

STUDY

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Addressing the challenges of smart, sustainable and inclusive growth in national Recovery and Resilience Plans

A preliminary assessment



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Supporting EU economic governance and EMU scrutiny



Addressing the challenges of smart, sustainable and inclusive growth in national Recovery and Resilience Plans

A preliminary assessment

Abstract

This briefing paper provides an initial analysis of selected measures proposed by Germany, France, Italy and Poland in their respective Recovery and Resilience Plans (RRPs), and focuses on the areas of competitiveness, business environment /entrepreneurship, and (re)industrialisation. As the analysis has shown, targets and milestones set for the majority of the analysed measures seem to be realistic and enhance the probability of completing the planned projects on time; they are also tailored to the needs of specific EU MS.

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LIST OF ABBREVIATIONS

ANAC	Italian National Anticorruption Authority
AODE	French public electricity distribution authorities
ASAP	French Law No. 2020-1525 on the acceleration and simplification of public action
BMWK	German Federal Ministry for Economic Affairs and Climate Action
CIE	Polish Central Pension Information
CNES	French National Centre for Space Studies
CO₂eq	Carbon dioxide equivalent
CSR	Country Specific Recommendations
DARP	German Resilience and Recovery Plan
DNSh	Do No Significant Harm principle
EASE	European Energy Storage Association
EC	European Commission
EIB	European Investment Bank
EPSR	European Pillar of Social Rights
ESA	European Space Agency
GWh	Gigawatt hours
ICPE	French installations classified as environmental protection
ICT	Information and communication technologies
ISTAT	Italian National Institute of Statistics
IT	Information technology
KPO	Polish Resilience and Recovery Plan
kWh	Kilowatt hours
MS	EU Members States
MW	Megawatt
NRRP	National Recovery and Resilience Plan
NRW	North Rhine-Westphalia
OZG	German Online Access Act
PNRR	Italian Recovery and Resilience Plan
R&D	Research and development
RES	Renewable Energy Source
RRF	Recovery and Resilience Facility
RRPs	Recovery and Resilience Plans
SMEs	Small and Medium Enterprises
OEM	Original Equipment Manufacturer (Germany)

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EXECUTIVE SUMMARY

This briefing paper provides **an initial analysis of selected measures proposed by Germany, France, Italy and Poland in their respective Recovery and Resilience Plans (RRPs)** and focuses on three areas, namely: **competitiveness, business environment/entrepreneurship, and (re)industrialisation**. These areas were clustered by the European Commission (EC) in the Recovery and Resilience Facility (RRF¹) Scoreboard² around the pillar “**Smart, sustainable and inclusive growth**, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong SMEs”.

The paper is divided into six main parts. The first provides the background for the analysis, and presents the paper’s scope and aims, as well as its main findings. The subsequent four parts present selected measures proposed and/or implemented by Germany, France, Italy and Poland in their respective RRPs in the above-mentioned areas, with a special emphasis on the associated risks. The study concludes with a set of recommendations resulting from the analysis of the chosen measures.

In accordance with the RRF Regulation³ and conclusions of the European Council of July 2020, funds from the RRF can be committed in the years from 2021 to 2023 and spent up to 2026.⁴ The deadline for the implementation of reforms and investments is August 2026. Although **targets and milestones set for the majority of the analysed measures seem to be realistic and enhance the probability of completing the planned projects on time**, activities planned by Poland have a rather long time horizon. Taking into account that as of November 2022 Poland has not yet started the implementation of its RRP, there is a risk of some of the planned activities not reaching conclusion by this deadline.

The appearance of the “black swan” in the form of changes in the geopolitical and social situation across the EU related to **Russia's aggression on Ukraine**, together with the related energy crisis and the crisis of rising costs of living, means that **the assessment of the needs presented by the EU MS in their respective RRPs can be seen from a completely different perspective**.

The analysis has also shown that changes envisaged in the RRPs relating to the functioning of public administration must go hand in hand with **adequate investments in people, equipment, training and continuing education**. There is a need to **ensure adequate administrative structures and good planning capacity** for the implementation of reforms and investments as well as **high quality of laws** on the basis of which reforms and investments included in RRPs are implemented.

¹ European Commission (n.d.). *Recovery and Resilience Facility*.

² See: European Commission (n.d.). *Recovery and Resilience Scoreboard*.

³ Regulation (EU) 2021/241 of the European Parliament and the Council of 12 February 2021 establishing the Recovery and Resilience Facility, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32021R0241&from=EN>.

⁴ European Council (2020).

1. INTRODUCTION

Background

In order to receive RRF funding, EU Members States (MS) had to draw up and present their national RRP inclusive of a set of reforms and investments. The said reforms and investments (measures) had to meet the criteria specified in article 19 of the RRF relating to **relevance, effectiveness, efficiency** and **coherence** of the Plan.⁵ The RRP were expected, among other things, to:

- Effectively address challenges identified in the relevant country-specific recommendations for MS or challenges identified in other relevant documents officially adopted by the EC in the context of the European Semester.
- Contribute to strengthening the growth potential, job creation, and economic, social and institutional resilience of the MS, and implementation of the European Pillar of Social Rights (EPSR).
- Be in line with the principle of “do no significant harm”.⁶
- Contribute to the green transition (at least 37% of the total allocation of a given RRP should be earmarked for this goal) and the digital transition (20%).

Scope of the briefing paper

This briefing paper provides an **initial analysis of selected measures proposed by Germany, France, Italy and Poland in their RRP**. More specifically, it focuses on measures relating to the areas of **competitiveness, business environment/entrepreneurship, and (re)industrialisation**. While selecting the measures to be analysed as part of this paper, preference was given to those already under implementation (as of August 2022), except for Poland, which as at the time of delivering this report (November 2022) has not yet started the implementation of its RRP. In keeping with the adopted methodology,⁷ measures cross-cutting national RRP were selected whenever possible (Table 1). Consequently, in the area of competitiveness the briefing paper focuses on **measures addressing specific sectors of the economy**, differing depending on the MS. In the area of business environment/entrepreneurship it focuses on measures tagged as “**public administration/action reform**”. And in the area of (re)industrialisation, the briefing paper concentrates on measures related to **energy systems in rural or urban areas**, with energy storage, supply and production being a common denominator.

⁵ Official Journal of the European Union (2021).

⁶ See for example: European Commission (2021b).

⁷ For the selection methodology please consult the Annex.

Table 1: Analysed measures for Germany, France, Italy and Poland

	Germany	France	Italy	Poland
Competitiveness	Investment programme for vehicle manufacturers/ supplier industry	Space sector	Integrated funds for the competitiveness of tourism businesses	Investments to diversify and shorten the agricultural and food supply chain and build resilience among actors in the chain
Business environment/ entrepreneurship	Digitalisation of the administration - implementation of the Online Access Act	Law for the acceleration and simplification of public action (ASAP)	Reform of public administration / Reform of the legislative framework on public procurement and concessions / Recovery Procurement Platform - Digitalisation and reinforcement of the administrative capacity of contracting authorities	Public e-services, IT solutions improving the functioning of administrations and economic sectors, and breakthrough technologies in the public sector, the economy and society
Industrialisation/ reindustrialisation	Investment: Municipal living labs for the energy transition	Improving the resilience of electricity networks and energy transition in rural areas	Hydrogen production on brownfield sites	Energy storage systems

Source: National Resilience and Recovery Plans of Germany, France, Italy and Poland.

The analysis was conducted on the basis of publicly available information on the respective RRP and the chosen measures. In this regard it has to be underlined that as the majority of the selected measures were still under implementation while collecting information for and drafting this briefing paper, the analysis could not be supported by referring to evaluation or closing reports.

Aims of the briefing paper

The main aims of the briefing paper were:

- To assess the extent to which the selected measures meet the specifications set out in the Council implementing decisions and in related Commission documents.
- To discuss the extent to which the underlying milestones and targets are sufficient and appropriate for monitoring progress towards achieving the measures’ stated objectives and the overall objectives of the Recovery and Resilience Facility (RRF).
- To identify risks that may stem from the chosen measures and gaps that remain unaddressed in the broad policy areas underpinning the set of measures.

2. GERMANY

2.1. Introduction

The German National Resilience and Recovery Plan (*Deutscher Aufbau- und Resilienz-plan*, DARP⁸) consists of a total of 40 measures aimed at countering the negative effects of the Covid-19 pandemic on both the German economy and society.

The DARP amounts to EUR 27.9 billion. According to the Council Implementing Decision from July 2021, Germany should receive EUR 25.6 billion in non-repayable support from the RRF. Other allocations – such as funds from the Just Transition Fund – are not indicated in the DARP.⁹ Nevertheless, according to the Commission's assessment, the plan is aligned and ensures consistency with key European and national programs and initiatives¹⁰.

Following Council approval of the plan, the EC, on 26 August 2021, disbursed EUR 2.25 billion to Germany in pre-financing, equivalent to 9% of the country's financial allocation under the RRF. The remaining 91% should be paid in five instalments once Germany has satisfactorily fulfilled the milestones and targets identified in relation to the RRF implementation.¹¹

The DARP is divided into six focus areas, and each of them consists of different components:

Box 1. The structure of the German Resilience and Recovery Plan (values represent the projected costs of each of the components).

1. Climate policy and the energy transition

- 1.1. Decarbonisation using renewable hydrogen in particular (EUR 3.26 billion)
- 1.2. Climate-friendly mobility (EUR 5.43 billion)
- 1.3. Climate-friendly renovation and construction (EUR 2.58 billion)

2. Digitalisation of the economy and infrastructure.

- 2.1. Data as the raw material of the future (EUR 2.77 billion)
- 2.2. Digitalisation of the economy (EUR 3.14 billion)

3. Digitalisation of education

- 3.1. Digitalisation of education (EUR 1.44 billion)

4. Strengthening social inclusion

- 4.1. Strengthening social inclusion (EUR 1.26 billion)

5. Strengthening of pandemic-resilient healthcare system.

- 5.1. Strengthening a pandemic-resilient healthcare system (EUR 4.56 billion)

6. Modern administration and reducing barriers to investment

- 6.1. Modern public administration (EUR 3.47 billion)
- 6.2. Reducing barriers to investment (EUR 50 million)

Source: European Commission (2021a).

⁸ European Commission (2022a).

⁹ Bundesministerium der Finanzen (2021b).

¹⁰ European Commission (2021a).

¹¹ European Parliament (2021).

The measures described in the DARP were included in the 2021 federal budget (adopted by the German Bundestag on 11 December 2020) and in the medium-term financial plan for the period up to 2024.¹²

2.2. Competitiveness

Measure name: Investment programme for vehicle manufacturers/supplier industry (included in Component 2.2)

The automotive industry is the largest sector of the manufacturing industry in Germany. In 2021, the sector's companies achieved turnover of EUR 411 billion. Vehicle and engine manufacturers play a large role in the sector, having generated more than three quarters (EUR 318 billion) of the above-mentioned sum. In turn, automotive suppliers generated almost one fifth (EUR 79.7 billion) of the industry's turnover, and body and trailer manufacturers generated about 3% (EUR 13.1 billion) of it.¹³

The measure "Investment programme for vehicle manufacturers/supplier industry" is intended **to support companies in the vehicle manufacturing and supply industry**, and in particular **small and medium-sized enterprises**. Universities and other research institutes can also participate in industry-led collaborative projects. The primary objective of the measure is **to modernise (digitalise) vehicle production and supply networks**. This is aimed at increasing the energy efficiency of production systems and meet sustainability criteria. Automotive research and innovation will also contribute to avoiding greenhouse gas emissions and accelerating the digital transformation as well as promoting the concept of sustainable mobility.

The investment programme consists of three modules:

- Module A: Digitalisation of production as a boost for productivity and resilience (EUR 427.1 million).
- Module B: New innovative products as the key to vehicles and mobility of the future (EUR 392.67 million).
- Module C: Finding joint solutions, building regional innovation clusters (EUR 232.4 million).

Module A places particular emphasis on the digitalisation of facilities, as well as on ensuring that production facilities become material- and energy-efficient as a result of environmental investments. Module B aims to support research on innovation (the development of automated and connected driving, alternative propulsion technologies, and designing vehicles for energy efficiency, etc.), as well as the introduction of new business models across the supply chain. Module C focuses on supporting new regional innovation clusters, particularly in the supplier industry.

Schemes for funding the three modules went into effect in March 2021.¹⁴ Since then, applicants have been able to submit their project ideas to the relevant administrative office.¹⁵ By June 2021, the Federal Ministry for Economic Affairs and Climate Action (BMWK), the leader of this measure, had selected the first six projects among the proposals received so far for funding as part of the programme entitled "Digitalisation of the vehicle manufacturers and supplier industry".¹⁶ The first collaborative project,

¹² Bundesministerium der Finanzen (2021a).

¹³ Bundesministerium Bundesministerium für Wirtschaft und Klimaschutz (n.d.). *Automobilindustrie*.

¹⁴ Bundesamt für Wirtschaft und Ausfuhrkontrolle (2021).

¹⁵ Depending on the main focus of the project, this would be Bundesamt für Wirtschaft und Ausfuhrkontrolle, VDI Technologiezentrum GmbH, TÜV Rheinland Consulting GmbH or Projektträger VDI/VDE Innovation + Technik GmbH.

¹⁶ Bundesministerium für Wirtschaft und Klimaschutz (2022b).

which began on 1 August 2021, was Catena-X, with a project value of about EUR 245 million.¹⁷ At its core, the project is a broad-based collaboration of suppliers and users in the automotive value chain and covers a wide range of company sizes.¹⁸ Five other cooperative projects from the first selection group were started between October and December 2021. Two more projects were selected in September and started in 2022. A total of 116 sub-projects were approved for 2021, with a value of nearly EUR 400 million and state funding of about EUR 185 million. More projects are currently pending (as of August 2022).¹⁹

Table 2: Examples of projects that received funding (Next Generation EU, state and private funds, combined)

Name of Project	Duration	Goal	Value
SDM4FZI	01.10.2021 – 30.09.2024	Development of a versatile, highly adaptable production system controlled by a break-free virtual mapping across all levels of manufacturing.	EUR 73.1 million
AdaProQ	01.10.2021 – 30.09.2024	Systemic consideration of quality assurance and efficiency enhancement across different stages of the value chain and exemplary implementation in various use cases.	EUR 19.1 million
AgiloDrive2	01.10.2021 – 30.09.2024	Development of an agile production system for the manufacture of electronic traction motors based on transparent data acquisition and use along the value chain.	EUR 34.2 million
VWS4LS	01.12.2021 – 30.11.2024	Implementation of a continuous representation of the implementation of the management shell as a digital twin across all stages of the value chain from "point zero" to the disassembly of the line set.	EUR 10.3 million

Source: Bundesministerium für Wirtschaft und Klimaschutz (2022b).

In the DARP, strategic milestones and targets have been identified to track and measure activity progress. A total of three milestones or targets have been identified:

- Milestone, Q1 2021: All funding guidelines entered into force.
 - All funding guidelines for the funding measures were published on 26 March 2021 in the Federal Gazette (*Bundesanzeiger*), and as such they became legally binding, and from then on it was possible to launch funding projects.²⁰
- Target, Q1 2023: Number of approved funding projects in 2021 and 2022.

¹⁷ Ibidem.

¹⁸ Catena-X (n.d.).

¹⁹ Ibidem.

²⁰ Bundesministerium für Wirtschaft und Energie (2021).

- A total of 401 funded projects (projects that have received a funding decision for implementation) are to be approved in Modules A, B and C in the years 2021 and 2022. The number of funded projects at the time of writing this briefing paper was not possible to establish.
- Target, Q3 2026: Number of successfully completed funding projects with RRF funding.
 - A total of 531 grant projects approved with RRF funding from 2021 to 2026 will be successfully completed (i.e. not terminated due to failure to meet targets).

2.3. Business environment/entrepreneurship

Measure name: Digitalisation of the administration – implementation of the Online Access Act, OZG (included in Component 6)

The measure “Digitalisation of the administration – implementation of the Online Access Act (*Verwaltungsdigitalisierung – Umsetzung des Onlinezugangsgesetzes, OZG*)” aims **to digitalise administrative services, thereby increasing their speed, economic efficiency and sustainable technical quality**, among other things. The target group of the measure comprises all citizens, companies, organisations and the administration itself. In Germany the administrative landscape is very diverse, implementation of this measure is therefore a large-scale interdepartmental endeavour. The leading role in its implementation is held by the Federal Ministry of the Interior and Community.

The primary goal of the measure is the comprehensive, user-friendly digitalisation of the German administrative landscape. This should be done in accordance with the so-called “**one for all**” principle, in line with which services regulated by federal law, which make up the vast majority of implemented services, should be developed and implemented only once. This means that a federal state or an alliance of several federal states develops and operates a service centrally, and then makes it available to other federal states and municipalities.²¹ The measure aims to implement the relevant infrastructure (e.g. front-end and back-end procedures) in 16 federal states and more than 11,000 municipalities; federal and state governments are required to link their public administration portals into a portal network, which in turn is connected to the Your Europe portal.²² According to the plans expressed in the DARF, in the future citizens, businesses and organisations will no longer need to know which authority is responsible for a particular administrative service. The measure has been allocated EUR 3 billion from the RRF (no national funds are provided).²³

Cloud services are of particular importance in the context of enhancing the business environment through the implementation of the OZG. This is underlined by the German Administration Cloud Strategy,²⁴ with which the federal, state and local governments have set themselves the goal of **developing the existing cloud solutions into a federal cloud solution through standardisation and harmonisation**. In this way, dependencies can be reduced, efficiency and effectiveness in development, commissioning and operation can be increased, data protection and information security can be ensured and strengthened, and data exchange, storage and use between the federal, state and local governments can be optimised. The administrative cloud is particularly important for the efficiency, availability and scalability of “one-for-all” services.

²¹ Bundesministerium des Innern und für Heimat (n.d.). *Einer für Alle – Einfach erklärt*.

²² European Union (n.d.). *Your Europe*.

²³ Bundesministerium der Finanzen (2021a).

²⁴ IT Planning Council (2021).

The Online Access Act, which entered into force on 18 August 2017,²⁵ puts an obligation on federal, state and local governments to digitalise all administrative services by the end of 2022. In 2020, important preliminary work on implementation began, such as the development of agreements between federal states, as well as important decisions on the use of funds by the IT Chamber and the IT Planning Council (e.g. regarding the distribution of expenditures on the digitalisation of particular services²⁶). The German RRP indicates that the measure it provides is linked to the reform in question, but that the funds allocated for the implementation of the Online Access Act from 2020 to 2022 should come exclusively from European funds. From this perspective it can be assessed that the cost of implementing the reform has been shifted towards the European financial resources and that the related measure included in the NRRP has not provided any additionality compared to previously defined targets.

The implementation plan of the measure was approved by the Special IT Council on 1 September 2020.²⁷ As the first implementation milestone, agreements between the lead ministry and the federal states were set to be concluded by the third quarter of 2021. As this milestone was fulfilled, the legal basis for the practical implementation of the measure was set.

According to the eGovernment MONITOR,²⁸ it is certain that the implementation of the OZG has led to an overall increase in services available online.²⁹ However, it is also now clear that the original goal of offering 575 packages of online OZG services nationwide by the end of 2022³⁰ is a long way off. There are currently 49 OZG administrative services (as of August 2022) available online that can be processed completely digitally, including all proofs and notifications.³¹ In May 2022 the IT Planning Council set a list of 35 priority services to be digitalised by the end of 2022 (for example the list includes applications for naturalisation, and issuing cards for the severely disabled).³² The deadline for the rest of the services was recently extended to 2025.³³

The **lack of strategies for digitalisation in municipalities** may explain the delay.³⁴ Only 75% of all municipalities have a digitalisation strategy, are working on one, or are planning to do so. **Staffing bottlenecks** are also a significant obstacle to developing a plan to make online services available. More than eight in ten municipalities claim that employees are busy with day-to-day tasks, and nearly 60% of them say they see no need for a digitalisation strategy. Nearly half of the municipalities say they lack the political will to develop such strategies.³⁵

At the end of June 2022, Thuringia was the leader with 142 services available online throughout the federal state. Schleswig-Holstein (131 services available throughout the federal state) and Bremen (126 services) were also on the podium. It should be noted, however, that the availability of official services offered in digital form in some federal states has even declined recently. In North Rhine-Westphalia, nine online services were added across the region between March and June 2022, but the number of digital services available in at least one municipality fell by eleven during the same period; a total of

²⁵ IT Planning Council (n.d.). *Implementation of the Online Access Act (OZG)*.

²⁶ IT Planning Council (n.d.). *Beschlüsse und Informationen*.

²⁷ Bundesministerium des Innern und für Heimat (n.d.). *Rechtliches und Beschlüsse*.

²⁸ The report published annually by Initiative D21, which is Germany's largest non-profit network for the digital society.

²⁹ Initiative D21 (2022).

³⁰ IT Planning Council (n.d.). *Implementation of the Online Access Act (OZG)*.

³¹ Initiative D21 (2022).

³² IT Planning Council (2022).

³³ Deutscher Gewerkschaftsbund (2022).

³⁴ Grundun M. (2022).

³⁵ *Ibidem*.

two fewer digital services were available in NRW than earlier in the spring. In Lower Saxony, the range of e-government services at the municipality level decreased by up to eleven services over the period. It can be assumed that services that had already been reported had to be removed due to insufficient digitalisation.³⁶

In addition to the above-mentioned obstacles, one could point out that the measure is being implemented on the basis of **changing regulations**, which could cause difficulties because of the need for active stakeholders to quickly adapt to the new conditions. The existence of **diverse administrative systems in federal states** poses a challenge to the implementation of the “one for all” principle.

2.4. Industrialisation/reindustrialisation

Measure name: Investment: Municipal living labs for the energy transition (included in Component 1.3)

Germany has been undergoing a transition from a system based on fossil fuels and nuclear power to one based on renewable energy. It is aligning its entire climate, energy and economic policy with the 1.5-degree climate protection path to which the EU committed itself as part of the Paris Agreement. Electricity supply is therefore to be based almost entirely on renewable energies from as early as 2035.³⁷

To date, decentralised action has been the main driver of Germany’s energy transition. As a result, the German renewable energy market is characterised by a proliferation of players and the emergence of new, locally-rooted entities such as energy cooperatives.³⁸

The measure “Investment: Municipal living labs for the energy transition” **explores and demonstrates innovative solutions for efficient and sustainable energy supply of urban neighbourhoods**. It is based on the idea of testing technical and non-technical innovations in real environments, and promotes research into energy-optimised building design. Ambitious energy-optimised neighbourhoods are to be implemented both inside and outside the city limits in actual energy transformation laboratories. This includes residential and mixed-use neighbourhoods (neighbourhoods that offer residents the ability to live, shop, work and play in one community), commercial areas and industrial sites. They will serve as transferable models for municipalities. The main addressees are large-scale implementation projects, with the participation of SMEs particularly encouraged.

This measure is the continuation of the existing nationwide funding program “Reallabore der Energiewende” (Energy Transition Real Labs), in which several projects have been selected for funding.³⁹ For example, as part of the “Reallabor City Impulse” development project, more households in Dresden are to be connected to the district heating network through further technical development. In addition, several solar power plants, high-temperature heat pumps and a large long-term water heat storage system are planned.⁴⁰ In the area of modernising buildings and neighbourhoods, the Ministry approved 235 new research projects in 2021 with a funding volume of about EUR 117.27 million (own sources).⁴¹ One of the projects, DELTA, aims to show how a typical medium-sized city can be reliably and cost-effectively supplied with energy on the way to climate neutrality.. The other project focused

³⁶ Der Informationsdienst des Instituts der deutschen Wirtschaft (2022).

³⁷ Bundesministerium für Wirtschaft und Klimaschutz (2022a).

³⁸ Beerman J., Tews K. (2017).

³⁹ Bundesministerium für Wirtschaft und Klimaschutz (n.d.). *Reallabore der Energiewende*.

⁴⁰ Weckbrodt H. (2019).

⁴¹ Energiewende Bauen (2022).

on urban neighbourhoods is GWP, whose goal is to integrate waste heat, natural heat sources and renewable energies into district heating systems via large-scale heat pumps.⁴²

Living labs for energy transition are of a research and development (R&D) nature, and currently ten of them are active.⁴³ They are laying the foundations for subsequent greenhouse gas emissions (GHG) savings, with laboratories such as the “Norddeutsches Reallabor”⁴⁴ aiming to save large amounts of CO₂ by consistently combining sectors or effectively managing the energy cycle, especially in the case of hydrogen applications. For the “Norddeutsches Reallabor”, annual CO₂ savings of 560,000 tons are expected.⁴⁵ If, according to a conservative estimate, one lab is anticipated to save an average of about 200,000 tons CO₂eq⁴⁶ per year and is subsidised by the state with an average of about EUR 25 million, then with the planned funding of EUR 57 million in the German RRP, about 9.12 million tons CO₂eq can be avoided.⁴⁷

The financing for the implementation (EUR 57 million) of the discussed measure provided in the DARP will begin in the third quarter of 2023, and will allow to expand the scope of the program. By the first quarter of 2026, 10 energy-saving urban districts are to be created and capable of demonstrating effective and transferable solutions.

The measure, through its objectives – namely the development of energy networks – should **increase regional security of the energy supply as well as energy efficiency**, both gaining even more importance in the context of the ongoing energy crisis related to the war in Ukraine.

2.5. Conclusion

The Russian aggression on Ukraine continues to affect the European automotive sector, causing bottlenecks and disruptions on both the supply and demand sides. German companies are likely to be the most affected.⁴⁸ Experts warned as early as mid-March 2022 of a possible change in forecasts if the delivery of wiring harnesses was delayed by more than three to four weeks. OEMs such as Volkswagen, BMW and Porsche have temporarily halted production at some of their factories in Germany, or have partially shifted their operations, for example to North Africa.⁴⁹ An additional problem is that of rapidly rising energy prices; an economic survey conducted by the German Economic Institute revealed that high energy prices are now a burden for nearly 80% of companies in the German economy.⁵⁰ In this context, the measure **Investment program for vehicle manufacturers/supplier industry** could become an opportunity for the automotive industry to undergo a transformation in terms of both energy use and optimised production.

In the case of the measure **Digitalisation of the administration – implementation of the Online Access Act**, numerous activities have been undertaken at municipal and federal levels, but efforts are either insufficient or going in the wrong direction. Germany's administration is still lagging far behind when it comes to digitalisation, even though more billions have been invested in the digital state in

⁴² Energiewende Bauen (n.d.). *DELTA: Das Energiesystem der Stadt verbinden*.

⁴³ Bundesministerium für Wirtschaft und Klimaschutz (n.d.). *Reallabore der Energiewende*.

⁴⁴ Norddeutsches Reallabor (n.d.).

⁴⁵ Windmesse (2019).

⁴⁶ According to Eurostat, CO₂eq (carbon dioxide equivalent, CO₂ equivalent) is a metric measure that is used to compare emissions from various greenhouse gases on the basis of their global warming potential by converting amounts of other gases to the equivalent amount of CO₂.

⁴⁷ DIW Berlin (2021).

⁴⁸ Köllner C. (2022).

⁴⁹ Ibidem.

⁵⁰ Grömling M., Bradt H. (2022).

recent decades than in almost any other country in the world.⁵¹ The main difficulty may be the shortage of trained staff to work on digitalisation strategies. This can lead to the conclusion that the state and its administration need a big push in the direction of digitalisation and, above all, investments in people, equipment, training and continuing education in order to overcome current and future challenges.

The current energy crisis shows all too well that an affordable and sustainable energy supply can only be provided through renewable energy. Since the Russian invasion of Ukraine, concerns about the security of Germany's energy supply have been high. It has therefore become an urgent task to quickly reduce dependence on Russian imports, while simultaneously guaranteeing secure energy supplies for the next few years.⁵² At the same time, however, rebuilding the energy system to meet climate goals is more urgent than ever, and must be significantly accelerated.⁵³ Therefore, setting up laboratories for the energy transition as part of the measure **Investment: Municipal living labs for the energy transition** could be a major opportunity for Germany to realise these goals. Experience with national programmes has shown that this measure has the potential to be an important element of Germany's green transformation.

In the Council implementing decision on the approval of the assessment of the RRP for Germany,⁵⁴ it was pointed out that the Plan comprehensively addresses Germany's economic and social situation, and increases the country's resilience in this regard. The measures included in the RRP are described as "a balanced mix of reforms and investments covering economic, industrial, digital, environmental, social and health policies".⁵⁵ The Council pointed out that the investments and reforms described in the plan improve the performance of the administration, which will facilitate the sustainable development of Germany's economy and society, as well as benefit players in the economic market (including SMEs). It was also underlined in its specifications that milestones and targets proposed in the German RRP "are clear and realistic and the indicators for those milestones and targets are relevant, acceptable and robust".⁵⁶ The analysis conducted here supports those statements, but some additional effort must be made in relation to the Online Access Act, as described above.

⁵¹ Deutscher Gewerkschaftsbund (2022).

⁵² Wehrman B. (2022).

⁵³ Nordic Market (2022).

⁵⁴ European Commission (2021d).

⁵⁵ Ibidem.

⁵⁶ Ibidem.

3. FRANCE

3.1. Introduction

The French National Recovery and Resilience Plan (*Le plan national de relance et de résilience*⁵⁷) consists of 20 reforms that “address bottlenecks to lasting and sustainable growth”,⁵⁸ and 71 investments “to accelerate the transition towards more sustainable, low-carbon and climate resilient economy, to support the digital transformation of all economic actors including public authorities, and to make the French economy more resilient thanks to investments in the health sector and skills, from higher education and lifelong learning”.⁵⁹ The plan includes 70 milestones and 105 targets. Reforms and investments are to be supported by EUR 39.4 billion in grants, while 46% of the plan should support climate objectives and 21% should foster the digital transition.

The Plan was formally submitted to the Commission on 28 April 2021, and accepted by the EC on 23 June 2021. It was subsequently adopted by the Council on 13 July 2021.

Proposed investments and reforms are described in Part 2 of the Plan, and are structured around nine components:

Box 2. Components of the French National Recovery and Resilience Plan

- **Component 1. Energy renovation** (EUR 6.7 billion, of which EUR 5.8 billion financed from the RRF)
- **Component 2. Ecology and biodiversity** (EUR 3.2 billion, of which EUR 2.1 billion financed from the RRF)
- **Component 3. Infrastructure and green mobility** (EUR 8.8 billion of which EUR 7.0 billion financed from the RRF)
- **Component 4. Energy and green technology** (EUR 7.2 billion, of which EUR 5.3 billion financed from the RRF)
- **Component 5. Financing of enterprises** (EUR 0.25 billion, of which EUR 0.25 billion financed from the RRF)
- **Component 6. Technological sovereignty and resilience** (EUR 5.2 billion, of which EUR 3.2 billion financed from the RRF)
- **Component 7. Digital upgrading of the state, territories and businesses, culture** (EUR 3.1 billion, of which EUR 2.1 billion financed from the RRF)
- **Component 8. Safeguarding employment, youth, disabled, professional training** (EUR 11.3 billion, of which EUR 7.5 billion financed from the RRF)
- **Component 9. Research, health and dependency, territorial cohesion** (EUR 9.8 billion, of which EUR 7.7 billion financed from the RRF)

Source: Gouvernement (2021).

On 21 August 2021, the EC disbursed EUR 5.1 billion to France in pre-financing, equivalent to 13% of the country's financial allocation under the RRF. The first payment of EUR 7.4 billion to France was disbursed by the EC on 4 March 2022.

⁵⁷ Accessible at: Gouvernement (2021) (last access 25.10.2022). The Plan is a part of “France Relance”, a EUR 93.4 billion recovery package funded from domestic and EU sources, presented in September 2020.

⁵⁸ European Commission (n.d.). *France's recovery and resilience plan*.

⁵⁹ Ibidem.

3.2. Competitiveness

Measure name: Space sector (included in Component 6)

Space is becoming a severely competitive and strategic arena, including from the military point of view. France has the largest space industry in Europe: in 2021 it had turnover of EUR 5,623 million euro and employed 16,500 people.⁶⁰ The French National Centre for Space Studies⁶¹ (*Centre national d'études spatiales*, CNES) – a government space agency under the supervision of the Ministry of the Economy, Finance and the Recovery, the Ministry for the Armed Forces and the Ministry for Higher Education, Research and Innovation – is the EU's most important actor in assuring Europe's independent access to space. CNES also serves France's military space needs.⁶²

As stated in the French NRRP, companies in the space sector have suffered a serious setback due to the Covid-19 crisis. First, the activities of the Guiana Space Centre, a spaceport in French Guiana, experienced a slowdown or were even temporarily suspended, which generated additional costs for the space launcher programme. Secondly, a portion of the commercial orders for orbital systems were suspended. Thirdly, most space companies in France are also active in the aeronautical sector, and suffered from the slowdown in orders from major airlines, which in turn affected their self-financing capacity.

Consequently, companies in the space sector needed support. The French NRRP allocated EUR 365 million for this purpose as part of the space recovery plan. In May 2021, the French government granted a budget of this size to CNES to cover the needs of sectors of activity and eligible businesses⁶³ across the country, what allowed to expand the operations.⁶⁴ The list of priority technologies and collaborative projects (involving both CNES and industry) to be supported under the measure in question was defined by the government in close cooperation with CNES and in consultation with industry. CNES is the sole operator of the space recovery plan, the implementation of which is also monitored by a steering committee comprising representatives of three CNES overseeing ministries.

The space recovery plan was structured around several schemes with the ambition to cover the needs of the entire French space sector, in terms of areas of activity (launchers and orbital systems, technological bricks to applications through equipment), eligible companies (start-ups, SMEs, ETIs, large groups) and national dissemination.⁶⁵

⁶⁰ GIFAS (n.d.).

⁶¹ CNES (n.d.).

⁶² Following the announcement of its space strategy for national defence, France launched its Space Command, which will lead and coordinate the country's enhancement of its space surveillance and observation and the development of means of self-defence. The French Space Command is expected to be supported by a budget of EUR 700 million in 2020-2025. See: PWC (2020); AraineGroup (2021).

⁶³ These include start-ups, SMEs, mid-tier firms and original equipment manufacturers.

⁶⁴ CNES receives funding from multiple sources, including government subsidies, the PIA future investment programme, the space budget line of the government's stimulus plan, external sources for programmes where CNES has delegated responsibility, and in 2022 from the France 2030 plan (CNES, 2022).

⁶⁵ CNES (2022).

Table 3: The structure of the French space stimulus

Space stimulus plan EUR 365 million		
ESA Launchers EUR 165 million Additional contribution from France to ESA (Ariane 6)	Innovation France EUR 200 million	
	Vernon strand - Engine test stands - Hydrogen recovery	Strand B – Collaborative calls for projects - Flexible comsats - Optical communicators - Stacom terminals - Virtual ground segment - Data-driven economy
	Strand A – Theme-based calls for projects Civil and dual-use future technologies	
	Strand D – Nanosatellite plan - Ramp up in-orbit validation - Structure ecosystem	Strand C – Space Tour 2021 call for projects Space applications as a springboard for the economy and society

Source: CNES (2021), p. 15.

For strands A, B, C and D, the terms and conditions of the calls for tender and calls for projects were launched from the beginning of 2021, and a series of procurements was also initiated. This led to 25 projects being given the go-ahead in 2021, involving 94 companies – nearly 80% of them start-ups and SMEs.⁶⁶ In 2022, in turn, three innovative service demonstration projects and 18 innovative scientific and technological concept projects have been selected for funding under the “Innovation France” component.⁶⁷

Direct support within the space recovery plan was granted to the ArianeGroup⁶⁸ site in Vernon, which designs, develops, produces and tests liquid propellant propulsion systems. The Vernon investment’s aim was to support the production of decarbonised hydrogen at Vernon, instead of grey hydrogen transported by truck, and to support the creation of a 10-hectare photovoltaic park on the site.⁶⁹

Support for launchers and engine test beds as public investments has matured in France, and the production of decarbonised hydrogen is part of the green transition; both areas are also important from a European point of view. The measure is consistent with French and European space policy, while the support for the development of Ariane 6 is a strategic pillar of European autonomy with regard to access to space.

The implementation of the measure is to be monitored according to three indicators, as stated in the French NRRP⁷⁰:

1. Share of the budget contracted with the industry players carrying the projects, with a target value of EUR 200 million cumulated in 2022.
2. The number of beneficiary companies, with a target of 80 in 2023 (cumulated).

⁶⁶ CNES (2021).

⁶⁷ Ministère de l’économie, des finances et de la souveraineté industrielle et numérique (2022a).

⁶⁸ ArianeGroup (n.d.).

⁶⁹ In 2022 the construction was still ongoing. République Française (2022a).

⁷⁰ Gouvernement (2021), p. 367.

3. Completion of the Ariane 6 programme by 2025.

3.3. Business environment/entrepreneurship

Measure name: Law for the acceleration and simplification of public action (ASAP) (included in Component 5)

The debate in France on transformation of public action through the simplification of administrative procedures started before the Covid-19 pandemic. Prior to its adoption on 7 December 2020, the text of a related law was enriched with multiple amendments and new articles in order to accelerate the post-pandemic recovery. The main aims of law no. 2020-1525 on the acceleration and simplification of public action (*Loi d'accélération et de simplification de l'action publique*, ASAP), which became a part of the French NRRP when responding to the 2019/2020 CSR no. 4 on regulatory simplification, are to bring the administration closer to the citizen, facilitate the development of business, and simplify administrative procedures for individuals. More specifically, the measure was planned to provide for the decentralising of individual administrative decisions in the field economy and health (with the aim of 99% of decisions to be taken at local level), and the simplification of certain procedures applicable to industrial installations in order to develop activity and employment in the regions, among other things.⁷¹

Regarding the expected economic impact, the ASAP law was to “make everyday procedures easier, simpler, more readable and more predictable” and lead to an increase in growth stemming from the simplification of administrative procedures. In this context, the ASAP law was expected to enhance the business environment.

The law had some considerable **deregulatory aspects**. With the view of reviving industrial activities, it introduced some major changes to the provisions relating to **environmental procedures and public enquiries**. For example, in relation to installations classified as environmental protection (ICPE),⁷² the ASAP law secured project owners against regulatory changes occurring during file examination (the standard at the date of submission should be binding). Regarding consultations, the number of cases in which public consultations on projects with an environmental impact were required was limited, granting the prefect the discretion to use electronic public consultations in other cases. The prefect can also, under certain circumstances, issue a special reasoned decision allowing certain construction works to commence without waiting for the environmental authorisation, once the building permit has been issued and the public consultation completed, and provided that these works do not require a specific authorisation. The so-called Gemapi (*Gestion des milieux aquatiques et prévention des inondations*), which is a competence relating to the management of aquatic environments and flood prevention, was also amended through the introduction of a simplified environmental authorisation procedure, limited to “emergency situations of a civil nature”.

With the objective of recovering economic activity and supporting economic operators, the ASAP law also introduced some changes relating to **public procurement**. With the aim of encouraging rapid recovery in the building and public works sector, the threshold for exemption from the procedure for works contracts was temporarily raised to EUR 100,000 excluding tax until 31 December 2022.⁷³ The list of cases in which certain contracts may be concluded without prior advertising or competitive tendering was expanded to cover cases where compliance with such procedures would be “manifestly

⁷¹ Gouvernement (2021), p. 317.

⁷² République Française (2022b).

⁷³ netPME (2022).

contrary to reason or general interest". The "exceptional circumstances" mechanism was also created in order to derogate from the rules of public procurement and concession contracts in the event of "exceptional circumstances".⁷⁴ Such a mechanism may be implemented by a decree, and the maximum application of related measures may not exceed 24 months. Also, the mechanism for SMEs provided for partnership contracts has been extended to embrace all global contracts.

The ASAP law also continued the trend of **streamlining administrative commissions** by abolishing a series of bodies and merging others. The aim of the law was also to **decentralise several administrative decisions**, mainly in the fields of culture, economy and health. Some **administrative procedures** have been **simplified** (e.g. exemption from the requirement to provide proof of address to obtain identity cards, passports and driving licences).

The French NRRP includes just one indicator relating to this measure, which is the "adoption of the decree on various measures to accelerate and simplify public action in the environmental field",⁷⁵ with a target date set broadly to 2021, and does not mention any costs of its implementation. The document also states that the described measure does not harm the environment and does not have any effect on climate, and that the ASAP law is consistent with the Territorial Just Transition Plan and the Energy-Climate Plan, and that it contributes to the achievement of the 2030 climate objectives and the 2050 climate neutrality objective.

Although the non-effect of the ASAP law on the environment has been widely questioned, and the law was accused of dismantling the environmental regulatory framework and undermining environmental democracy,⁷⁶ the French government highlighted once again the need to simplify procedures when presenting the NRRP following Russia's aggression on Ukraine that began on 24 February 2022. In his address of 16 March 2022 Jean Castex, the French Prime Minister, stated that France "must accelerate to shorten [...] deadlines and allow for the faster deployment of energy production projects or critical inputs".⁷⁷ To this end, the government announced the implementation of several measures based on the Laurent Guillot report,⁷⁸ which includes, among other things, a call to strengthen the involvement of prefects in the monitoring of establishment projects, and the undertaking of new initiatives to better guide industrial and logistics project developers toward sites with lesser environmental challenges.

3.4. Industrialisation/reindustrialisation

Measure name: Improving the resilience of electricity networks and energy transition in rural areas (included in Component 3)

The measure "Improving the resilience of electricity networks and energy transition in rural areas" is linked to the "Green infrastructure and mobility" theme of the French NRRP. It aims to **improve the quality of electricity distribution** by increasing the resilience of the networks and developing renewable energy. Users are the final beneficiaries of the measure, while the public electricity distribution authorities (AODE) are beneficiaries of the subsidies.⁷⁹

⁷⁴ Leos, P.M. (2022a).

⁷⁵ République Française (2021).

⁷⁶ Radisson, L. (2020); Editions Francis Lefebvre (2021); Reporterre (2020).

⁷⁷ Gouvernement (2022).

⁷⁸ Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2022b). Laurent Guillot is a former executive of the Saint-Gobain group who in July 2021 received a mission letter signed by four ministers (Ecological Transition, Cohesion of Territories, Transformation, Industry) proposing measures to accelerate and simplify the establishment of economic activities.

⁷⁹ Article L.322-6 of the Energy Code.

The need to increase investment in electricity networks was recognised by the French government well before the 2022 energy crisis related to Russia's aggression on Ukraine. The French NRRP called for the **improvement of electricity networks' resilience in the event of a crisis** on the one hand, and the **creation of a network capable of facing the challenges of energy transition**, with the increasing integration of renewable energies and the development of electric mobility, on the other. Such investments were particularly important in rural areas where most of the network was located, reliability was the lowest, renewable energies were mostly developed, and needs in terms of electric mobility were the greatest.

The measure provided for the supplementation of the FACÉ fund⁸⁰ with a special allocation of EUR 50 million spread over 2 years, in order to respect the limit of 10% of the total of the recipient programme (which amounts to EUR 360 million) that the organic law on finance laws in France imposes on a payment from the general budget. These credits have been carried by the following sub-programmes: "energy transition", "innovative solutions", "bad weather" and "securing bare wires".⁸¹ The subsidised projects were to be selected and monitored by the Ministry of Ecological Transition (*Ministère de la Transition écologique*), and the Directorate General for Energy and Climate (*Direction Générale de l'Énergie et du Climat*).

The planned target indicator for the measure is 50 projects by the end of 2022, with a target of 25 projects by the end of 2021. Work may be carried out in the projects over a period of 3 to 4 years, i.e. until 2026 at the latest. The NRRP states that the impact can be monitored through the number of financed renewable electricity generation projects and electric vehicle charging or storage installations.

Regarding the distribution of funds, EUR 35 million were allocated in 2021, and the remaining EUR 15 million in 2022. In 2021 FACÉ supported 11 projects within the framework of the "bad weather" sub-programme for EUR 10 million, 26 projects with the "securing bare wires" sub-programme for EUR 7 million, and 68 projects in the "energy transition" and "innovative solutions" sub-programmes for EUR 17.2 million (with a total budget of €18 million). On 15 March 2022 the Minister of Ecological Transition issued a decree on the financing of the mission related to the Recovery Plan with the budget envelope for the year 2022 set at EUR 15 million for the "energy transition" and "development of innovative solutions allowing a more efficient management of the electricity network" sub-programmes.

In September 2022 the French Court of Audit published a report on the functioning of the FACÉ fund. FACÉ is the leading financer of investments under control of AODEs in rural areas for over 25 thousand municipalities in France.⁸² Between 2015 and 2020 it participated in the financing of 9% of total investments made in the entire electricity distribution network.⁸³ According to the Court of Audit, the fund "is struggling to meet the current and future challenges of the electricity distribution network"⁸⁴ and requires immediate further reforms.⁸⁵ In its report, the Court of Audit stated that the management of aid suffered numerous shortcomings. It pointed out that decisions on granting support were based

⁸⁰ The FACÉ (Fonds d'Amortissement des Charges d'Électrification) is a fund financed by electricity distributors in France, which helps rural communities in charge of electricity distribution networks to finance the improvement of these networks. Its mission is to provide financial assistance to the owners of electricity distribution networks in municipalities under the Rural Electrification (RE) regime.

⁸¹ The sub-programmes "energy transition" and "development of innovative solutions for a more efficient management of the electricity network" aim at financing projects such as e.g. integration of renewable energies, deployment of charging stations, deployment of storage devices, and "smart grid" solutions, etc. The "bad weather" sub-programme aims to rebuild and reinforce the network affected by climatic incidents. The "Securing bare wires" sub-programme supports replacement or burial of old network equipment.

⁸² Leos, P.M. (2022b).

⁸³ Ibidem.

⁸⁴ Cour des comptes (2022).

⁸⁵ The latest reforms were implemented with the decree of 10 December 2020.

on unreliable data, and the estimate of customers with poor electricity supply was based on a disrupted statistical model that did not guarantee a faithful representation of the network's deficiencies. The Court also pointed out the lack of data for measuring the effectiveness of the system, and the general weakness of system control measures. Moreover, the report mentioned the risk of falling into a logic of subscribing to AODE subsidies (with quite stable individual allocations in 2015–2020), and the Court concluded that the “equalising” effect between territories was difficult to assess. The Court recommended reserving aid from the new sub-programmes for projects not covered by other programmes or public support measures.

Another challenge for FACÉ is the need to make massive investments in the electricity network in order to make it capable of connecting and integrating renewable energy projects that are often located in rural areas.⁸⁶

3.5. Conclusion

In its decision on the approval of the assessment of the RRP for France⁸⁷ the Council recalled that France was recommended “to invest in sustainable transports, renewable energies, energy interconnections and infrastructures as well as clean and efficient production and use of energy” as well as “to improve its business environment by simplifying the tax system, reducing administrative burdens, fostering firms' growth and removing barriers to competition in services”. All of the analysed measures are in line with those recommendations and meet the Council's specifications.

Regarding the principle of “do no significant harm”, a systematic assessment of each measure, as envisaged in the RRP, should indeed be carried out, and in the context of the measures analysed special attention should be given to the ASAP law. The targets and milestones for the analysed measures do indeed seem clear and sufficient.

The analysis has revealed, however, that there are some specific aspects related to each measure that require attention. In the case of the ASAP law, some **deregulatory aspects should be re-evaluated**. This is especially important in view of the “do no significant harm” principle. Already now France is facing a number of significant environmental challenges and disasters, some of which are the result of human behaviour. New laws and practices should not lead to further degradation of the environment.

Some **structural weaknesses of institutions involved in the implementation of measures** persist, as exemplified by the FACÉ fund in the case of the measure concerning improvement of the resilience of electricity networks and energy transition in rural areas. In order for this measure to work and fulfil its purpose, the malfunctions described by the Court of Audit in its September 2022 report on the functioning of the fund must be addressed.

In the context of this measure, the issue of granting support on the basis of **adequate and reliable data**, as well as the need to **collect data for estimating the effectiveness of measures**, also emerged. Data collection methods must be improved in order for this and every public action to be effective.

⁸⁶ Garrigues, A. (2022).

⁸⁷ Council of the European Union (2021a).

4. ITALY

4.1. Introduction

The Italian National Recovery and Resilience Plan (*Piano Nazionale di Ripresa e Resilienza*, PNRR) contains various investments and reforms, divided into six missions, aimed at supporting the economic recovery after the Covid-19 pandemic. The Plan promotes an ambitious reform agenda and the fulfilling of important objectives aimed at achieving the country's ecological transition and digital transition as well as supporting greater social inclusion.

The package consists of EUR 191.5 billion allocated through NextGenerationEU (EUR 68.9 billion of RRF grants and EUR 122.6 billion of RRF loans) and EUR 30.6 billion integrated by Italy through the Complementary Fund, for a total amount of EUR 222.1 billion. Moreover, an additional EUR 26 billion was assigned for the implementation of specific works from the Development and Cohesion Fund and EUR 13 billion was made available by the REACT-EU programme.⁸⁸

By June 2022, Italy had so far received 24% of the resources from NextGenerationEU, meaning EUR 45.9 billion: on 13 August 2021, Italy received pre-financing of EUR 24.9 billion, while it received the first payment on 13 April 2022, of EUR 21 billion (net of pre-financing) in grants and loans, based on the achievement of the related 49 milestones and 2 targets.⁸⁹

On 29 June 2022, Italy requested payment of the second tranche for another EUR 21 billion (net of pre-financing).⁹⁰ On 27 September 2022 the European Commission certified the achievement of the 45 milestones due for the first semester of 2022, and allowed the release of the second tranche of payments, which is expected in two months.⁹¹

The Plan primarily consists of six Missions or Policy Areas that cascade into Components, in turn addressing specific challenges and structured into Investments and Reforms:⁹²

- M1. Digitalisation, innovation, competitiveness, culture and tourism (EUR 40.29 billion⁹³)
- M2. Green revolution and ecological transition (EUR 59.46 billion)
- M3. Infrastructure for sustainable mobility (EUR 25.4 billion)
- M4. Education and research (EUR 30.88 billion)
- M5. Inclusion and cohesion (EUR 19.85 billion)
- M6. Health (EUR 15.63 billion)

According to the European Commission,⁹⁴ Italy has fulfilled 10% of the milestones and targets. In particular: Green transition 10%; Digital transformation 9%; Smart, sustainable and inclusive growth 11%; Social and territorial cohesion 7%; Health, economic, social and institutional resilience 12%; and Policies for the next generation 9%.

⁸⁸ Ministero dell'Economia e delle Finanze (2021).

⁸⁹ European Parliament (2022).

⁹⁰ European Parliament (2022).

⁹¹ European Commission (2022b).

⁹² Presidenza del Consiglio dei Ministri (2021).

⁹³ The amounts provided sum to EUR 191.5bn (only NGEU fund).

⁹⁴ European Commission (2022c).

4.2. Competitiveness

Measure name: Integrated funds for the competitiveness of tourism businesses

The investment “Integrated funds for the competitiveness of tourism businesses”⁹⁵ aims to increase the competitiveness of the tourism sector with specific measures and funds. It is part of the third Component of the first Mission (M1C3), its aims covering **the development of major tourist attractions, tourism in rural areas and suburbs, and tourist services and creative business, as well as the valorisation of historic villages, parks and gardens and the improvement of hospitality facilities.**⁹⁶

The Covid-19 pandemic crisis has made the necessity of dealing with a series of “unresolved knots” in Italy’s tourism system even more pressing, from the fragmentation of tourism businesses to the progressive loss of competitiveness in terms of quality of supply standards, age of accommodation facilities, capacity for innovation and care of the environment.

The PNRR therefore assigned a total of EUR 1.78 billion to the investment, for the following measures:

- Tax credit for activities aimed at improving accommodation facilities.
- Guarantee Fund to facilitate access to credit for companies in the sector, through a dedicated section of the Small and Medium Enterprises (SMEs) Guarantee Fund.
- Setting up the European Investment Bank (EIB) Thematic Fund for tourism to support investment in the sector.
- The National Tourism Fund, an equity fund for the redevelopment of properties with high tourist potential.
- The Revolving Fund, an additional financial instrument that complements the measures in support of businesses operating in the tourism sector.

The scope of the investment is intended to increase the quality of hospitality and strengthen sustainable tourism, promoting the use of renewable sources of energy. In particular, the interventions under this investment aim to: improve mountain tourism, in terms of both infrastructure and services; restore historical buildings, also with the entry of private capital; facilitate access to credit for entrepreneurs; and renovate hospitality facilities.

The PNRR proposes multiple investments, as laid out below:

- The tax credit is aimed at improving accommodation facilities with investments culminating in environmental sustainability (renewable sources with lower energy consumption), requalification, and the improvement of qualitative standards of Italian accommodation facilities. A non-repayable percentage of the tax credit investment is foreseen for incentivising investments at a complex period such as the post-Covid period.
- The Guarantee Fund facilitates access to credit opportunities for entrepreneurs running an existing business as well as for young people planning to start their own business.

⁹⁵ See: Italia Domani (n.d.). *Integrated funds for the competitiveness of tourism businesses* (last accessed on 25.10.2022).

⁹⁶ Council of the European Union (2021c).

- The newly established EIB Thematic Fund⁹⁷ is a 1:3 leverage fund capable of generating more than two billion in investments in the following areas: (a) mountain tourism, both in infrastructures and accommodation services; (b) the business sector and the supply of top-quality tourism; (c) sustainable tourism and the upgrading of movable and immovable assets related to tourism. The Fund can raise capital through participation in initiatives by European financial institutions to grant “soft loans”⁹⁸ to the tourism sector.
- The National Tourism Fund is intended for the requalification of properties with high tourism potential, in particular the most iconic hotels, in order to enhance the identity of Italian hospitality of excellence, and to encourage the entry of new private capital or other public funds.
- The Minister of Tourism's involvement in the capital of the National Tourism Fund, a fund of real estate funds with the objective of purchasing, renovating and upgrading Italian hotel facilities (1500 hotel rooms), protecting strategic and prestigious real estate, and supporting the recovery and growth of hotel chains operating in Italy, especially in southern regions.

With this investment, the Italian PNRR expects to create opportunities for the tourism sector to be more competitive by having renovated hotels and improved attractions, as well as sustainable accommodation facilities. Consequently, Italy expects to attract more tourism, create more work for the entire sector, and offer new opportunities for young people and all kinds of seasonal workers.

By December 2025, Italy aims to conclude the investment with at least 3500 tourism businesses helped by the Tax Credit, 150 supported tourism projects, 11800 tourism businesses helped by the Guarantee Fund for SMEs, 300 medium business supported by the Revolving fund and 12 real estate properties requalified by the National Tourism Fund.

The indirect environmental impacts of the measures in the Italian PNRR have been evaluated and they were minimised in line with the Do No Significant Harm (DNSH) principle. The analysed measure aims at increasing the environmental sustainability of the tourism sector by improving hospitality facilities' environmental footprint and promoting the use of renewable sources of energy.

The investment is at the implementation phase and has achieved the milestones set for December 2021: the Italian Government completed the adoption of investment policies for all the Funds as well as the adoption of the implementing decree on Tax Credit and the definition of eligibility criteria. The next milestones regard the disbursement of EUR 350 million to the EIB Thematic Fund and EUR 150 million to the National Tourism Fund in line with the investment policy defined in 2021. The disbursements are currently in progress and need to be completed by December 2022. The PNRR planned to spend the funds as follows: EUR 247 million in 2021, EUR 266 million in 2022, EUR 257 million in 2023, EUR 558 million in 2024 and finally EUR 458 million in 2025.

The measure is compliant with the RRF Regulation⁹⁹: it has a lasting impact, contributes to meet the 37% climate expenditure target of the plan and addresses the challenges identified in the 2020 Country Specific Recommendations¹⁰⁰. The measure acts in accordance with the recommendation to focus investments on the green and digital transition, in particular on clean and efficient use of energy and the renovation of services and accommodations for touristic purposes.

⁹⁷ For more information please consult the Funding Agreement between the Ministry of Economy and Finance of the Republic of Italy and European Investment Bank, available at: https://www.ministeroturismo.gov.it/wp-content/uploads/2022/12/21.12.22_Funding-Agreement.pdf.

⁹⁸ “Soft loans” (*crediti agevolati*) are loans with favourable conditions, usually with low interest rates or long repayment deadlines.

⁹⁹ European Commission (2021c).

¹⁰⁰ European Commission (2020a).

The planned milestones are appropriate for monitoring the progress of the investment and its implementation phase, while also being easily traceable and verifiable.

Since the Italian tourism sector is very fragmented, with most accommodation facilities small and family-owned, the investment could be perceived as useful only to those businesses with the tools and capability to apply for the benefits. It is important that the investment and each of its measures are well publicised, and – while this issue has not been addressed in the PNRR – consideration should be given to helping the entire cross-section of businesses in the sector.

Since one of the main objectives of the investment is to improve mountain infrastructure and services, mainly located in the Alps, spillovers could involve the border areas of neighbouring Member States. The improvement of accommodation and services incentivises tourists to visit these mountain areas, and border countries can benefit from the bigger affluence.

4.3. Business environment/entrepreneurship

The following reforms concern the public administration and are included in the first Component of the first Mission (M1C1), which aims at **modernising and digitalising the public administration's processes and services**. The final objective of M1C1 is to provide better services, encourage the recruitment of young people into public administration, invest in human capital and improve the equity, efficiency, competitiveness and business environment of the country.

The measures below are compliant with the RRF Regulation¹⁰¹: they have a lasting impact since they aim at improving the public administration's role and capacity, contribute to meet the 20% digital expenditure target of the plan and addresses the challenges identified in the 2020 Country Specific Recommendations¹⁰². The measures act in accordance with the recommendation to improve the effectiveness of public administration and, subsequently, address the challenges related to the pandemic, sustain the economy and support the ensuing recovery.

Measure name: Reform of the public administration¹⁰³

The reform aims at developing administrative capacity at central and local level while strengthening the processes of selection, training, promotion and mobility of public employees, streamlining bureaucracy, and digitalising administrative procedures. It is a horizontal reform that provides cross-functional interventions to make the best use of the funding provided by the PNRR as well as to implement organisational and structural lasting change throughout the Public Administration.

The interventions can be divided into a program of three reforms and three investments:¹⁰⁴

Reform 1) Access to job offers in public administration and recruitment, to streamline selection procedures, make them more effective and encourage generational turnover.

Reform 2) Good administration and simplification of rules and processes, with the elimination of bureaucratic constraints and making administrative action more effective and efficient, reducing the time and costs required of citizens and businesses.

¹⁰¹ European Commission (2021c).

¹⁰² European Commission (2020a).

¹⁰³ See: Italia Domani (n.d.). *Reform of the Public Administration* (last accessed on 25.10.2022).

¹⁰⁴ Reforms modify current legislature, procedures and regulations, while investments are indeed investments in various areas.

Reform 3) Skills and careers (EUR 24.3 million) to align knowledge and organisational skills with the work needs of a modern and efficient Public Administration, starting with the removal of restrictions on the mobility of public employees between administrations and new career prospects.

Investment 1) A single portal for recruitment (EUR 20.5 million), divided into two sub-investments: creation of a single recruitment platform; procedures for the recruitment of technical profiles.

Investment 2) Digitalisation, monitoring and performance task force (EUR 734.2 million), divided into five sub-investments: technical assistance at central and local level; simplification and standardisation of procedures; digitalisation procedures (SUAP portal for all businesses and SUE for construction businesses¹⁰⁵); monitoring and communication of simplification actions; result-oriented public administration.

Investment 3) Skills: Skills and administrative capacity (EUR 489.9 million), divided into two sub-investments: investments in education and training; capacity building in strategic planning, organisation and training of the workforce.

The PNRR has allocated approximately EUR 1.27 billion to the whole package of reforms, with the first two reforms being at cost zero, the “Skills and career” reform having EUR 24.3 million and the three investments having approximately EUR 1.25 billion.

The package is aimed at the implementation phase and has achieved the milestones set to be implemented before June 2022. In 2021 the Italian government approved the entry into force of the primary legislation on governance of the PNRR for technical assistance and the strengthening of capacities for its implementation, as well as the provision of a system of archives for audit and control, and extended the methodology adopted for the PNRR to achieve the objectives to the complementary fund. Later, in June 2022, the government approved the entry into force of the implementation legislation for the reform of the civil service, while the bringing into force of the administrative procedures for the simplification reform for the implementation of the RRF, that must be achieved by December 2022, is currently underway. More milestones are defined by the Plan up to 2026.

Measure name: Reform of the legislative framework on public procurement and concessions¹⁰⁶

Its final objective is the simplification of procedures such as permits, authorisations and public procurement in order to ensure the implementation and maximum impact of the investments. Measures include: reducing the fragmentation of contracting authorities, establishing the basic elements of the qualification system, creating an e-platform as a basic requirement for participating in the national assessment of procurement capacity, and granting ANAC specific powers to monitor the performance of the contracting authorities; establishing incentives for the use of existing professional purchasing centres; promoting the digitalisation of central purchasing procedures; gradually reducing restrictions on subcontracting; defining the ways to digitalise the procedures for all public contracts and concessions, and ensuring the appropriate requirements of interoperability and interconnectivity between databases.

The reform provides for the introduction of a new code on public contracts and is currently at the implementation phase. Milestones set for 2021 and 2022 have been achieved: entry into force of the Decree on simplification of the public tenders system, of all measures for the public procurement system and of the revised Code of public tenders. By 2024, the reform aims at: the full functioning of the National eProcurement System; the reduction of the average time between the publication of a

¹⁰⁵ SUAP – Sportello Unico per le Attività Produttive; SUE – Sportello Unico per l'Edilizia.

¹⁰⁶ See: Italia Domani (n.d.). *Enabling law for the reform of the code on public contracts* (last accessed on 25.10.2022).

notice and the award of a contract to less than 100 days; the reduction of at least 15% of the average time between the award of a contract and the construction of the infrastructure (executive phase); at least 35% of the public administration staff trained thanks to the professionalising strategy of public buyers; at least 20% of contracting authorities using the dynamic purchasing system.

Measure name: Recovery Procurement Platform – Digitalisation and reinforcement of the administrative capacity of contracting authorities¹⁰⁷

The reform aims to modernise the national public procurement system to support development policies, through digitalisation and by strengthening the administrative capacity of commissioning authorities. Three different measures are planned:

1. Training and support, through an intensive information, training and mentoring programme carried out by staff specialised in the management of purchasing procedures, in digital format, and in the use of advanced purchasing and negotiation tools.
2. Definition of advanced purchasing tools, through specific functional Contracts for more efficient project implementation, as well as the training and support services required for their optimal use.
3. Development of the national eProcurement system, through an end-to-end digitalisation of public procurement processes.

Although the reform has not yet started, it aims at the creation of a modern public procurement system by 2026.

4.4. Industrialisation/reindustrialisation

Measure name: Production on brownfield sites

The investment Production on brownfield sites¹⁰⁸ aims at **redeveloping brownfields sites for the production of hydrogen and using them for local transportation and industry**. The investment is part of the second Component of the second Mission (M2C2), which aims at implementing the energy transition through the production and distribution of renewable energies and the enhancement of electricity grid infrastructures.

According to ISTAT, the total area of industrial areas in the country in 2011 was about 9,000 km², an area roughly equal to that of the Umbria region. Most of the areas are strategically located to help build a more granular network of hydrogen production and distribution to neighbouring SMEs. The project aims to promote local hydrogen production and use in industry and local transport, with the creation of so-called hydrogen valleys, industrial areas with a partly hydrogen-based economy.

To keep costs down, brownfield sites already connected to the electricity grid will be used in the first phase to install electrolyzers for hydrogen production by RES over-generation or dedicated RES production in the area. In the first phase, hydrogen will be transported to local industries either by road or, if the brownfield site is already connected to the gas grid, via existing dedicated pipelines mixed with methane gas. In addition, to increase demand, hydrogen refuelling at truck or local public transport stations is envisaged. The project thus has the ambition to give these sites a second life, using their existing infrastructure, if compatible, for a range of energy services. The expected output at this stage is 1–5 MW per site.

¹⁰⁷ See: Italia Domani (n.d.). *Recovery Procurement Platform – Digitalisation and reinforcement of the administrative capacity of contracting authorities* (last accessed on 25.10.2022).

¹⁰⁸ See: Italia Domani (n.d.). *Production on brownfield sites* (last accessed on 25.10.2022).

The plan is to install instruments and tools for the production of hydrogen specifically in brownfield areas that are already connected to the electrical grid. In the first phase, the transport of hydrogen in the local areas will be by truck and via already existing ducts mixed with methane gas. In the second phase, production plants will be used with a medium capacity between 1.5 and 10 MW each.

The redevelopment of the brownfields sites will create 10 hydrogen valleys, or industrial areas, whose economy is based partly on hydrogen, to promote the local production and use of hydrogen in industry and transports. To keep costs down, brownfield sites already connected to the electrical grid will be used in the first phase to install electrolyzers for hydrogen production through RES over-generation or dedicated RES production in the area.

The total cost of the investment is EUR 500 million, which will promote the use of hydrogen in industry and local transport with the final objectives being to have a green and renewable source of energy, to make use of unused industrial spaces, and to create new jobs in the restructuring and modernisation of plants at first and later in the activities of the hydrogen industry.

The measure is compliant with the RRF Regulation¹⁰⁹: it has a lasting impact, contributes to meet the 37% climate expenditure target of the plan and addresses the challenges identified in the 2020 Country Specific Recommendations¹¹⁰. The measure acts in accordance with the recommendation to focus investments on the green and digital transition, in particular on clean and efficient production of energy and sustainable public transport. The indirect environmental impacts of the measures in the Italian PNRR have been evaluated and they were minimised in line with the Do No Significant Harm (DNSH) principle. Moreover, the measure analysed is aimed at increasing the production and distribution of renewable energies for implementing the energy transition.

The first milestone of the investment is set for March 2023 and regards the adjudication of public contracts for projects related to hydrogen production in abandoned industrial areas. According to the Plan's official website this phase has not yet started. In conclusion, by June 2026 the Italian Government expects to complete at least 10 hydrogen production projects with a capacity of at least 1-5 MW each. The plan is for EUR 500 million to be spent from 2023 to 2026: EUR 56 million in 2023, EUR 134 million in 2024, EUR 134 million in 2025 and finally EUR 167 million in 2026.

4.5. Conclusion

Overall, the Italian PNRR presents an ambitious agenda, aimed at furthering the green and digital transition as well as supporting social inclusion. The Plan supports progress in both the private and the public sectors. Support for the private sector (this study reports the example of the Integrated funds for the competitiveness of tourism businesses) focuses on helping private businesses and individuals recover from the pandemic by creating opportunities of employment, with sustainable transition and social inclusion. Particular attention is given to the southern regions and furthering the territorial rebalance.

Italy is currently achieving the planned milestones and receiving good feedback from the EU institutions, as demonstrated by the release of the second tranche of payments recently approved by the EC (on 27 September 2022). However, despite the positive signs, some delays persist. To make sure that the next milestones and objectives are achieved, the government must **ensure adequate administrative structures and good planning capacity**. Even though Italy, as most EU MS, is facing a difficult situation brought about by the Russian military invasion of Ukraine and the subsequent

¹⁰⁹ European Commission (2021c).

¹¹⁰ European Commission (2020a).

energy crises, execution of the Plan cannot slow down when the biggest measures must be implemented.

In this regard, measures such as the analysed “Production on brownfield sites” (see sub-chapter 4.4) are important to address the energy crisis and promote sustainability at the same time. The measure in question contributes to the EU objective of **reducing carbon fossil usage and become less independent from imported oil by incentivising the production and use of hydrogen**.

According to the specifications in the Council implementing decisions,¹¹¹ the Italian PNRR promotes smart, sustainable and inclusive growth across all missions and components with investments and reforms that should have a positive impact on both productivity and competitiveness over the medium and long term. The major reforms concerning the public administration and investments aiming at the digitalisation and the sustainable growth of various sectors of the economy (e.g. the tourism sector) should remove significant bottlenecks in the functioning of the Italian economy and should have a positive effect on productivity, energy efficiency and climate change mitigation.

To ensure the smooth implementation of the above-described **measures the involvement of local authorities is essential**. The implementation of the Plan should guide local authorities towards ambitious and revolutionary objectives for their communities, pushing them to overcome their limits for with a view of a concrete a purpose.

The specifications of the Council also underline that the milestones and targets proposed by the Italian PNRR are “clear and realistic, and adequately reflect the investments and reforms envisaged”. According to the milestones and targets that the country has been achieving, the Plan seems appropriately constructed to realise the intended objectives. However, it also presents some very ambitious reforms concerning the public administration and the justice system, not analysed in this study that must be appropriately assessed and implemented. It is fundamental that the implementation of such big reforms does not result in non-realistic or rushed interventions that do not address the long-term objectives.

¹¹¹ Council of the European Union (2021b).

5. POLAND

5.1. Introduction

The tool for implementing the RRF in Poland is the so-called National Reconstruction Plan (*Krajowy Plan Odbudowy, KPO*).¹¹² The document was sent to the European Commission on 3 May 2021, but was not approved until June 2022. Reasons for this delay included concerns about the rule of law in Poland. This has also been the reason why the EU funds for the implementation of the plan have not yet been made available.¹¹³ The said funds may amount to a maximum of approx. EUR 35 billion. For comparison, state budget revenues are approx. EUR 105 billion.¹¹⁴

The process of preparing the KPO was conducted in a rather disorderly manner, which is reflected in its final shape. Although the KPO was intended to present ordered, wide-ranging reforms of specific areas of the state, it seems that there was no coherent concept as to its shape and content. A wide range of various entities (ministries, state-owned enterprises, state agencies and institutions, and local governments) were asked to prepare project descriptions – proposals of goals for which they would like to receive funds from the KPO. Representative organisations of social partners were formally involved in the work, although their actual impact on the shape of the KPO is debatable, as they themselves admitted.¹¹⁵

In the opinion of the non-governmental think-tank Klub Jagielloński,¹¹⁶ which reviewed all 1000 project descriptions submitted, most of them did not meet the expectations of those responsible for the creation of the KPO, but above all were well below all EC expectations. Work on the KPO dragged on and the consultation process began two months later than originally planned. When drawing up the plan, there was no room for a meaningful role by players other than the most important politicians of the ruling party, Law and Justice (*Prawo i Sprawiedliwość, PiS*). Social partners played a very limited role in this process, as indicated in the Eurofund study.¹¹⁷

The KPO consists of the following components:

Table 4: The composition of the KPO

	Component	Allocated funds – grants	Allocated funds – loans	Share from funding
A	Resilience and competitiveness of the economy	EUR 4.5 billion	EUR 245 million	13.1%
B	Green energy and reduction of energy consumption	EUR 5.7 billion	EUR 8.6 billion	39.8%
C	Digital transformation	EUR 2.797 billion	EUR 2.1 billion	13.6%
D	Efficacy, availability and quality of the health system	EUR 4.1 billion	EUR 450 million	12.6%
E	Green, smart mobility	EUR 6.8 billion	EUR 0.7 billion	20.9%

¹¹² See: Serwis Rzeczypospolitej Polskiej (n.d.) (last accessed on 25.10.2022).

¹¹³ At the time of completion of this report, i.e. the end of October 2022.

¹¹⁴ Data for 2021, Ministerstwo Finansów (2021) (last accessed on 25.10.2022).

¹¹⁵ See: Eurofund (2022).

¹¹⁶ Klub Jagielloński (2021) (last accessed on 25.10.2022).

¹¹⁷ Eurofund, op.cit.

A	Resilience and competitiveness of the economy	EUR 4.5 billion	EUR 245 million	13.1%
B	Green energy and reduction of energy consumption	EUR 5.7 billion	EUR 8.6 billion	39.8%

Based on: Ministerstwo Funduszy i Polityki Regionalnej (2021) (last accessed on 25.10.2022).

The KPO is rather an additional tool for financing development activities, and not a strategic document for the country's development, which should contain comprehensive solutions. To be effective, many of the proposed solutions require additional actions going beyond the time horizon of the RRF, and therefore would require later support from the state's own funds.

5.2. Competitiveness

Measure name: Investments to diversify and shorten the agricultural and food supply chain and build resilience among actors in the chain (A 1.4.1)

In the area of component A of the KPO (Resilience and Competitiveness of the Economy) the following activities are planned: reducing the regulatory and administrative burden; investments for enterprises related to the diversification of activities, and in particular supporting the resilience of SMEs and micro-enterprises in sectors most affected by the Covid-19 pandemic; and reform to improve the competitiveness and protection of producers/consumers in the agricultural sector. The goal of the latter comprises investments to diversify and shorten the agricultural and food supply chain and build the resilience of actors in the chain. This is to be served by the measure listed in the topic, selected for detailed discussion, due to the importance attached by the state in Poland to maintaining the international competitiveness of this sector.¹¹⁸

In 2020 food and agricultural products made up 14.3% of Poland's total exports, having increased their share from 13.3% in 2019.¹¹⁹ The commodity structure of Polish exports of agri-food products was dominated by meat and meat products.¹²⁰

The overriding goal of the planned investment is to increase the competitiveness and resilience of the agri-food and fisheries sectors in Poland. The specific objectives are: (i) to support the green and digital transformation in the agri-food and fisheries sectors; (ii) to shorten the agri-food and fisheries and aquaculture supply chain and build its resilience, in particular by supporting local SMEs, small producers and fishermen; (iii) to avoid food waste and tackle unknowns and technical barriers related to food redistribution.

The investment is to be implemented through the following initiatives:

- Construction and modernisation of local storage and distribution centres, wholesale markets, local food markets and cooperatives, including the modernisation of logistics and ICT infrastructure.
- Support for SMEs and micro-enterprises in the field of agri-food processing, including in the fishery and aquaculture sector, which will cover the purchase of machinery and equipment, including means of transport, as well as the expansion and modernisation of plant infrastructure.

¹¹⁸ See: Ministry of Agriculture and Rural Development (2020) (last accessed on 25.10.2022).

¹¹⁹ See: The First News (2021) (last accessed on 25.10.2022).

¹²⁰ See: Agroberichten Buitenland (2022) (last accessed on 25.10.2022).

- Support for farmers and fishermen in the processing and marketing of agricultural and food products, including the construction and modernisation of infrastructure and the purchase of new machinery and equipment for the processing, transport and storage of products. The support also covers organisation of the online selling of agri-food products along with the organisation of deliveries.
- Support for charities from the agri-food sector for the modernisation of buildings, infrastructure and equipment, including means of transport. The support covers the development of IT systems and digital applications.
- Support for agricultural producers for the implementation of solutions in the field of Agriculture 4.0. It includes the purchase of sensors, tables and digital devices, as well as the purchase and maintenance of digital solutions such as applications and software.
- Support for agricultural and fisheries producers and aquaculture related to the green transition. It includes the renovation of producers' infrastructure, including the replacement of roofs containing materials harmful to health or the environment, thermal modernisation of buildings, replacement of electrical and ventilation systems with energy-saving ones, and the replacement of pole carriers impregnated with creosote in hop plantations.

This measure is worth considering from the perspective of the circular economy. Many companies in the agricultural industry point to this idea as an effective response to the environmental risks they face in their daily operations. However, the circular economy poses a challenge to society as a whole, as it requires a change in thinking regarding the use of resources. By looking at the value creation process of the "from Farm to Fork" EU strategy, manufacturers can seek innovation in terms of the environmental impact of individual processes precisely in the context of using a carbon footprint indicator as well as a water footprint indicator – in terms of optimisation or technology change, but also in terms of consumer education (explaining what specifically translates to environmental impact in the production process).

The measure seems necessary in the context of environmental change and the related adjustment of Polish agriculture (e.g. the modernisation of buildings, construction and modernisation of local storage and distribution centres, and the purchase of machinery and equipment – including means of transport). At the same time, however, actions in the field of training and investment in human competencies in this sector are necessary. If such actions and investments in human capital are absent, the full use of new technical solutions is not possible.

5.3. Business environment/entrepreneurship

Measure name: Public e-services, IT solutions improving the functioning of administrations and economic sectors, and breakthrough technologies in the public sector, the economy and society (C2.1.1)

To increase the use of public e-services, the following packages shall be implemented under this investment:

- The development of e-services in public administration enabling citizens to deal with administrative matters online.
- The construction or development of IT systems for the public administration enabling civil servants to digitalise their activities.
- The digitalisation of the administrative procedures related to construction and spatial planning.

- The digitalisation of services and processes of the National Revenue Administration, including the implementation of the electronic circulation of invoices in business (national e-invoice system).
- The digitalisation of agriculture, including the implementation of geomatics and satellite monitoring in agriculture and the implementation of a digital farmland verification system.
- The implementation of test cooperation mechanisms to stimulate the development and dissemination of breakthrough technologies, for example via a portal integrating smart city services with applications based on Artificial Intelligence and the Internet of Things.

In particular, 39 projects are expected to be developed in order to achieve, inter alia: the construction of nine new or expanded public data sharing and e-service platforms; the construction of 30 new or expanded public IT systems; the implementation of 65 new, modified or integrated public e-services; the provision, adaptation and expansion of 400 e-services, including API services on new or expanded platforms; and finally the implementation of three test cooperation mechanisms to stimulate the use of breakthrough technologies. All new or upgraded e-services with graphical user interface are expected to have at least a fourth level of maturity, which is full electronic case handling (transaction level in the five-stage maturity model). The implementation of the investment shall be completed by 30 June 2026.

This measure should be assessed positively. However, a drawback of this measure is the focus on the number of activities and not their effects, which can be seen in how the indicators are defined. For example, the focus on the number of e-applications that will be created in the course of the digitalisation of the administration, and not on the number of final users. There is also no clear concept indicating which needs are to be served by e-platforms/e-applications. At the same time there seems to be a certain development that can be illustrated by referring to an example that is not directly covered by the KPO but which shows a potential problem. In 2022, the government is to embark on the creation of the Central Pension Information (*Centralna Informacja Emerytalna*, CIE) – a platform on which citizens will have access to all information related to their pension products (both within the Social Insurance Institution (ZUS) as well as voluntary programmes¹²¹). This is intended, in principle, to raise awareness of the need to save for one's post-employment period. The problem identified in opinions on the CIE project is the fact that all this information can already be accessed by citizens online (although, indeed, on various e-platforms). Nevertheless, not having to remember passwords to several online platform accounts in favour of one password for a single account seems an unconvincing argument in favour of spending PLN 245 million to build the CIE. This seems to be an example of digitalisation for its own sake – the resulting tool will potentially be better than those already available, but it is doubtful that this in itself can be a sufficient argument to describe such spending as rational.

5.4. Industrialisation/reindustrialisation

Measure name: Energy storage systems (B 2.4.1)

In terms of industrialisation as broadly understood, the KPO envisages the following measures: increasing the number of investment areas and reforming spatial planning; creating favourable conditions for the development of the pharmaceutical and medical devices sector; increasing the

¹²¹ IKE – Indywidualne Konto Emerytalne, IKZE – Indywidualne Konto Zabezpieczenia Emerytalnego, PPE – Pracownicze Plany Emerytalne, PPK – Pracownicze Plany Kapitałowe. All of the above are forms of additional saving for pension, financed by the employee, the employer (or jointly) and subsidised or not by public funds.

production of energy from renewable sources (development of offshore wind energy); and creating a legal framework for the development of energy storage and investments in energy storage systems.

From the point of view of ensuring the country's energy security, the initiative on energy storage is particularly important. It includes, firstly, **the reform of the regulatory environment**, and for example frees electricity storage from the tariff obligation and eliminates the double charging of network fees. The proposed tariff framework for storage is to be non-discriminatory and cost-reflective. Implementation of this reform was to be completed by 30 June 2021.

The purpose of investments in storage systems in turn is to ensure the continuity of supplies to customers and to increase the efficiency of using renewable energy sources by investing in technologies that facilitate the balancing of electricity in the power system. The investment will consist in the modernisation of existing pumped storage hydropower plants. It covers the **adaptation of installations to current and future regulatory and market needs in order to ensure profitable power plant operation**. It includes modernisation of the upper reservoir (renovation of the concrete upper wall), the upper water intake and related tunnels, and at least three of the four hydro generators of pumped storage power plants. The investment will lead to an increase in the availability and efficiency of the power plants, and will also finance the purchase and assembly of reserve electricity storage, each with a capacity of 4–5 kWh. The investment is planned to be completed by 30 June 2026.

There are certain synergies with the planned increase in energy storage production in Poland that can be pointed out here. Energy storage facilities are one of the key elements stabilising the National Electricity System. In Poland the system will ultimately be based on two basic pillars: nuclear power, and renewable energy sources. On 30 May 2022, a project to build a battery cell plant for energy storage was presented in Katowice. The plant is to be built on a post-mining site in Jastrzębie-Zdrój, and is expected to have an annual capacity of 1.2 GWh, and eventually as much as 15 GWh (as the market develops). The cell factory is to operate based on Czech HE3DA technology. Project initiators from the Silesian Energy Storage Foundation anticipate trial production to begin in 2024.¹²² The production of energy storage facilities is also being launched by other entities.¹²³ One could also mention that Europe's largest battery energy storage facility is to be built in Poland's Silesia region.¹²⁴

This initiative should be seen against a broader background. It can be noted that the European Energy Storage Association (EASE), along with 12 national energy storage associations operating across Europe, has written an open letter to the EC expressing concern about the lack of attention and underfunding of energy storage technologies in energy recovery. One of the letter's signatories is the Polish Chamber of Energy Storage and Electromobility (*Polska Izba Magazynowania Energii i Elektromobilności*)¹²⁵.

The development of energy storage (within the framework of existing technologies) is, on the one hand, absolutely necessary in the context of increasing the share of renewable energy in the energy mix. On the other hand, it is indispensable as an impulse for research into the development of new energy storage solutions. Thus, placing this measure within the KPO responds to the need expressed by business representatives.

¹²² See: Globenergia (2022) (last accessed on 25.10.2022).

¹²³ See: Bielińska, K. (2022) (last accessed on 25.10.2022).

¹²⁴ See: Śląski Urząd Wojewódzki w Katowicach (2022); MAGAZYN ENERGI (2022) (last accessed on 25.10.2022).

¹²⁵ See: CIRE (2021). (last accessed on 25.10.2022).

It should also be noted that the measure described above can be considered a part of EU policy on energy storage.¹²⁶ The main energy storage reservoir by far in the EU is pumped hydro storage, but battery projects are increasing according to a study on energy storage published in May 2020. Besides batteries, a variety of new technologies for storing electricity are being developed at a fast pace and are becoming increasingly market-competitive.¹²⁷ Storing energy so it can be used later, when and where it is most needed, is crucial for increased renewable energy production and for energy security.

In summary, the scale of this measure is probably not sufficient, but it is undoubtedly necessary for changing the future energy mix and, as such, is part of numerous EU policies. Due to delays in the implementation of the KPO, it is not possible to comment on the implementation of the indicated solutions.

5.5. Conclusion

At the time of writing this report, Poland has still not received the first tranche of RRF payments, due to the dispute over whether a milestone has been reached in the form of restoring the rule of law and independence of the judiciary. Due to this delay, it is not possible to present the implementation process of certain activities or evaluate this process. However, some comments may already be made.

A preliminary assessment of selected examples of actions planned by the Polish government as part of the use of funds from the RRF requires great caution as to whether the KPO provides answers to the challenges related to smart, sustainable and inclusive economic growth. On the one hand, initiatives such as investing in the agri-food sector, improving the energy mix through the development of energy storage and the digitalisation of the business environment address evident deficiencies in the Polish economy.

However, on the other hand it is difficult to observe anything more in these activities than the implementation of individual, perhaps necessary activities that do not bring about a synergy effect. The basic assumption of this mechanism was that the common debt should be a source of investments in stable sources of growth, and not serve to fuel consumption. At the same time, the investments were to be related to the implementation of the EPSR and the implementation of country specific recommendations (CSRs) received by the country under the European Semester. However, the linkage of individual activities to the Pillar or to CSR is not visible in the KPO (in purely technical terms, individual activities are not “linked” to Pillar points or individual CSRs). Knowledge on the EPSR or the mechanisms of the European Semester is not common in the Polish society. Thus, the lack of references in the KPO to the Pillar has not caught the public eye.

One of the major development limitations in Poland is the low quality of the laws enacted and the lack of assessment of the effects of the regulations introduced (ex post evaluation of the laws passed).¹²⁸ The issue of improving the legislative process also appeared in the subsequent CSRs for Poland. The KPO attempts to address these challenges. The objective of the reform is the adoption of an amendment to the Rules of Procedure of the Sejm,¹²⁹ the Senate and the Council of Ministers, which would introduce a mandatory impact assessment and public consultation for draft laws proposed

¹²⁶ See: European Commission (n.d.). *Energy storage* (last accessed on 25.10.2022).

¹²⁷ European Commission (2020b) (last accessed on 25.10.2022).

¹²⁸ See for example: Frączak, P. et al. (2022) (last accessed on 25.10.2022).

¹²⁹ The lower house of the Polish Parliament; the Senate is the upper house of the Polish Parliament.

directly by deputies and senators. The reform will also limit the use of fast-track procedures to well-specified and exceptional cases. Implementation of the reform was to be completed by 30 September 2022.

As far as the authors are aware, no parliamentary work is taking place in this area at the time of writing this report (December 2022), even in the planning stage.¹³⁰

¹³⁰See: Kubicki, P. (2022) (last accessed on 25.10.2022).

6. CONCLUSIONS & RECOMMENDATIONS

6.1. General conclusions

All measures analysed as part of this study contribute to the pillar “Smart, sustainable and inclusive growth, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong SMEs”, as stated in the Article 29 (3) of the RRF Regulation¹³¹; additionally, they also contribute to green and digital transitions.

Targets and milestones set for the majority of the analysed measures seem to be realistic and enhance the probability of completing the planned projects on time, thus seem appropriate for monitoring towards achieving the stated objectives. They could, however, be more quality-oriented in order to ensure good quality of laws on the basis of which reforms and investments are implemented. The analysed measures are also **tailored to the needs of specific EU MS**, including those related to the economic and social post-Covid-19 pandemic recovery.

However, a question might arise as regards the role of the RRF funding in the general reforms’ landscape of the analysed EU MS. More specifically, for example, the majority of measures analysed as part of this study that were included in the NRRPs are a **continuation of previous activities or projects**, or are to implement the previously (meaning: in pre-Covid-19 pandemic time) agreed reforms. This is the case, for example, of the implementation of the Online Access Act in Germany where it is to be financed solely from the EU funds. Also the discussion on the ASAP law in France commenced before the pandemic and its implementation was included in the French RRP but in this case is to be cost-free. In other instances the RRF funds provide **additional cash injection to the existing activities and projects**, and allow to expand their scope (e.g. municipal living labs for the energy transition in Germany or the additional funding made available for the French CNES).

Some of the analysed measures **promote public-private and private-private sector collaboration and make use of other sources of funding to leverage the impact of the stimulus package** (e.g. collaborative projects in the German automotive industry or co-financing aid for the Italian travel industry from the EIB sources). Such approach contributes to ensuring the sustainability of the measures in question as, on the one hand, it ensures the dispersal of knowledge and know-how and, on the other, reduces reliance on a single source of funding. At the same time many of the analysed measures apply a **project-based approach** what in practice should mean open competition for funding as well as better monitoring and quality of the interventions undertaken.

In view of the Russia’s invasion of Ukraine and the resulting energy and economic crises the need to **invest in strategically important areas across the EU, including food security, defence and energy**, became even more evident. From this perspective the relevant measures included in NRRPs of Germany, France, Italy and Poland have to be assessed positively. Some, however – like in case of investments of energy storage systems in Poland – if were to bring durable outcomes would have to be better designed and strengthened.

Main characteristic of the analysed measures for Germany, France, Italy and Poland have been included in the table below:

¹³¹ European Commission (n.d.). *Recovery and Resilience Facility*.

Table 5: Main characteristics of the analysed measures for Germany, France, Italy and Poland

	Germany	France	Italy	Poland
Competitiveness	<p>Investment programme for vehicle manufacturers/ supplier industry</p> <ul style="list-style-type: none"> • Digitisation of production • Supporting innovative products & building innovation clusters • Project-based approach • Companies' support, incl. SMEs • Multi-stakeholder collaboration 	<p>Space sector</p> <ul style="list-style-type: none"> • Fostering innovation • Direct and indirect support • Project-based approach • Multi-stakeholder cooperation 	<p>Integrated funds for the competitiveness of tourism businesses</p> <ul style="list-style-type: none"> • Involves a number of specific instruments such as tax credit, guarantee fund or a special thematic fund • Involves support for small and medium tourist businesses 	<p>Investments to diversify and shorten the agricultural and food supply chain and build resilience among actors in the chain</p> <ul style="list-style-type: none"> • Support green and digital transformation in the agri-food and fisheries sectors • Support local SMEs, small producers and fishermen • Involves a number of specific actions such as modernisation of storage systems, purchase of machinery etc.
	Business environment/ entrepreneurship	<p>Digitalisation of the administration – implementation of the Online Access Act</p> <ul style="list-style-type: none"> • Digitalisation of public services • Fully financed from the RRF 	<p>Law for the acceleration and simplification of public action (ASAP)</p> <ul style="list-style-type: none"> • Simplification of administrative procedures • Decentralisation of administrative decisions • Included in the NRRP but no-cost 	<p>Reform of public administration / Reform of the legislative framework on public procurement and concessions / Recovery Procurement Platform – Digitalisation and reinforcement of the administrative capacity of contracting authorities</p> <ul style="list-style-type: none"> • Digitalisation of public services • Simplification of administrative procedures • Encouragement of recruitment into public administration
Industrialisation/ reindustrialisation	<p>Investment: Municipal living labs</p>	<p>Improving the resilience of electricity networks</p>	<p>Hydrogen production on brownfield sites</p>	<p>Energy storage systems</p>

	<p>for the energy transition</p> <ul style="list-style-type: none"> Investment to support energy transition Innovative solutions in energy supply Project-based approach 	<p>and energy transition in rural areas</p> <ul style="list-style-type: none"> Improvement of the quality of electricity distribution Implemented through the previously established fund Project-based approach 	<ul style="list-style-type: none"> Redevelopment of brownfields sites for the production of hydrogen Project-based approach 	<ul style="list-style-type: none"> Includes the reform of the regulatory environment and relevant adaptation of installations
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Source: National Resilience and Recovery Plans of Germany, France, Italy and Poland.

6.2. Recommendations

The following set of recommendations can be formulated based on the analysis carried out:

- Comparing to other NRRPs, the activities planned by Poland have a rather long time horizon. Taking into account that as of November 2022 Poland has not yet started RRP implementation, there is a risk that some of the planned activities might not be concluded by August 2026. Provided it gets the funding, **Poland should provide realistic scenarios for the implementation of the proposed measures.**
- Investments in the energy systems** of EU MS – including investments in the electricity network in order to make it able to connect and integrate renewable energy projects that are often located in rural areas – are needed in order to meet the climate goals and reduce dependence on Russian imports. Investments related to **hydrogen production and enhancing its use in industry** are also crucial from this point of view. Related measures have been envisaged in the RRP by all analysed EU MS but the scope of the analysed activities seems to be too modest to meet the challenges, especially those related to the current energy crisis caused by the Russian aggression on Ukraine. One of the EC's replies to the energy crisis is the REPowerEU package of significant far-reaching measures aimed at reducing EU dependency on Russian fossil fuels which was provisionally agreed by EU law makers in December 2022. In future, EU MS should seek additional opportunities to fund relevant additional or supplementing measures with the use of REPowerEU funding.
- Changes envisaged in the RPPs relating to **the functioning of public administration** (including the digitalisation of services) must go hand in hand with **investments in people, equipment, training and continuing education**, at all levels of governance. If such investments should be necessary, MS have the possibility to reinforce their NRRPs by adding new reforms and investments to be financed through loans. The RRF Regulation sets the maximum amount of loans to EUR 360 billion (in 2018 prices), as of July 2022 around EUR 165 billion of loan support have been committed.¹³² To leverage their impact, RRF loans can be combined with private funding.
- EU MS should guarantee the **high quality of laws on the basis of which reforms and investments included in RRP are implemented.** In this context the applied milestones and targets could include more quality-related requirements, in addition to quantitative ones. Among

¹³² European Commission (29.7.2022). *Report from the Commission to the European Parliament and the Council. Review report on the implementation of the Recovery and Resilience Facility.* https://commission.europa.eu/system/files/2022-07/com_2022_383_1_en.pdf.

the analysed EU MS, the low quality of laws enacted and the lack of assessment of the effects of the regulations is of particular concern in Poland.

- As exemplified by the ASAP law reform in France, **deregulatory aspects of enacted laws should be properly taken into account and revisited**, if necessary. This is especially important in view of the “do no significant harm” principle, a systematic assessment of which should be carried out by EU MS. With rapidly changing external and internal circumstances and the EU MS’ willingness to respond to them quickly, the principle of respect for the environment must be observed.

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ANNEX

Methodology for selecting the measures

The methodology for selecting the measures that are the subject of analysis in this report was as follows.

In the first stage, individual measures were extracted from individual National Recovery and Resilience Plans (NRRPs) from the countries selected as cases in this report.

Next, a generalisation and tagging of the extracted measures was carried out based on their purpose and content. This allowed related measures from different NRRPs to be linked together via common tags. A bottom-up approach was used in this regard, so that the tagging process was based on actually existing measures rather than theoretically imposed ideas.

The measures generalised and tagged at the previous stage were then assigned to the categories selected jointly by CASE and the European Parliament. These will be: (1) competitiveness, (2) business environment & entrepreneurship, and (3) industrialisation & reindustrialisation.

A matrix was prepared with measures, tags, categories and other relevant information documenting and facilitating the entire process.

Finally, a selection of measures that became the subject of analysis was carried out, based on the following criteria:

- the presence of these measures in all (most) of the NRRPs analysed;
- comparability of the measures between the different NRRPs;
- the qualitatively assessed impact of individual measures;
- and equal representation of selected categories of measures.

The focus was on selecting those measures that were already being implemented, with the caveat that due to the delay in implementation of some NRRPs, this would not be possible in every country selected as a case (e.g. the case of the Polish NRRP).

As a result, in each of the four countries three measures from each of the three categories were analysed and compared with other similar measures from other NRRPs under review.

This briefing paper provides an initial analysis of selected measures proposed by Germany, France, Italy and Poland in their respective Recovery and Resilience Plans (RRPs), and focuses on the areas of competitiveness, business environment/entrepreneurship, and (re)industrialisation. As the analysis has shown, targets and milestones set for the majority of the analysed measures seem to be realistic and enhance the probability of completing the planned projects on time; they are also tailored to the needs of specific EU MS.

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