a systematic assessment of each measure against the principle of ‘do no significant harm’ (DNSH), for each of the six environmental objectives within the meaning of Article 17 of the Taxonomy Regulation. While France’s assessment often stresses the environmental and climate benefits of measures in this assessment, especially as regards the ‘green’ components 1 to 4, it also provides information allowing to assess that measures will comply with the ‘do no significant harm’ principle – for instance by providing reassurance that the implementation of the existing EU and French legislative framework will prevent any significant harm, or by indicating that any measure that could have had a significant impact has been carved out from funding under the Recovery and Resilience Facility. For instance, for the ‘Support to demand for clean vehicles’ measure (component 3), France justifies compliance with the ‘do no significant harm’ principle by indicating that the ‘ecological bonus’ for light-duty vehicles is only available for the purchase of an electric, hydrogen or plug-in hybrid vehicle with CO₂ emissions below or equal to 50 g/km. To justify that the ‘Forests’ measure (component 2) complies with the ‘do no significant harm’ principle, France’s assessment makes reference to the commitment to integrate biodiversity-related criteria in forest management plans by 2021³¹.

For some measures where calls for projects or calls for interest are still necessary to select specific projects in the future, ensuring adherence with the ‘do no significant harm’ principle will require introducing specific safeguards, in particular in the milestones associated with each measure, to monitor the implementation of the measures. This is the case, for instance, for ‘programmatic’ measures such as calls for projects to promote innovation, which will be organised in the context of the fourth ‘*Programme d’Investissements d’Avenir*’ (PIA4). Four investment measures are mentioned in the Plan, in component 4 (‘Innovate for the green transition’), component 6 (‘Innovating for the resilience of our business models’ and

³¹ As part of the ‘roadmap on the adaptation of forests to climate change’ and of the ‘commitment charter between the State and stakeholders of the forest and wood sectors’ adopted in December 2020.

‘Supporting innovative businesses’), and component 9 (‘Support teaching, research, development and innovation ecosystems’). These measures typically rely on the adoption of framework strategies (‘acceleration strategies’) to define a tailored set of calls for projects or calls for interest, to mobilise private and public investors to engage in innovation actions in the most suitable way in relation to each specific ‘acceleration strategy’. In this context, keeping the appropriate flexibility for the definition of these strategies implies that it is not yet possible to know in detail the technical contents of these measures, and as a result to guarantee that measures will comply with the ‘do no significant harm’ principle.

To address this situation, provisions and milestones associated to these measures provide that appropriate criteria will need to be introduced in the terms of reference of the calls for projects or calls for interest, when they are developed following the adoption of the ‘acceleration strategy’. The terms of reference will ensure that all projects selected under these calls comply with the ‘do no significant harm’ principle, by preventing activities that could do significant harm to environmental objectives (e.g. activities related to fossil fuels, waste landfills and incinerators) from being selected as part of the calls.

Similar safeguards will need to be built into the provisions and milestones for other measures, including the support scheme for the aeronautics sector. Both sub-measures proposed (support to R&D, and an investment support fund) will rely on calls for projects. While these measures can support the green transition of the aeronautics sector, they need to be appropriately framed to avoid supporting conventional aircrafts based on fossil fuels. To ensure that the sub-measure ‘investment support fund to promote companies’ diversification, modernisation, and digital and environmental transformation’ complies with the ‘do no significant harm’ principle, aircraft operators (in particular airports and airlines) will be explicitly excluded from the calls for projects under this sub-measure. In addition, future terms of reference for upcoming calls for projects under both sub-measures will also need to include as an eligibility criterion that selected measures shall contribute to the green transition.

Safeguards have also been introduced for measures included in the Plan that could potentially lead to investments being made in installations falling within the scope of the EU Emission Trading System (ETS). This is the case in particular for the measure on the ‘decarbonisation of industry’ in component 2, but also for abovementioned innovation measures in the framework of the PIA4. To comply with the ‘do no significant harm’ principle, the terms of reference for upcoming calls for projects for these measures need to ensure that greenhouse gas emissions following the investment end up below the relevant benchmark³² for free

³² Where the activity supported achieves projected greenhouse gas emissions that are not significantly lower than the relevant benchmarks an explanation of the reasons why this is not possible should be provided. Benchmarks established for free allocation for activities and installations falling within the scope of the Emissions Trading System, as set out in the Commission Implementing Regulation (EU) 2021/447.

allocation relevant to the activity concerned. To that end, it has been necessary to reflect this requirement in the relevant provisions and milestones.

Conclusion

Taking into consideration the assessment of all the measures envisaged, no measure for the implementation of reforms and investments projects included in France's recovery and resilience plan is expected to do significant harm to environmental objectives within the meaning of Article 17 of Regulation (EU) No 2020/852 (the principle of 'do no significant harm'). This would warrant a rating of A under the assessment criterion 2.4 in Annex V to the Recovery and Resilience Facility Regulation.

4.5. Green transition

Climate target

The recovery and resilience plan mostly follows the methodology for climate tracking in accordance with Annex VI to the Regulation, by identifying intervention fields and corresponding coefficients for the calculation of support to climate change objectives. The table in Annex 5.1 presents the detailed application of the climate tracking methodology. It should be noted that:

- the proposed reform measures do not have any associated cost within the plan. In this context, the plan does not identify intervention fields for them, and they do not contribute to reaching the climate target.
- the measures of the plan often consist of several sub-measures – for most measures where that is the case, the plan indicates an intervention field for each sub-measure, and provides a weighted average of contribution to the climate target for the whole measure, which corresponds to the appropriate methodology.
- in some cases where such a breakdown was not provided, where the intervention field remained unspecified or insufficiently justified, leading to an overestimation of the climate contribution, the Commission had to attribute a different intervention field, applying a conservative approach in case of uncertainty. The assessment below reflects this approach.
- the plan does not propose any increased climate coefficients for any measure.

Overall, the recovery and resilience plan contributes to climate objectives for 46.0% of France's allocation of EUR 39.4 billion, and as such, the climate target of 37% is met with a significant margin.

Some measures with large amounts make a particularly significant contribution to the climate target:

- Energy renovation measures for public buildings (EUR 3.8 billion as part of component 1) make a very significant contribution to the objective by being tracked with a 100% coefficient due to the high energy performance of these renovations (achieving, on average, at least a medium-depth level renovation as defined in Commission Recommendation on

Building Renovation (EU) 2019/786, through a gain in primary energy demand of at least 30%, and as such qualifying for intervention field 025bis). Other building renovation measures are sometimes tracked with a 100% climate coefficient (renovations of private buildings and social housing as part of component 1) due to their high expected energy performance, and sometimes with a 40% climate coefficient (part of the measures in component 9 on the renovation of health-related buildings and residential homes for older people that correspond to building renovation works and not to small investments) where energy efficiency is not the main objective of the measure.

- The railway measure in component 3 (the biggest measure of the Plan at EUR 4.39 billion) is very largely tracked with a climate coefficient of 100%. Intervention field 068 applies to two sub-measures consisting in reconstructing or modernising railways that are part of the ‘TEN-T comprehensive network’, resulting in a 100% coefficient for a total amount of EUR 3.55 billion. Sub-measures that relate to other railways (more local railways than the TEN-T comprehensive network) contribute with a climate coefficient of 40% under intervention field 069. Finally, the sub-measure on the development of alternatives to glyphosate for the cleaning of tracks does have a positive environmental effect, but does not contribute to the climate objective.
- Still in component 3, measures relating to the shift to clean vehicles (support to clean vehicles demand, and greening of the State car fleet, for a cumulated amount of EUR 1.14 billion) have been tracked with a 100% climate coefficient as regards electric light-duty vehicles, and a 40% coefficient as regards plug-in hybrid vehicles³³. Where information on the repartition between various types of vehicles was not available, such measures have been tracked with a 40% coefficient.
- The decarbonised hydrogen measure in component 4 has been tracked with a 100% climate coefficient for a significant amount of EUR 1.925 billion, as it promotes the production and use of hydrogen produced from renewable sources or low-carbon hydrogen produced from the electricity grid.
- The support scheme for the aeronautics sector in component 4 (total amount of EUR 1.486 billion) has only been tracked with a 100% climate coefficient for the part of the R&D support sub-measure that corresponds to direct support to low-carbon aircraft (i.e. 70% of the sub-measure’s EUR 1.37 billion), as only this part qualifies for intervention field 022 (‘Research and innovation processes, technology transfer and cooperation between

³³ The ‘Methodology for climate tracking’ annexed to the Recovery and Resilience Facility Regulation does not set out intervention fields that would allow for climate or environmental tracking of electric vehicles or plug-in hybrid vehicles, except for vehicles for urban transport falling under intervention field 074. According to Article 18(4)(e) of the Regulation, the methodology should however ‘be used accordingly for measures that cannot be directly assigned to an intervention field listed in Annex VI’. In this context, the Commission has applied a 100% climate contribution coefficient for zero-emission vehicles of all categories (this includes battery electric and fuel cell/hydrogen-powered vehicles); a 40% climate contribution coefficient for plug-in hybrid light-duty vehicles; and, in line with the criteria under the Taxonomy Regulation, a 100% climate coefficient for low-emission heavy-duty vehicles.

enterprises focusing on the low carbon economy, resilience and adaptation to climate change'). The aeronautics modernisation fund has been tracked with a 0% climate coefficient, absent a justification on the precise breakdown of the fund's expenses between green and other projects.

- Finally, for the 'green innovation' measure as part of the '*Programme d'Investissements d'Avenir*' (PIA4) in component 4 (for a total amount of EUR 1.7 billion), the climate contribution remains significant but was recalculated to take into account the specific expected contribution of each of the seven planned 'acceleration strategies'.
- It should also be noted that in component 2, the EUR 140 million sub-measure on the incorporation of recycled materials could not be tagged with a 100% climate coefficient, in the absence of a justification that this sub-measure complied with the efficiency criterion mentioned in the Regulation to justify eligibility for intervention field 045bis.

Green transition

The recovery and resilience plan puts a significant focus on the green transition, with four components (components 1-4) dedicated to environmental and climate action, for a total contribution from the Facility of EUR 20.2 billion. The proposed actions are in line with the context of the European Green Deal, and put in perspective both the environmental and economic benefits of the green transition to foster recovery and resilience. The Plan addresses many significant challenges France is facing as regards the green transition (cf. Section 2.3.1).

On the reform side, the recovery and resilience plan puts forward the proposed 'Climate and Resilience Law' as a key upcoming reform to underpin the green transition. This proposed law follows up from a wide-ranging consultation associating 150 randomly-selected citizens, with the aim of contributing to the greenhouse gas emissions reduction target for 2030. This law is of critical importance to advance France's climate and environmental objectives. According to the impact assessment study³⁴, the Law should secure achievement of between half and two-third of the way to be covered between in 2019 and the target for 2030 in terms of greenhouse gas emissions reduction, thanks to a reduction estimated between 56 and 74 million tonnes of CO₂ equivalent. In addition to this structuring Law, the revision of the thermal regulation of new buildings (RE2020) will make a significant contribution to the French 2030 target. The plan also mentions France's new 'green budgeting' system as a useful reform to increase transparency on how public spending contributes to the green transition.

Climate and energy

³⁴ Cf. impact assessment study (in French): <https://www.legifrance.gouv.fr/contenu/Media/Files/autour-de-la-loi/legislatif-et-reglementaire/etude>.

A significant part of the investments proposed in the recovery and resilience plan focus on the climate and energy transition. They aim to contribute to France's 2030 targets and to its transition to climate neutrality by 2050. The proposed measures of the plan follow up on and are consistent with the orientations outlined in France's National Energy and Climate Plan (NECP), although they focus prominently on certain challenges, in particular on energy efficiency of buildings and sustainable mobility, thus addressing the two biggest greenhouse gas emitting sectors – transport and buildings – with a dedicated component each (components 3 and 1). By contrast, the development of renewable energy production, which is also a significant element of the NECP, appears modestly in the measures of the plan, while renewable energy consumption will be boosted by a number of measures, for instance dedicated to hydrogen, transport or decarbonisation of industry, making the parallel development of additional renewable capacity even more crucial. The third biggest emitting sector, agriculture, also benefits from some investments, but to a lesser extent (one measure in component 2 and R&D as part of component 4's '*Programme d'Investissements d'Avenir*' measure).

The recovery and resilience plan dedicates a full component (component 1) to the energy renovation of buildings, contributing to tackling associated challenges with a broad, cross-cutting approach. Measures cover all types of buildings, with a prominent amount for public buildings (for a total recovery and resilience facility funding of EUR 3.8 billion), but also significant actions for the renovation of the private building stock, of social housing, and to increase the energy efficiency of SMEs. These actions generally follow up on actions already undertaken by France through previous policy instruments, thus accompanying an increase in scope and scale of the renovation effort, also with the aim of developing a wider professional know-how to underpin renovations at a larger scale. The component also contains a significant reform on the thermic regulation of new buildings (RE2020), which is considered key to enshrine good practices in the domain. However, some actions (such as addressing 'thermal sieves' to fight energy poverty, and promoting in-depth renovation), while present in the plan, will need to be further scaled up in the future³⁵. Actions to promote energy efficiency are also complemented by measures aiming to reduce industrial greenhouse gas emissions thanks to more energy efficient industrial processes (notably through electrification) and investments in renewable heat, transport, as well as R&D on green technologies (respectively in components 2, 3 and 4).

The recovery and resilience plan does not contain direct support measures to promote renewable energy deployment, but lays the ground for ambitious action to develop a decarbonised hydrogen value chain, which will increase renewable energy demand. France, which is set to miss its 2020 renewables target, likely by at least 5 percentage points, indicates that policies to develop renewable energy are organised through other means than the plan,

³⁵ Castellazzi, L., Zangheri, P., Paci, D., Economidou, M., Labanca, N., Ribeiro Serrenho, T., Zancanella, P. and Broc, J., Assessment of second long-term renovation strategies under the Energy Efficiency Directive, 2019, JRC114200, JRC114200. <https://publications.jrc.ec.europa.eu/repository/handle/JRC114200>

including via green bonds ('OAT vertes'). Only some measures include renewable energy aspects as a secondary point, notably actions to promote the integration of renewable energy generation through building renovation (component 1), and some administrative simplifications in the context of the ASAP law (component 5). On the other hand, France's plan includes a full-fledged measure to promote the development of decarbonised hydrogen (component 4), partly based on renewable electricity, and partly based on electricity from the grid. Following up on France's 2020 Hydrogen Strategy, and largely in line with the Commission's own 2020 Hydrogen Strategy, this measure includes taking part in planned Important Projects of Common European interest (IPCEI), to support research and first industrial deployment for the hydrogen value chain. It also includes setting up a new support scheme based on operating aid to promote the generation of decarbonised hydrogen. This and the electrification measures planned for road transport (component 3) and industrial decarbonisation (component 2) reinforce the need for parallel development of matching renewable energy generation capacity.

The recovery and resilience plan includes some actions to develop energy infrastructures (component 3), notably by reinforcing the resilience of electric distribution networks in rural areas and developing charging stations for electric vehicles, which is welcome, although with little specificity as regards detailed targets. The plan does not, however, contain measures to improve cross-border electricity interconnections – France indicates that projects to that end are underway outside of the context of the Recovery and Resilience Facility, in particular with Ireland and Spain.

The recovery and resilience plan aims to promote sustainable mobility through a range of investments, covering various means of transport in a comprehensive way. Component 3 features actions to address the main challenges of the sustainable mobility transition, by promoting the development of infrastructures across cleaner transportation modes (rail transport, charging stations, reserved lanes for low-emission road transport, waterways), as well as through actions to accelerate the electrification of road transport and to incentivise the purchase of zero- and low-emissions vehicles through bonuses. The key action in this component (and the biggest of the whole Plan at EUR 4.39 billion) is the railway measure, including a EUR 4.05 billion plan to support investments to modernise the railway network, through the recapitalisation of SNCF Réseau, the railway infrastructure manager in France. Component 4 also contains a measure to promote the transition of aeronautics towards lower-emission aircrafts by dedicating EUR 1.37 billion to R&D in the sector. Finally, the plan mentions the mobility law, which has reformed the transport sector to support its shift towards climate objectives.

The recovery and resilience plan aims to increase resilience towards climate change. Component 2 includes several measures of adaptation to the negative impact of climate change, for instance measures adapting and improving the resilience of vulnerable forest stands to the impact of climate change, measures to reduce vulnerability in areas impacted by natural disaster (e.g. risk prevention and disaster resilience in overseas areas). Investments in clean water and sewage networks also contribute to the preservation of water resources and prevent scarcity during drought periods.

The recovery and resilience plan does not include measures to remove harmful fuel subsidies or increase environmental taxation. Such measures require a careful design to address consequences on all groups in society, and ensure social fairness, but, if designed well, they can significantly support a fair and inclusive green transition. In general, the measures of the plan do not address specifically the social fairness aspects of the climate and energy transition (although component 1 does include measures to support energy renovations for poorer households and in social housing, contributing to eradicating energy poverty).

Environmental policies

The recovery and resilience plan contains useful actions to accelerate the transition towards a circular economy, by increasing available funding to invest in waste sorting centres and recycling infrastructures (component 2). This should support France in implementing its national circular economy roadmap and in reaching its waste management objectives. Other measures will support the plastics value chain to foster a reduction in single-use plastics and the integration of recycled plastics into new products.

The recovery and resilience plan includes dedicated measures to support biodiversity protection and restoration, within component 2, addressing various aspects of biodiversity policies through a range of actions on water and ecological continuity in rivers, as well as enhancing protected areas. The plan is also expected to contribute (component 2) to the fight against artificial conversion of soil, with measures dedicated to the reduction of the environmental impact of urbanisation (through densification of housing in tensed urban areas) and to the reconversion of brownfields. Indirectly, such measures also support biodiversity conservation, knowing that in France only 28% of the species of community interest and 22% of the habitat types of community interest are in favourable conservation status. Component 2 also features measures related to sustainable management of forests in order to maintain carbon sinks, timber resources and other environmental services provided by forests – in the context of this measure, France has mentioned the commitment to integrate biodiversity-related criteria in legal forest management plans by 2021. In the field of agriculture, the development of the national production of vegetable proteins aims to contribute to the fight against global warming by developing a national supply source of vegetable plant proteins for animal and human consumption, thus making it possible to reduce the imports of proteins and contributing to the fight against imported deforestation.

The recovery and resilience plan's measures will indirectly contribute to improving air quality, although no measures are specifically dedicated to this objective. France needs to improve the situation on air quality, especially in larger agglomerations and in the context of court cases. However, the plan should essentially contribute to improving the situation indirectly, mostly through actions to shift mobility away from fossil-based transport modes (component 3), and by investing in industrial decarbonisation and buildings renovation (components 2 and 1 respectively).

Lasting impact

Most measures described in the recovery and resilience plan are expected to have a lasting impact towards the green transition. They will contribute to concrete action to renovate buildings, progressing on the necessary action to improve the energy efficiency of the bulk of the existing building stock, between now and 2050. They will also support the development of long-lasting energy and transport infrastructure, which will underpin the deployment of renewable energy as well as low-emission mobility in the coming decades. Finally, a number of actions are forward-looking R&D actions (*Programme d'Investissements d'Avenir*, development of hydrogen) with a potential to support longer-term evolutions necessary to achieve the transition to climate neutrality. On the other hand, some measures, such as the renewal of the State's vehicle fleet, while supporting to a certain extent the market uptake of clean vehicles, will have a more limited long-term impact.

Conclusion

Taking into consideration the assessment of all the measures envisaged, the recovery and resilience plan is expected, to a large extent, to make a significant contribution to the green transition or to address the challenges resulting from it and ensures that at least 37% of its total allocation contribute to the climate target. This would warrant a rating of A under the assessment criterion 2.5 in Annex V to the Recovery and Resilience Facility Regulation.

4.6. Digital transition

The recovery and resilience plan mostly follows the methodology for digital tracking set out in Annex VII to the Regulation, by identifying intervention fields and corresponding coefficients for the calculation of support to the digital objectives, for each investment measure. The table in Annex 5.1 presents the detailed application of the digital tagging methodology. It should be noted that:

- The proposed reform measures do not have any associated cost within the recovery and resilience plan. In this context, the Plan does not identify intervention fields for them, and they do not contribute to reaching the digital target.
- The measures of the Plan often consist of several sub-measures – for measures where that is the case, the Plan indicates an intervention field for each sub-measure and provides a weighted average of contribution to the digital target for the whole measure.
- Where the intervention field remained unspecified or insufficiently justified, leading to an overestimation of the digital contribution, the Commission had to attribute a different intervention field, applying a conservative approach in case of uncertainty. The assessment below reflects this approach. In particular, the Commission applied a correction on several youth employment measures where sufficient justification as to their digital contribution was lacking (intervention field 099). The contribution of the investment in the aeronautics sector was also revised downwards due to the lack of justification provided for the “modernisation” sub-measure.
- The plan does not propose any increased digital coefficients for any measure in case of linked reform.

Overall, the recovery and resilience plan contributes to digital objectives for 21.32% (EUR 8.4 billion) of France’s allocation of EUR 39.4 billion, and as such, the digital target of 20 % is considered to be met.

Some measures make a significant contribution to the digital target:

The digitalisation of health (component 9), the support to innovation in the *Programme d’Investissements d’Avenir* (component 6), and the digitalisation of the State and territories (component 7) account for more than half (EUR 4.3 billion) of the overall digital contribution of the French plan and are all tagged 100% digital.

- The **digitalisation of health** (component 9) aims at accelerating the development of digital tools in the health sector. It consists of four sub-measures. (i) State digital infrastructure in the field of health shall accelerate the deployment of State information systems: the shared medical record, the digital health platform, one-stop shop for all digital services for healthcare professionals, electronic identification cards for healthcare professionals. (ii) Interoperability and safety of the software used by the public and private healthcare sectors aims at upgrading the existing software already used in the public and private sector to make them compatible with the interoperability and security requirements imposed by the State. (iii) Support to the deployment of software and their integration with existing systems and support for healthcare professionals and users to enhance the take-up of new solutions. (iv) The digital catch-up of the long-term care sector aims at equipping long-term care facilities with digital infrastructure such as internet connections, computers and software.
- The **support to innovation** in the *Programme d’Investissements d’Avenir* (component 6) “Innovating for the resilience of our business models” has the objective of supporting investment for the development of key digital technologies. It shall finance, more specifically, projects falling under six strategies: (1) development of quantum technologies, (2) cybersecurity, (3) education technologies, (4) cultural and creative industries, (5) 5G and future telecommunications technology, and (6) cloud.
- The **digitalisation of the State and territories** (component 7) shall identify digital innovative approaches allowing for an improvement of the efficiency of the public action and the quality of the working environment of public officials, including for e-mobility. To this end, a “Public Agent Digital Backpack” Fund for projects shall modernise the workstation of State. The funded projects shall fall under five themes: increased performance of data transport networks; development of federated digital identification for State officials, of secure remote access solutions to digital tools; of unified communication solutions at the interministerial level and support for the appropriation by managers and teams of digital working methods. In addition, an “Innovation and digital transformation Fund” will support high-impact digital initiatives within the State and local authorities, while supporting the digital sector. The funded projects shall fall under eight themes: quality dematerialisation of the administrative procedures most used by citizens and businesses; new natively digital public policies; development of best digital practices born in local State services; professionalise public digital sectors; develop the use of data in the service of public action; study and experiment with the use of emerging

digital technologies and approaches; digital transformation of local authorities; support structuring projects mobilising multiple transformation levers.

Digital transition

Actions to support the digital transition are present in several components of the recovery and resilience plan, each responding to the digital challenges of the specific sector or area covered by the component. The recovery and resilience plan dedicates components 6 to 9 to the digital transition, contributing to tackling associated challenges with a broad, cross-cutting approach. Measures cover fundamental research, innovation, deployment of new technologies, digitalisation of the State, of the territories, of SMEs, schools and universities, investments to increase cybersecurity, increase digital skills of the labour force, and improve digital connectivity, electronic identity and eHealth. The digital investments have the potential to contribute to the attainment of the Digital Decade targets and the digital government commitments under the Berlin Declaration on Digital Society and Value-based Digital Government. Investments are also consistent with the EU cybersecurity strategy, with funding for automated solutions to detect cyber-attacks.

Connectivity

Investments in connectivity are crucial to ensure that all citizens can access basic services online and benefit from an enriched, accessible and secure digital space, preventing social exclusion. The Plan includes an investment to boost connectivity in rural areas with an allocation of EUR 240 million (component 9). This sum contributes to a larger effort to improve connectivity under the ‘France Très Haut Débit’ plan, supported by national funds to the tune of EUR 3.3 billion. The objective set in the recovery and resilience plan is to reach 100% Fibre-to-the-Home (FTTH) coverage by 2025 on the basis of the State aid decision THD³⁶. This investment has the potential to contribute significantly to the digital transformation of economic and social sectors, as it is expected to appropriately address existing shortcomings in terms of current total fibre-to-the-home coverage. Fast broadband (Next Generation Access) coverage reached 69% in 2020, improving by 7 percentage points, but it still remains well below the EU average of 87%.

Investments in connectivity are also foreseen for the implementation of 5G and new networks of communication strategy adopted in February 2021 (component 6). This strategy aims to develop French solutions around telecommunications networks, for technological sovereignty and to achieve end-to-end control of these solutions (sovereignty over exploitation) through support for supply, R&D and training. The measures planned have the potential to contribute to the targets set by the Digital Decade Communication, aiming at having all European households covered by a Gigabit network and all populated areas covered by 5G, by 2030.

³⁶ Decision C(2016) 7005 final, 7.11.2016, State aid SA.37183 (2015/NN) – France Plan France Très Haut Débit, OJ C 68, 3.3.2017.

Digital-related investment in R&D

Investments foreseen in digital R&D are expected to address structural shortages, increase the overall level of investment and simplify provisions for cooperation between public and private sector researchers. The recovery and resilience plan foresees support to R&D investment in digital areas, increasing the budget for R&D projects via the National Research Agency and supporting the preservation of employment in private research. This action is estimated to contribute to the digital objective, as from the past records more than 40% of projects selected through competitive calls concerned digital areas, from fundamental research on algorithms, to the use of digital technologies (e.g. sensors and modelling) to fight climate change.

Human Capital

The recovery and resilience plan includes significant investment to support education and employment, including specific interventions for digital skills development. The latter will support the implementation of a comprehensive strategy for the digitalisation of education, in particular for primary and secondary schooling, including an enhanced use of platforms and digital technologies for pedagogical purposes (component 7). The digitalisation of the Ministry of National Education has the potential to contribute to the resilience of the organisation of the compulsory education system and better administrative exchanges within the education community. In addition, EUR 304 million will be devoted to the digitalisation of training platforms for life-long learning. These measures have the potential to improve the resilience of the education and training systems, when matched with appropriate training for teaching staff and with measures to ensure that all students can take part to the new learning environment.

Specific investment is dedicated to digital inclusion, with the aim to provide citizens with basic digital skills, necessary to have access to online public services, thereby contributing to preventing social exclusion. In addition, the recovery and resilience plan includes a complementary allocation to the individual learning accounts for training 25 000 people in digital skills or digital professions. Finally, a dedicated action aims at supporting the development of digital education ecosystems (component 9) at all levels of education, from primary school to universities, encouraging the development of structural partnerships between educational and research institutions and businesses. These partnerships can be particularly relevant if implemented in the digital area because they offer students the possibility to use state-of-the-art technologies in their training and ensure that the school curricula are in line with the rapidly changing demands of the labour market. This action has the potential to improve the education offer and to facilitate technology transfer, thus contributing to increasing the international attractiveness of French educational institutions.

Budget allocated to these measures will be complemented by national resources, as part of the “France Relance” plan. Measures to improve skills, in particular digital ones, can contribute to addressing France’s structural issues related to the persistent lack of digital skills among the French population and contribute to reaching the Digital Decade target of 80% of EU citizens with basic digital skills by 2030 and 20 million information and communication technologies specialists.

The recovery and resilience plan dedicates several investments to the digitalisation of the State and of the territories (component 7). The health crisis has demonstrated the need to accelerate the digital transformation of the public service: employee workstations that meet the challenges of performance and safety, collaborative and nomadic tools, dematerialisation of State services to offer all French people, whether they are agents or administrators, simpler and more efficient online services. These investments will also support e-Identity (eID) deployment, with the objective of delivering up to 12.5 million national digital identity cards in 2023. In addition, it will support the development of an application interacting with electronic title chips to allow online authentication for the holder. A budget of EUR 136 million is devoted to cybersecurity, to strengthen public services whose disruption would have a strong detrimental impact on citizens. It also supports innovation competitions to develop an efficient and competitive cybersecurity offer and local centres able to respond to cybersecurity challenges. These investments address the current challenges related to the delivery of cross-border e-Identity services, for which France scores below the EU average and at the same time will improve the overall security of the digital services. These investments, when accompanied by measures to strengthen the user-centric approach, are expected to have a lasting impact.

Significant investments (component 9) in eHealth will support the national digital health services infrastructure and project management. They will also cover software updates to interoperability standards, upgrades or new software, the integration, transformation and sharing of data. These measures underpin the introduction and establishment of two flagship projects of digital health in France: the health record and the electronic health data space. These measures will have an impact in terms of promoting better exchange and access to different types of health data, such as electronic health records, genomics data, and data from patient registries. This is particularly useful not only to support healthcare delivery, but also for health research and health policy-making purposes. This investment will also contribute to increasing the share of healthcare prevention expenditure, which has traditionally been among the lowest in the EU (1.86% in France in 2017 compared with 3.1% in the EU).

Digitalisation of businesses

Concerning the digitalisation of businesses (component 7), the recovery and resilience plan builds on existing initiatives such as ‘France Num’, with the objective of increasing the digitalisation of 200 000 SMEs by 2024 while providing employees with the necessary support to manage the transition to digital technologies. Despite progress accomplished over the past years, the percentage of companies having high levels of digital intensity in France (13.4%) remains below the EU average (15.4%) (DESI 2021 figures). These measures address this challenge by strengthening the support to SMEs willing to digitalise, through local and personalised support. In the implementation phase, concrete support to SMEs will be needed in terms of advisory and access to digital infrastructure (such as cybersecurity, cloud computing and data infrastructure). Organisations such as the Digital Innovation Hubs can help to achieve a sustainable and successful digital transformation. Investments in industrial SMEs and mid-caps through upscaling and supporting their medium and long-term digitalisation strategy with the

adoption of new technologies (virtual reality, robotics, numerically controlled production machines, artificial intelligence) have the potential to boost productivity over the long term.

Investment in digital capacities and deployment of advanced technologies

The recovery and resilience plan supports a number of actions for the deployment of key digital capacities, mainly through the *Programme d'Investissements d'Avenir* (component 6). The areas targeted include cybersecurity, 5G, quantum, as well as digital education and cultural and creative sectors. In particular, EUR 350 million will be devoted to implementing the cybersecurity strategy, launched by the French government on 18th February 2021. This strategy aims at strengthening the State's digital security and safety, as well as to help businesses and citizens increase their cyber-awareness and ensure that they can benefit from a secure digital environment. Investments planned in the recovery and resilience plan aim at increasing by more than three times the turnover of the cybersecurity value chain, doubling the number of employees in the sector and supporting the emergence of three unicorns by 2025. The investment in the area of quantum computing will focus on the development of the first prototype of quantum computer, training 6600 doctors, masters, engineers and technicians and ensuring France's self-sufficiency in its supply of resources to the development of quantum technologies. Investments in key digital capacities will strengthen French technological sovereignty and resilience in strategic domains, they are in line with the commitment taken by France in different EU initiatives.

Green transition and ICT

The Plan includes investment to use digital technologies in support of the transition to the green economy in key markets. Resources will be dedicated among others to the digitalisation of the mobility sector, the roll-out of sustainable farming systems and the decarbonisation of industry. In addition, the roadmap published in February 2021 includes a number of existing and new measures, such as the establishment of an environmental barometer for digital actors or the support for artificial intelligence projects for ecology. These measures are in line with the EU's ambition to achieve a successful green and digital transition and are key to ensuring a sustainable recovery.

Planned Important Projects of Common European interest (IPCEI)

The French recovery and resilience plan mentions France's participation to two planned digital Important Projects of Common European interest: one on next generation cloud and edge computing, for which France is co-coordinator, and the other on microelectronics and communication technologies, both co-funded via the '*Programme d'Investissements d'Avenir*'. These are expected to contribute to increasing Europe's digital leadership in future data processing and communication technologies, including electronic components and systems, and next generation cloud and edge services and infrastructures, based on core EU values and rules, and making the most of the interoperability solutions and frameworks. This will also

contribute to reducing strategic dependencies along complex, global supply chains, from innovative industrial research to the first industrial deployment of advanced technologies, infrastructure and services.

Conclusion

Taking into consideration the assessment of all the measures envisaged, the recovery and resilience plan is expected, to a large extent, to make a significant contribution to the digital transition or to address the challenges resulting from it and ensures that at least 20% of its total allocation contribute to support digital objectives. This would warrant a rating of A under the assessment criterion 2.6 in Annex V to the Recovery and Resilience Facility Regulation.

4.7. Lasting impact of the plan

According to the French authorities, the impact of the investments included in the EUR 40 billion of the recovery and resilience plan would support activity to the extent of 0.7 percentage points of GDP at its peak in 2021, without taking into account the potential additional impact of structural reforms. In the environmental realm, the plan is also expected to reduce greenhouse gas emissions by 60 million tonnes. These estimates should be seen in the context of the broader France Relance plan. Over the period 2020-2025, the EUR 100 billion plan “France Relance” is estimated to lead to a GDP increase of around 4 percentage points of GDP, also including the spillovers from the recovery and resilience plans of other EU Member States. In the long term, the plan is expected to raise GDP by 0.9 p.p. compared with a scenario without the plan. This effect would be mainly due to the cut in production taxes, investment in infrastructures, and measures aimed to bolster the skills of the labour force, the digital transition and the innovation system, with a positive impact on long-term productivity and labour force employability. Beyond strengthening competitiveness, the investments in the plan are also expected to strengthen social and institutional resilience, especially of the healthcare system. Likewise, by fostering employment in areas linked to R&D, the plan is also deemed to strengthen the capacity for innovation.

The implementation of investments and reforms planned by France in its recovery and resilience plan is expected to bring about structural changes in a number of areas and to have a significantly positive impact on the economic, social and institutional resilience of the country. The envisaged investment in technologies, innovation (green technologies, digital, health), skills and in the digital transition embedded in the plan are meant to entail a beneficial and long-lasting effect on productivity and therefore on potential growth of the French economy. In particular, they are expected to enhance the resilience and productivity of SMEs, while also providing accurate incentives for innovative firms.

The measures aimed to increase employability, particularly of youth, will also carry a positive effect on potential growth in the long-term, mainly through the labour component.

The plan encompasses large-scale investments in skills and the integration of young people into the labour market. This youth employment policy is both significant in its scope and likely to have a lasting impact through its expected effects on employment and social inclusion. Measures to promote youth employment and training, including those furthest away from employment, should facilitate the labour market integration of young people and counteract the structural rise in unemployment. Vocational training policies are also undergoing significant structural changes, following reforms undertaken since 2018. Resources devoted to upskilling the workforce are considerably increased, notably through the coupling of short-time work schemes with vocational training and geared towards the green and digital transition. Training schemes conditional on state support for short-time work schemes aims to upskill 170 500 employees. A major effort is also planned to digitalise vocational training and strengthen the support capacity of Public Employment Services (Pôle Emploi and France Competences). Finally, the unemployment benefit system reform is expected to strengthen incentives to work for employees and to discourage the excessive use of very short-term contracts by employers that are detrimental to labour productivity.

With the recovery and resilience plan, France is reaching a turning point in its digital development policy. While France had already invested in improving connectivity throughout the territory ('France Très Haut Débit' plan), the French plan will provide the means to continue and expand this objective, thereby increasing coverage and widening access to fast fixed and mobile networks. Beyond that, large-scale public investments are planned for improving skills, including digital ones, not only of young people, but also of the overall workforce. Investments will also foster the digitalisation of public services, administrations and businesses, as well as the digitalisation of healthcare, vocational training, education and culture. The increased focus on the development and deployment of key digital capacities, also via the implementation of multi-country projects, is expected to have lasting effects. Widening connectivity though the length and breadth of the country, along with the measures devoted to social digital inclusion will also have a positive lasting impact on social and territorial cohesion provided investments are targeted to regions the most in need. This support to the digital transition is also deemed to bring about a positive, long-lasting effect on productivity and competitiveness.

Green transition policies contained in the first four components of the plan should put France on the path towards a substantial and sustainable reduction in greenhouse gas emissions by acting mainly on two of the most emitting sectors: buildings and transport. The massive energy efficiency renovation plan for buildings encompassing public buildings, private and social housing as well as health facilities will make a substantial contribution to this objective. In turn, the development of efficient alternatives to road transport and the transition of the automotive sector to clean vehicles are also likely to have a lasting impact in contributing to the fight against climate change. Major investments in the hydrogen sector (be it in production or in its applications in transport, industry and in the production and storage of decarbonised energy) are also expected to lead to long-term emission reductions. Beyond these investments,

the climate imperative will be taken into account within public spending throughout the budgetary procedure (green budgeting). So far, France is one of the very few countries to have introduced an innovative approach for classifying public expenditure according to their environmental impact. The green transition is also supported by specific reforms (e.g. Climate and Resilience Law, based on an extensive citizen consultation process, the thermal regulation of new buildings, Law on waste and circular economy, Mobility Law).

The resilience, effectiveness and accessibility of the health sector is expected to be strengthened through the implementation of the national reform strategy for the healthcare system, investments in infrastructures (investments in the renovation and modernisation of hospitals and long-term care institutions) as well as in health research and digital development. The plan provides support for the development of key health markets (digital health, biotechnologies, biomedical research, bio-production of innovative therapies) in order to develop health knowledge and improve medical practices. A particular effort is being made to develop digital health and telemedicine (EUR 2 billion). Beyond health policy, a policy on long term care is being developed with the creation of a new branch of social security covering the risk of loss of autonomy in order to improve the provision of long-term care for the elderly and persons with disabilities both at home and in medical and social institutions.

Investment is planned to support the transformation of higher education institutions. As investment in higher education institutions has high spill over effects that prove beneficial to the economy and society as a whole, incentivising the transition of these institutions to excellence, increasing the diversification of resources and their role in the innovation chain should have a lasting impact.

The French recovery and resilience plan will support technological sovereignty and competitiveness and ensure the resilience of the economy in the long term. It can be achieved by prioritising strategic sectors that have demonstrated to be key, particularly in the current crisis, such as digital, health, education, cultural and creative industries. This resilience will be ensured by more investment in the innovation capacity of these sectors, from the research infrastructure to the deployment on the market.

Institutional changes are taking place in the civil service and in the organisation of local and regional authorities, along with the modernisation and digitalisation of public services. The transformation of the public service reform aims at a better management of human resources promoting labour mobility, gender equality and encouraging the professional insertion of young people and those with disabilities. In addition, the plan foresees significant investment in digitalisation of central and local administrations, schools and health institutions. A further step is being taken in reforming the organisation of local authorities (Law ‘4D: *décentralisation, différenciation, déconcentration & décomplexification*’). At territorial level, local authorities wishing to do so will adopt contracts for recovery and environmental development with the State, with concrete action plans and quantified and measurable targets in the areas of housing,

transport, green transition and health. The Recovery and Resilience Facility will also lead France to engage in a more systematic assessment of public policies through performance indicators monitored over time in order to measure the impact of investments.

The proposed reforms in the areas of the public governance framework and the quality of public spending are expected to contribute to enhancing the efficiency of public spending while putting public debt on a downward path. However, the extent to which these reforms can pose a useful contribution to debt reduction critically depends on the parameters defining the multiannual expenditure rule, which have not been detailed. If these reforms proved instrumental to reinforcing public debt sustainability and to providing more fiscal space to offset negative shocks, they should also entail a positive impact on long-term growth.

Conclusion

Taking into consideration all reforms and investments planned by France in its recovery and resilience plan, their implementation is expected to bring about a structural change in relevant public policies and to have a positive long-lasting impact. This would warrant a rating of A under the assessment criterion 2.7 in Annex V to the Recovery and Resilience Facility Regulation.

4.8. Milestones, targets, monitoring and implementation

Adequacy of the structure tasked with the implementation of the plan, monitoring of progress and reporting

The implementation, monitoring and reporting process of the French recovery and resilience plan is ensured at the highest level of the French Government by the “Monitoring National Committee”, attached to and chaired by the Prime Minister. This Committee is composed of representatives of local and regional authorities, public administrations Directors, economists, Members of Parliament, as well as social partners representatives. Its role is to ensure a swift implementation of “France Relance” and consequently the French recovery and resilience plan, which is a sub-part of it as far as investments are concerned. It met in October 2020 to launch the monitoring exercise and again in February 2021 to take stock of the progress made.

In addition to the high-level political steering process, the implementation of France Relance is administratively led by the Ministry of Economy, Finances and Recovery, in close cooperation with the General Secretariat of European Affairs (SGAE) concerning the recovery and resilience plan, as the EU-funded part of France Relance. The General Secretariat of European Affairs is coordinating central administrations involved in the plan, and is supported in the implementation and monitoring process of the plan by the “General Secretariat in charge of the Recovery Plan” (the “Recovery Secretariat”), specifically created for

the purpose of France Relance and directly attached to the Prime Minister and the Minister of Economy, Finance and Recovery. The Recovery Secretariat is monitoring the implementation of the plan at the level of each measure, in close cooperation with regional prefects and Heads of each Ministry.

In parallel with the monitoring carried out at national level, the regional and local prefects (i.e. State representatives in the regions and “départements”) are in charge of the territorial implementation, with the assistance of deputy-prefects specifically appointed to monitor the implementation of the national recovery plan. Regional monitoring committees, placed under the authority of the regional prefects, are integrated by decentralised State services at regional and local levels, local and regional authorities’ representatives and social partners. Such committees have been set up in each region in order to monitor the progress of projects on the ground, and to identify and resolve any sticking point. They also have to report back on the implementation of each measure of the plan to the Recovery Secretariat on a monthly basis.

Regarding the reforms presented in the recovery and resilience plan, their implementation is subject to specific monitoring by each Ministry concerned. Attached to each Minister, an advisor is specifically responsible for monitoring, implementing and reporting on the reforms included in the recovery and resilience plan. The inter-ministerial coordination is ensured by the General Secretariat of European Affairs, which will be in charge of collecting, together with the Ministry of Economy, Finance and Recovery, the supporting documents demonstrating the achievement of the milestones of the reforms planned under the recovery and resilience plan (adoption of laws, publication in the Official Journal, entry into force, adoption of implementing documents, reports).

The achievement of the targets and milestones related to investments will be subject to regular and centralised monitoring by the Recovery Secretariat, on the basis of information collected and reported by the public administrations concerned. A “referent” has been appointed for each measure (defined as the smallest sub-investment described under each investment of each component) within the organisation responsible for its implementation (Directorate of a Ministry, public operator such as the Environment and Energy Agency (ADEME), French Biodiversity Office (OFB), National Housing Agency (Anah), General Secretariat for Investment (SGPI), Bpifrance). In particular, the “referent” will provide information, generally on a monthly basis, on the progress of the indicators chosen as milestones and targets in a dedicated IT collection tool (Propilot), set up by the Recovery Secretariat. These data will be collected at local level and centralised at national level, and will be used to report on the achievement of milestones and targets under the recovery and resilience plan. The Recovery Secretariat will extract them from the IT tool “Propilot” and send them to the Budget Directorate of the Ministry of Economy, Finance and Recovery at regular intervals in order to finalise payment requests to be sent to the European Commission.

Responsibility for the implementation of the measures has been entrusted to each Ministry by the Ministry of Economy, Finance and Recovery by means of a management delegation agreement. These agreements specify that each Ministry must strictly comply with reporting obligations, which implies that each Ministry sets out within its scope the internal control system defined by the Ministry of Economy, Finance and Recovery. Verification, inspection and audit missions will be organised to ensure the effectiveness of these systems and to control the quality of the data transmitted, following the validation made by the internal budget and accountant controllers (CBCM). This process will attest the reality, exhaustiveness, correct evaluation and appropriate budgetary allocations and commitments of each payment request sent to the Ministry of Economy, Finance and Recovery.

The system put in place by French authorities will therefore ensure a close monitoring of the implementation of the recovery and resilience plan and a robust reporting on the achievements of milestones and targets to the Commission.

Milestones, targets and indicators

The number of milestones and targets as well as their overall quality are deemed satisfactory. The French recovery and resilience plan includes a set of 175 milestones and targets (reforms will be monitored by 33 milestones and 7 targets, investments by 36 milestones and 98 targets, and one milestone is included for control and audit procedures).

Milestones and targets tracking the implementation of reforms are clear and realistic. For reforms taking the form of a new legal act (law or implementing act), the milestone is the entry into force of the new piece of legislation, capturing the actual implementation of new provisions. Other milestones set for reforms are based on the achievement of decisive steps in the implementation process, such as the setting up of a new administrative body with new competences and missions, the state of play of the first pilot experimentation, or the publication of a report presenting concrete elements for a new policy framework in a given field. Such milestones are clear and realistic as they reflect decisive steps towards the complete implementation of a specific reform, which is captured by a final milestone or target. In addition, the main elements and objectives of the planned reforms are described in detail, enabling a thorough monitoring of the expected outcome of each reform.

The performance of investments will be mainly captured by the achievement of targets monitored by each public entity in charge of implementing the measures, although some milestones are also foreseen, usually for the earlier stages of implementation. For measures for which the volume of investment is high and/or whose implementation is spread over several years, the targets chosen reflect the launch of the investment project (for example with the selection of beneficiaries through a call for tenders), then the result of the works undertaken, quantified by a specific indicator (for example, the number of km of networks, the number of tons of greenhouse gas avoided, the number of people trained). For investments based on future calls for tenders with dedicated budgetary envelopes, considering that it is not possible to

estimate ex ante the final number of beneficiaries, final milestones are based on the completion of the calls and financing decisions permitting the funds to be contracted.

The level of ambition for targets related to investments reflects for the most part the costing estimates, while taking into account potential risks of delays in the implementation of each measure. All in all, the level of ambition for the targets proposed is high, reflecting the ambition of French authorities in terms of climate, environment, competitiveness and social cohesion, and supported by an appropriate risk assessment which makes them realistic and achievable under the timeframe proposed. In addition to the upstream identification of risks in achieving the milestones and targets, the General Secretariat of European Affairs will coordinate with responsible entities the necessary corrective actions to address those risks and meet the targets.

Concerning the robustness of the underlying indicators for milestones and targets, data will be collected by the implementing public body responsible of the measure, following a verification process (cf. sub-section above) ensuring the reliability and accuracy of the data.

Overall, milestones and targets proposed in the French plan are realistic, ambitious and granular enough to monitor the performance of the investments and reforms planned under the plan.

Overall organisational arrangements

The General Secretariat of European Affairs will play a crucial role in the implementation of the recovery and resilience plan. It will work in parallel to the national organisation set up to implement and monitor progress of France Relance (i.e. the General Secretariat in charge of the Recovery working in cooperation with the responsible Ministries under the aegis of the Ministry of Economy, Finance and Recovery). The General Secretariat of European Affairs will supervise and coordinate the different Ministries involved as well as the public operators in charge of specific measures. The interministerial competence acquired by the General Secretariat of European Affairs is a strong asset, given its role as point of contact for the Commission as the “coordinator” and managing authority.

The strong supporting role allocated to the Ministry of Economy, Finance and Recovery, and in particular to the Treasury and the Budget Directorate, is a guarantee that the administrative capacity required will be mobilised to ensure an appropriate monitoring of each measure under each component of the plan. Furthermore, adequate supervision and quality control procedures will be ensured by the Ministry of Economy, Finance and Recovery which will sign management delegation agreements with each Ministry. As indicated above (in the first sub-section under 4.8.), these agreements will be signed after verification of the reporting and control mechanisms in place in each Ministry, therefore ensuring the reliability and quality of data transmitted on the achievement of milestones and targets.

Conclusion

The arrangements proposed by France in its recovery and resilience plan are expected to be adequate to ensure effective monitoring, implementation and reporting on the recovery and resilience plan, including the envisaged timetable, milestones and targets, and the related indicators. This would warrant a rating of A under the assessment criterion 2.8 in Annex V to the Recovery and Resilience Facility Regulation.

4.9. Costing

The cost description generally provides a breakdown of costs for the investments with references to earlier similar projects or to studies carried out to justify the cost figures. For the many demand-driven measures, such as the '*Programme d'Investissements d'Avenir*' measures or other investments based on calls for proposal, a milestone or target about passing all legal hurdles for committing or contracting the funds has generally been included. France submitted the table on costing included in the standard template, though some information, notably on comparative costing data, has not been filled in. France has not provided an independent validation for any of the cost estimates proposed. There are some shortcomings in the costing description for certain measures such as the description and justification of costs not covering all sub-measures, no calculations being provided for arriving at the total cost; or supporting documentation, in case reference is made e.g. to studies or past projects, in some cases not being provided. With more systematically complete information, explanations on costing would have benefited from additional robustness.

Reasonable costs

To support their cost estimates, France provided a source for its estimates of unit costs (where pertinent) and gave adequate explanations on the methodology used for establishing the cost for a clear majority of measures. The assumptions underlying the cost figures are sound and there are no grounds for doubting the estimates provided. An issue concerns measures consisting of several sub-measures, where the methodology for allocating costs to each sub-measure is not always entirely clear. For a small number of measures, no calculations for arriving at the total cost are provided, or those calculations do not reconcile to the requested funding or the associated milestones or targets. Depending on the significance of the shortcomings identified, these measures are assessed as having low or medium reasonability. Overall, the shortcomings above in the costing information affect only a minority of measures.

Plausible costs

The amount of the estimated total costs of the recovery and resilience plan is in line with the nature and type of the envisaged investments. Costing information is generally backed by expert analysis or previous experience. For some measures, clear explanations were missing as to how the past projects presented or studies carried out as the basis for the estimates were used or adjusted to arrive at the cost estimates presented. Without these explanations, it is difficult to verify in those cases without reasonable doubt how some of the documentation provided fits into the cost breakdown. For other measures, the supporting documentation was not provided.

The French recovery and resilience plan also contains a number of measures that are demand-driven: they have a certain budget that is to be allocated on the basis of calls for interest or calls for proposals. An ex-ante cost assessment of these measures inevitably has limitations, since it is not always knowable beforehand what will precisely be achieved. In these cases, France generally provided justification, by reference e.g. to the budgets or volume of applications of similar previous programmes, showing that the costs are not disproportionate to the size of the sectors concerned. These measures are assessed as having a high plausibility of cost. Overall, the shortcomings in the costing information affect only a minority of measures.

No double Union financing

France has indicated for nearly all measures whether other Union financing is planned, and, if it is, that the corresponding costs will not be covered by the recovery and resilience Facility. Further details could have been provided on the demarcation between funds, for those measures which are similar to a priority also funded under cohesion policy (e.g. renovation of buildings) or by the Just Transition Fund (decarbonisation) or by the EAFRD. However, given the strong governance between EU funds and control systems described in the Plan, any risk of double funding has been further mitigated. Further details on the arrangements are provided under section 4.10.

Commensurate and cost-efficient costs

The recovery and resilience plan is expected to be commensurate to the expected social and economic impact of the envisaged measures. The measures are expected to effectively help address a significant subset of challenges identified in the European Semester, including the country-specific recommendations (CSRs), fiscal aspects thereof, and recommendations made under the Macroeconomic Imbalances Procedure. Furthermore, the reforms and investments in the plan are aligned with the European ‘flagship initiatives’ of the 2021 Annual Sustainable Growth Strategy. All seven flagship initiatives are covered by the Plan. This is described in more detail in Section 4.2.

Moreover, the recovery and resilience plan contains measures to support economic growth and economic cohesion in an inclusive manner. This refers in particular to addressing weaknesses of the French economy, boosting growth potential, stimulating job creation, and mitigating the adverse effects of the crisis. Several of these measures also contribute effectively to the implementation of the European Pillar of Social Rights, including through the promotion of policies for children and youth. This is described in more detail in Section 4.3.

Conclusion

The justification provided by France on the amount of the estimated total costs of the recovery and resilience plan is to a medium extent reasonable, plausible, in line with the principle of cost-efficiency and is commensurate to the expected national economic and social impact on the economy.

France provided sufficient information and evidence that the amount of the estimated cost of the reforms and investments of the recovery and resilience plan to be financed under the Facility is

not covered by existing or planned Union financing. This would warrant a rating of B under the assessment criterion 2.9 of Annex V to the Recovery and Resilience Facility Regulation.

4.10. Controls and audit

Robustness of internal control system and distribution of roles and responsibilities

The Plan describes in an appropriate way the system for the implementation of the Recovery and Resilience Facility in France. At central government level, the Minister of Economy, Finance and Recovery (MEFR) is responsible for steering the recovery plan, in permanent consultation with the General Secretariat for European Affairs (SGAE). The Plan is monitored by the “Secrétariat Général France Relance” attached to the Prime Minister and the MEFR. The implementation is delegated to the Ministries by means of “conventions de délégation de gestion” and “chartes de gestion”.

With regard to the internal control system, the authorities in charge of the Recovery and Resilience Facility will rely on the national system in place in France to control the national budget. The “Commission interministérielle de Coordination des Contrôles” (CiCC) is appointed as the national audit and control coordinator. The national regulatory framework represents a robust internal control system whereby clear roles and responsibilities are allocated to the competent actors.

The controls on the milestones and targets are delegated to the Ministries in charge of the implementation of the components through the “convention de délégation de gestion”. This delegation of responsibility implies that each ministry sets out within its scope the internal control system defined by the Ministry of the Economy, Finance and Recovery. Verification, inspection and audit missions will be organised to ensure the effectiveness of these systems and to control the quality of the data transmitted for the most significant measures. The “conventions de délégation de gestion” detail the budget allocation, while the management and verifications to be carried out by the line ministries will be featured in the “chartes de gestion”, still under development.

With regard to audit, the French plan indicates that the audit summary will be prepared based on the reports produced by the various control bodies (internal and external). No further details are provided on how these various bodies will report to the CiCC in order to allow the CiCC to draw up this audit summary. The CiCC’s audit approach for the ESI Funds combines three types of audits, with a strong emphasis on system audits, to ensure that management and control systems in place are adequate. Further horizontal or thematic audits will then be organised on the basis of the risk assessment. An audit strategy tailored to the specificities of the Recovery and Resilience Facility will still need to be drawn up. A circular signed by the Prime Minister will further detail the elements relating to:

- The system organisation and the obligations of each structure in terms of ensuring reliability and control of data

- Procedures for collecting and storing data on monitoring indicators

Adequacy of control systems and other relevant arrangements

France has put in place measures with the view to protecting the Union's financial interests. France has adopted already in 2016 a national strategy to combat fraud against European funds, and disposes of several actors in the fight against fraud: MICAF (“Mission interministérielle de coordination anti-fraude”), AFA (“Agence française anticorruption”), DGFIP (“Direction générale des finances publiques”) and “le Haut-conseil pour la transparence de la vie publique”.

The data on final beneficiaries as set out in Article 22 of the Recovery and Resilience Facility Regulation will be collected through the existing financial information system Chorus, the procedures for which will be further detailed in the circular of the Prime Minister. In accordance with the Regulation, all the standardised categories of data set out in Article 22(2)(d) shall be collected.

In this context, prevention and control activities, with a view to minimising risks of fraud, are carried out through training, monitoring and ex post controls.

Adequacy of arrangements to avoid double EU funding

France has put in place adequate arrangements to avoid double EU funding. These arrangements are based on:

- An adequate level of coordination between the competent services and the authorities managing the EU funds in France;
- Since the issue of coordination between the recovery and resilience facility and the other European funding sources mainly concerns cohesion policy funds, the “Agence nationale de la cohésion des territoires” (ANCT), as the interfund coordinating authority, identified the measures that could be financed by several funds (recovery and cohesion), and developed a methodology for separating ex-ante the funding streams according to four criteria: a temporality criterion, a thematic criterion, a beneficiary criterion and a territorial criterion. The ANCT will continue to ensure this coordination after the submission of the recovery and resilience plan, the partnership agreement and the 2021-2027 European programs and as long as potential overlaps are identified.
- Adequate mechanisms to avoid double funding between the national and regional levels of implementation;
- Adequate procedures within the financial information system of the State allowing flagging the funds, several axes of analysis will be mobilised in order to follow the expenditure;
- The controls and audits of the various control and audit bodies: as part of their missions, the audit and control authorities will be responsible for ensuring the absence of double financing

Legal empowerment and administrative capacity of control function

The “Commission interministérielle de coordination des contrôles » (CiCC) is appointed as the national audit and control coordinator. The CiCC aims to protect the financial interests of the European Union in France. With its own power of control, it ensures that European funds are used in accordance with Union and national rules. It also has a mission to prevent and sanction fraud. There is however no information in the Plan on the legal empowerment and the administrative capacity of the CiCC to exercise their roles and tasks in relation to the recovery and resilience facility. The controls on the milestones and targets will require new expertise and staffing, but the Plan does not elaborate on how the French authorities will tackle this challenge.

The Responsibility for the implementation of the measures has been entrusted to each Ministry by the Ministry of the Economy, Finance and Recovery by means of a management delegation agreement. This delegation of responsibility implies that each ministry sets out within its scope the internal control system defined by the Ministry of the Economy, Finance and Recovery.

Furthermore, the implementation of the Recovery and Resilience Facility will rely on the control actors in place within the French national system.

Conclusion

France’s plan describes in an appropriate way the system for the implementation of the recovery and resilience facility in France. The plan is monitored by the “Secrétariat Général France Relance” attached to the Prime Minister and the Minister of Economy, Finance and Recovery. The implementation is delegated to the Ministries by means of “conventions” and “chartes de gestion”. With regard to the internal control system, the authorities in charge of the recovery and resilience facility in France will rely on the national system in place in France to control the national budget. The CiCC is appointed as the national audit and control coordinator.

France has provided additional information on the roles and responsibilities of actors in charge, and indicated that a circular would be signed by the Prime Minister relative to:

- The system organisation and the obligations of each structure in terms of ensuring reliability and control of data
- Procedures for collecting and storing data on monitoring indicators

Given that this circular will set out important elements of the control and audit system, which are not yet available as of the date of submission of the plan, a milestone relating to the signature of these circulars will provide further assurance and enable the European Commission to fully conclude on the adequacy of the arrangements proposed by France for the implementation and control of the funds allocated to France under the Recovery and Resilience Facility. Moreover, a report by the CiCC on the organisation of audits will set out the audit strategy envisaged, including a description of the audit work on payment claims.

Overall conclusion

The arrangements proposed by France in the recovery and resilience plan to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the

Facility, including the arrangements aimed to avoid double funding from the Facility and other Union programmes, are assessed to be adequate, provided that the milestone pertaining to the adoption of the circular and the provision of information on the organisation of audits is fulfilled in due time. This would warrant a rating of A under the assessment criterion 2.10 of Annex V to the Recovery and Resilience Facility Regulation.

4.11. Coherence

The recovery and resilience plan presented by France is structured around nine coherent components, which support the common objectives of stimulating the recovery of the French economy, contributing to the twin transition and increasing France's resilience to meet the challenges of the twenty-first century on the path of sustainable and inclusive growth.

Each component is built around consistent packages of both reforms and investments, with mutually reinforcing or complementary measures as explained hereafter.

Mutually-reinforcing measures

The second component, which aims to reduce the environmental impact of production and consumption patterns, includes a wide range of measures that consistently support the “greening” of existing production and consumption methods across sectors. The proposed investments and reforms are mutually reinforcing: the law on circular economy, adopted in February 2020 and to be implemented during 2021 and 2022, supports the investments in recycling and reuse, as well as the investments in the modernisation of waste sorting and recovery centres. Furthermore, the draft Climate and Resilience law under discussion is key for all “green components” (1 to 4), as it aims to contribute to the greenhouse gas emissions reduction target for 2030. All fields (buildings, transport, industry and agriculture) are covered and the law will aim to facilitate investments in climate mitigation and adaptation and environmental protection.

The fifth component, which aims to strengthen the equity position of SMEs, includes an investment and reform that are mutually reinforcing to support businesses, notably SMEs. The investment will support the financing of SMEs, which will in turn strengthen their competitiveness and capacity to invest, notably in digital and green projects. The reform (law ASAP - Accelerating and Simplification of Public Action) is expected to both facilitate business development and speed up certain administrative procedures, for the benefit notably of SMEs.

The sixth component, which aims to improve technological innovation, includes investments and reform that are mutually reinforcing to support R&D and innovation in strategic technologies. The investments aim at supporting research funding in strategic sectors, including space, and ensuring the preservation of R&D employment. These will be strengthened by the new research programming law for the years 2021 to 2030: it is expected to enhance and ensure predictability of public R&D funding, reform public researchers' careers and foster

public-private cooperation. As such, it is expected to reinforce the measure proposed to preserve employment in R&D.

Complementarity of measures

The first component, which aims at improving the energy efficiency of buildings, includes four complementary investments that cover a wide range of potential issues in relation to energy renovation of buildings (from public to private buildings, also with a specific focus on social housing and on SMEs' buildings). While the investments focus on the renovation of existing buildings, the component also includes a complementary reform on environmental performance of new buildings (RE2020). It is an important reform to support wider energy efficiency measures. The reform of the housing legislation includes some sub-elements, in particular the prolongation of the 'Pinel' renting investment scheme, which also support investments in rehabilitation of buildings.

The third component, which aims to invest in sustainable transport infrastructure and means of transport, includes investments with high complementarity. They cover a wide range of transport modes to ensure consistent progress across mobility policies (rail, waterways, reserved lanes, urban transport, and cars). The 2019 Mobility Law is a broad legislative initiative to update the governance and the general framework of mobility policies, with implementation measures taking place during the Recovery and Resilience Facility timeframe. It is also relevant and complementary to the investments supporting the decarbonisation of the transport sector. The component also includes the 'green budgeting' reform, implementing new methodologies in the field and which will promote investments conducive to the green transition, and is relevant for all the four "green components".

The fourth component, which aims to develop new green technologies and energy, includes complementary reform and investments related to the broad '*Programme d' Investissements d'avenir*' (PIA4). It includes a strategy for the development of hydrogen in France and investments (via the PIA4) to support the development of key markets in green technologies. The reform of the overall governance of the PIA4 aims to make the governance of the PIA4 fit for purpose for the coming years, by making its political steer more agile and efficient, with better coordination and follow-up of the wide range of investment strategies pursued under the programme. This reform is therefore also relevant to other PIA4-related measures in other fields of innovation that are presented as part of components 6 and 9. The fourth component also includes more sectoral measures in relation to energy and green technologies, namely on support to the aeronautics sector.

The seventh component, which aims to foster the digital transition, includes a set of complementary digital investments for the State and territories to make public services more efficient and more accessible. Sectoral measures are complemented with cross-cutting transformation measures aimed at fundamentally changing working methods within the administration, such as the evolution of the digital work environment for public officials. These

investments in the modernisation of the State are backed by a reform, the "4D law", which aims to transform relations between the State and local authorities: it intends to improve decentralisation, to promote differentiation and ensure that each territory has laws and regulations adapted to its specificities (de-concentration), as well as to simplify the administration ("de-complexification"). It is expected to empower those who are closest to the ground and thus best understand the reality of the public service users. This component also include investments related to cultural heritage, artistic education and support for strategic cultural sectors most affected by the current crisis which complement investments proposed under other components, to support the digital transformation of SMEs, as well as the PIA4 programme where the French cultural and creative industries are identified as key sectors for territorial growth and vibrancy. Lastly, the component includes an important reform of the public finance governance framework. It is expected to introduce a multiannual expenditure rule that should ensure consistency between the annual budget bills and the multi-year objectives, and will extend the responsibilities of the French High Council of Public Finances (Haut Conseil des Finances Publiques). A separate reform aims at enhancing the quality of public spending and introducing an annual assessment of measures taken, in compliance with the expenditure trajectory of the public finance programming law.

The eighth component, which aims to foster workers' mobility and promote the integration of all into the labour market, includes a set of measures that are highly complementary. Indeed, the renewed strategy of the public employment service, whose implementation started early 2020, is paving the way to more personalised support to job-seekers, through a new diagnosis and support methodology. This reform, combined with the additional hiring of 15 000 counsellors, to deal with the expected increase in unemployment in the coming months, should provide job seekers with tailored help and ultimately increase their chances of finding a job. The reform of the short-time work scheme will support financially firms in a changing economic context, shield workers from unemployment and foster their mobility on the labour market through access to further upskilling and reskilling, through the training opportunities financed through FNE-Formation and Pro-A. Besides these, other professional reskilling measures (AT-Pro) and training opportunities, such as the top-up of individual learning accounts should help reduce skills mismatches of the labour force and help equip employees with valuable skills. The investments in employment and youth also pursue complementary aims. For instance, several programmes aim at helping disadvantaged or NEET youth get a better start professionally. The aim of these programmes presents synergies with other measures supporting youth employment, such as the hiring subsidy for youth under 26 or the "professionalisation contracts" support, both targeting the longer term employment prospects of youth. In coherence with these youth-targeted employment measures, measures in component 8 also aim at addressing the challenges of early school leaving and access to the vocational and tertiary education system.

The ninth component, which aims to strengthen public investment in key sectors, includes complementary investments notably in the research and health sectors, accompanied by a

National Health System Reform Strategy. The investments support this strategy in a number of areas, namely, the digitalisation of care, access to care in the regions, prevention, the integration and modernisation of care. Investments in modernising long-term care are flanked by policy reforms to create a new branch of the social security system so support the autonomy of vulnerable people, namely the persons with disabilities by a draft law on autonomy and old age. Support to research and research-oriented start-ups and companies in the health sector is coherent with the measures in the health component (pandemic resilience, digital health). The investments in the digital transformation of health care are underpinned by the plan “France Très Haut Débit”.

At the plan level, all components pursue complementary aims – with no contradictory aims. The various components also provide synergies. For example, component 1 and component 8 are complementary, as the training measures (support to apprenticeships and career changes) of component 8 will contribute to component 1, by equipping the next generation of construction sector workers with the skills and knowledge needed to ensure building and renovation projects meet stringent energy efficiency requirements. The focus of component 2 on the “greening” of production and consumption is highly complementary with component 4, which focuses on the “greening” of the technologies and industries of the future. Overall, the Plan provides for a balanced mix of reforms and investments, considering the challenges to be addressed. In order to promote wider coherence across instruments, notably with the European cohesion policy funds, a balanced territorial allocation of resources is encouraged.

Conclusion

Taking into consideration the qualitative assessment of all components of France’s recovery and resilience plan, their individual weight (importance, relevance, financial allocation) and their interactions, the plan contains measures for the implementation of reforms and public investments which, to a high extent, represent coherent actions. This would warrant a rating of A under the assessment criterion 2.11 of Annex V to the Recovery and Resilience Facility Regulation.

5. ANNEX

5.1. Climate tracking and digital tagging table³⁷

Measure/ Sub-Measure ID	Measure/Sub-Measure Name	Budget (EUR m)	Climate		Digital	
			Int. Field	Coeff. %	Int. Field	Coeff. %
C1.I1	Energy renovation of private housing, including energy sieves	1404.5	025bis	100%		
C1.I2	Energy renovation and major rehabilitation of social housing	500	025bis	100%		
C1.I3	Thermal renovation of public buildings	3800	026bis	100%		
C1.I4	Energy renovation of very small enterprises (VSEs) and small and medium sized enterprises (SMEs)	120	024	40%		
C2.I1	Decarbonisation of industry	300	024	40%		
C2.I2	Urban densification: sustainable construction	350	050	40%		
C2.I3	Urban densification: brownfields	260	050	40%		
C2.I4	Biodiversity	185.5	050	40%		
C2.I7	Modernisation of sorting centres: modernisation of sorting centres for packaging and modernisation of sorting centres and for waste except packaging and recycling equipment	84	042/044	40%		
C2.I7	Modernisation of sorting centres: sorting at source, collection and valorisation of bio-waste	100	042/044	40%		
C2.I8	Recycling and reuse: reuse or repair for non-plastic products	21	042	40%		
C2.I8	Recycling and reuse: reduction, reuse and development of substitution solutions for plastic	40	042	40%		
C2.I9	Plant protein plan	70	047	40%		
C2.I10	Forests	150	037	100%		
C3.I1	Support to the railway sector: recapitalisation of SNCF Réseau - regeneration of national railways	2300	068	100%		

³⁷ While the total cost of France's recovery and resilience plan exceeds the total allocation of non-repayable financial support to France, France will ensure that all spending related to the measures mentioned in this table as contributing to climate objectives are fully financed by the funds from the Recovery and Resilience Facility.

C3.I1	Support to the railway sector: recapitalisation of SNCF Réseau - renovation of engineering structures	1250	068	100%		
C3.I1	Support to the railway sector: recapitalisation of SNCF Réseau - regeneration of local railway lines	250	069	40%		
C3.I1	Support to the railway sector: regional railway lines	300	069	40%		
C3.I1	Support to the railway sector: development of rail freight	40	069	40%		
C3.I2	Support to demand for clean vehicles: Eco-bonus for light vehicles	885	N/A ³⁸	40%		
C3.I2	Support to demand for clean vehicles: Eco-bonus for heavy vehicles (electric)	100	N/A ³⁹	100%		
C3.I3	Daily mobility: development of public transport	900	073	100%		
C3.I4	Acceleration of works on transport infrastructure: deployment of electric charging points	100	077	100%		
C3.I4	Acceleration of work on transport infrastructure: modernisation of the CROSS network & Revision of the digital system of maritime affairs	25			084	100%
C3.I5	Greening of the State's fleet: Electric vehicles	97.4	N/A ⁴⁰	100%		
C3.I5	Greening of the State's fleet: Plug-in hybrid vehicles	57.6	N/A ⁴¹	40%		
C3.I6	Greening of harbours: targeted actions in harbours (alternative fuels infrastructure part)	87.5	077	100%		
C3.I7	Strengthening the resilience of electricity networks and energy	50	037	100%		

³⁸ The 'Methodology for climate tracking' annexed to the Recovery and Resilience Facility Regulation does not set out intervention fields that would allow for climate or environmental tracking of electric vehicles or plug-in hybrid vehicles, except for vehicles for urban transport falling under intervention field 074. According to Article 18(4)(e) of the Regulation, the methodology should however 'be used accordingly for measures that cannot be directly assigned to an intervention field listed in Annex VI'. In this context, the Commission has applied a 100% climate contribution coefficient for zero-emission vehicles of all categories (this includes battery electric and fuel cell/hydrogen-powered vehicles); a 40% climate contribution coefficient for plug-in hybrid light-duty vehicles; and, in line with the criteria under the Taxonomy Regulation, a 100% climate coefficient for low-emission heavy-duty vehicles.

³⁹ See footnote above.

⁴⁰ See footnote above.

⁴¹ See footnote above.

	transition in rural areas					
C4.I1	Innovate for the green transition (PIA4): Decarbonised hydrogen	500	022	100%		
C4.I1	Innovate for the green transition (PIA4): Decarbonisation of industry	300	022	100%		
C4.I1	Innovate for the green transition (PIA4): Sustainable agricultural systems	200	047	40%		
C4.I1	Innovate for the green transition (PIA4): Recycling and reincorporation of recycled materials	150	023	40%		
C4.I1	Innovate for the green transition (PIA4): Sustainable cities and innovative buildings (decarbonisation part)	100	022	100%		
C4.I1	Innovate for the green transition (PIA4): Digitalisation and decarbonisation of mobility (decarbonisation part)	100	022	100%		
C4.I1	Innovate for the green transition (PIA4): Biobased Products and Industrial Biotechnologies – Sustainable Fuels	200	022	100%		
C4.I2	Develop decarbonised hydrogen: Support scheme for renewable and low-carbon hydrogen production	650	032	100%		
C4.I2	Develop decarbonised hydrogen: IPCEI on decarbonised hydrogen	1275	032	100%		
C4.I3	Support plan to the aeronautics sector. Support to R&D (part contributing directly to the low-carbon economy – 70%)	959	022	100%		
C4.I3	Support plan to the aeronautics sector. Support to R&D (part contributing indirectly to the low-carbon economy – 30%)	411			009bis	100%
C6.I1	Preservation of employment in private R&D digital part (40%)	120			009bis	100%
C6.I2	Innovating for the resilience of our business models (PIA4): Cultural and creative industries	300			021bis	100%
C6.I2	Innovating for the resilience of our business models (PIA4) 5G and future telecommunications technology	300			054bis	100%
C6.I2	Innovating for the resilience of our business models (PIA4) Cloud Acceleration Strategy	300			055	100%
C6.I2	Innovating for the resilience of our business models (PIA4) Quantum technologies	350			021quater	100%

C6.I2	Innovating for the resilience of our business models (PIA4)_Cybersecurity	200			021quin quies	100%
C6.I2	Innovating for the resilience of our business models (PIA4) Education and digital	350			012	100%
C6.I3	Supporting innovative businesses (PIA4) (climate-related part – 30%)	225	022	100%		
C6.I3	Supporting innovative businesses (PIA4) (digital-related part – 30%)	225			009bis	100%
C6.I4	Space Rocket launch system (digital-related part – 40%)	66			021quate r	100%
C6.I4	Space R&D projects	170			009bis	100%
C7.I1	Digitisation of companies	385			010	100%
C7.I2	Digital upgrade of the State and territories	500			011	100%
C7.I3	Cybersecurity of State services	136			021quin quies	100%
C7.I4	State digital upgrade: digital identity	30.3			011ter	100%
C7.I5	Equipment and infrastructure of the Ministry of the Interior	22.7			011	100%
C7.I6	Ministry of the Interior's applications	76.7			011	100%
C7.I7	Mobility and teleworking at the Ministry of the Interior	46.5			011	100%
C7.I8	Administrative continuity: digital upgrading of the administration of the education system	35			011	100%
C7.I9	Educational continuity: digital transformation of the school	131			012	100%
C7.I10	Developing access to higher education throughout the country thanks to digital	35			012	100%
C7.I11	Support for cultural sectors and heritage renovations. Ecological transition fund	13	026	40%		
C7.I11	Support for cultural sectors and heritage renovations. Modernisation plan for cultural higher education establishments (digital part)	5.6			055	100%
C7.I11	Support for cultural sectors and heritage renovations. Modernisation plan for cultural higher education establishments (renovation part)	64.4	026	40%		
C7.I11	Support for cultural sectors and heritage renovations. Press Sector Plan - climate part	16	022	100%		
C7.I11	Support for cultural sectors and heritage renovations. Book Sector Plan - digital part (40%)	21.2			021bis	100%

C7.I11	Support for cultural sectors and heritage renovations. Cinema Sector plan - digital part	10			021bis	100%
C8.I1	FNE-Training digital part (20%)	160			108	100%
C8.I2	Reskilling through dual training programmes (Pro-A) digital part (40%)	108			108	100%
C8.I11	Creation of places in higher education	180			099	40%
C8.I12	Plan for youth: higher education for post-baccalaureate students	76			099	40%
C8.I13	“Personalised guidance towards employment and autonomy” (PACEA) and youth guarantee	233			099	40%
C8.I17	Distance training courses (PIC)	160			011	100%
C8.I18	Digital educational content: platforms for digital content	304			011	100%
C8.I19	Additional allocation for the “Pro transitions” associations (AT pro)	100			016	40%
C8.I20	Top-up of individual learning accounts for digital skills	25			108	100%
C8.I21	Increase of resources for France Compétences (climate-related part – 40%)	300	01	100%		
C8.I21	Increase of resources for France Compétences (digital-related part – 40%)	300			108	100%
C9.I1	Digital health	2000			095	100%
C9.I2	Modernisation and restructuring of hospitals and health care supply (‘investissements structurants’ – 50%)	1250	026	40%		
C9.I3	Renovation of medico-social establishments (‘PAI immobilier’ part)	1250	026	40%		
C9.I4	National suicide prevention hotline	2.94			013	100%
C9.I5	High-speed broadband plan ("France Très Haut Débit")	240			053	100%
C9.I6	Digital Inclusion	250			108	100%
C9.I7	R&D recovery strategy (National Research Agency) (climate part – 40%)	171.2	022	100%		
C9.I7	R&D recovery strategy (National Research Agency) (digital part – 40%)	171.2			009bis	100%
C9.I8	Support teaching, research, development and innovation ecosystems (PIA4) (climate-related part – 25%)	187.5	022	100%		
C9.I8	Support teaching, research, development and innovation ecosystems (PIA4) (digital-related part – 25%)	187.5			009bis	100%

Int. Field = intervention field

Coeff. = Coefficient for the calculation of support to climate change objectives and to digital transition, on the basis of Annex VI and Annex VII to the RRF Regulation