

RECOVERY FUND

A great opportunity to restart and build our New Normal



WHAT ARE WE DISCUSSING?

| | |
|--|-----------|
| Scenario | 3 |
| 1 What is Recovery Fund? | 7 |
| 2 Next Generation EU: a European Challenge | 11 |
| 3 National Recovery and Resilience Plans | 14 |
| 4 Our Contribution To The Digital Transformation Of Italy | 19 |
| 5 Next Steps | 35 |
| 6 Working together for the New Normal | 39 |

AUTHORS

Barbara Balzano

Responsible for the European Funds Competence Center within DG PA and Health, Engineering

✉ barbara.balzano@eng.it

[in](#) [Barbara Balzano](#)



Specialized in European Union law and structural funds, Barbara has been dealing with cohesion policies and interventions for economic development for over 20 years. She has worked in support of numerous public administrations in the design of complex interventions for reorganization, strengthening of administrative capacity and digitization of processes.

Emiliano Coraretti

Content Specialist Group Marketing, Engineering

✉ emiliano.coraretti@eng.it

[in](#) [Emiliano Coraretti](#)



Emiliano has 20 years of experience in the journalism and communication sphere, having worked for the l'Espresso Editorial Group. In Engineering, he has overseen many of the company's communication projects and web portals. Today, he is responsible for the creation of Engineering's main content across the various platforms.

WITH THE COLLABORATION OF:

Antonietta Branni

Senior Offer Development Manager Municipia, Engineering

Antonio Delli Gatti

Healthcare Division Director, Engineering

Alessia Freda

Communication Specialist Municipia, Engineering

Piero Luisi

Smart Government Innovation Director, Engineering

Lanfranco Marasso

Smart City Program Director, Engineering

Stefano Picchio

Business Development, PA & Healthcare Department, Engineering

Alessandro Scandurra

Senior manager, Technical Director PA Central Italy, Engineering

Domenico Vaccaro

Engineering International Belgium's General Director

Dario Buttitta

General Director Public Administration & Healthcare, Engineering

Fabrizio Fontanesi

Director, Regulatory Consulting and Business Development, Energy & Utilities, Engineering

Matteo Lovato

Senior Sales Executive, Engineering

Massimiliano Lunghi

Commercial Director of the Industrial Manufacturing market, Engineering

Antonio Nardelli

Commercial Director of the Public Administration, Engineering

Carlo Risi

Innovation Department, Energy & Utilities, Engineering

Valerio Sensi

PA and Healthcare Marketing & Communication Manager, Engineering

Sauro Zuccali

Business Development, Digital Finance, Engineering

Scenario

On 19 February 2021, Regulation (EU) 2021/241, establishing the Recovery and Resilience Facility, better known as the 'Recovery fund', came officially into force.

This is the main instrument of the **Next Generation EU** Plan envisaged in the new EU Budget in response to the crisis and the challenges generated by the Covid-19 pandemic.

From a technical and financial viewpoint, the novelty lies in the possibility for the European Commission to take out loans, on the capital markets, that can be used in addition to the resources of the "ordinary" budget plan to boost the capacity to react to the crisis and adopt measures for recovery.

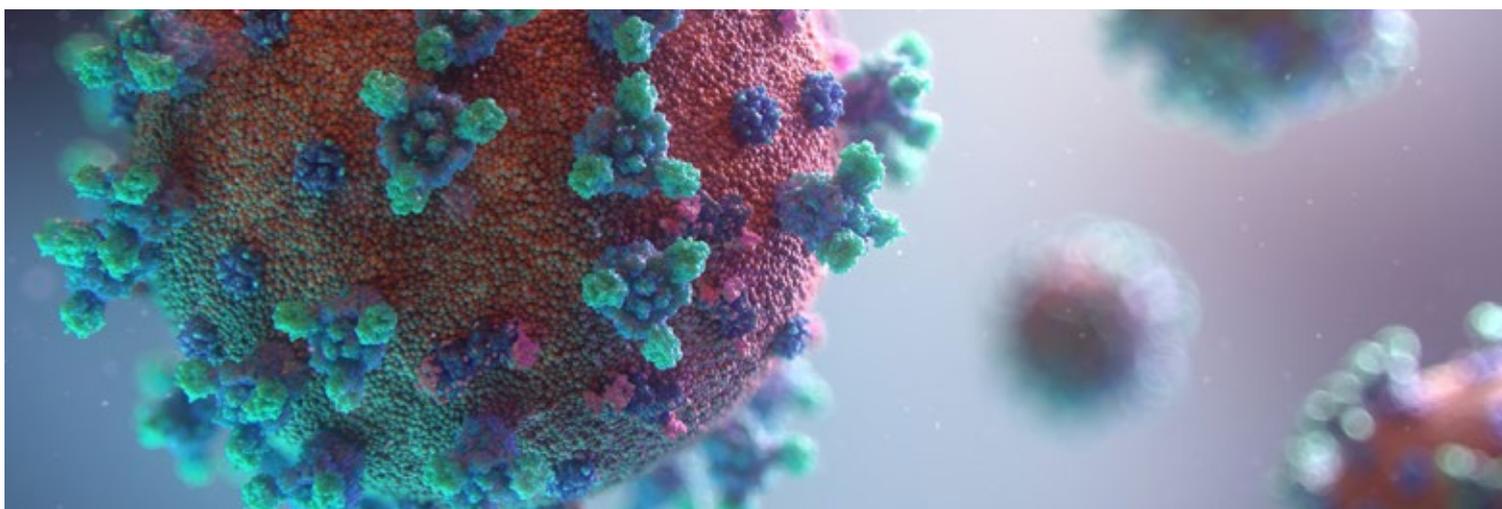
The funds of the "facility", totalling 572.5 billion Euros at 2018 prices, will be managed "directly" by the Commission and made available to the Member States who request them in the form of grants and loans (to be paid back over a long period and at favourable conditions), but in return for specific reforms and investments.

Mobilising the instrument responds to the more general need to ensure the mitigation of shocks generated by the crisis, thereby contributing to the strengthening of economic and social cohesion through measures that allow the Member States to embark on a swift and sustainable long-term recovery, in keeping with the perspective launched shortly before the pandemic in the 'European Green Deal'.

According to the European guidelines, investments in green and digital technologies, skills and processes in several key sectors of the economy will help create jobs and sustainable growth and enable the Union to make the most of the opportunities to reposition itself in the global race for recovery.

For these reasons, the governance of the Recovery Fund is closely integrated with the economic policy coordination process regulated in the 'European semester' system, and it is in this perspective that we should examine the real scope and constraints as well as the opportunities arising from it.

This implies, first and foremost, that the **Recovery Plans** or "plans for recovery and resilience" will have to be coordinated and coherent with national reform plans. They will also need to be aligned with all other programming instruments that contribute to the implementation of EU development and cohesion objectives, in particular the Partnership Agreements and Operational Programmes adopted under the EU structural and investment funds.



For this purpose, the Commission has indicated six sectors in which the States can choose to invest:

- green transition;
- digital transformation;
- smart, sustainable and inclusive growth, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong small and medium enterprises (SMEs);
- social and territorial cohesion;
- health, and economic, social and institutional resilience;
- policies for children and young people, such as education and skills.

On 15 October 2020, the information phase began with a meeting in Brussels between the Governments of the States concerned to define the national recovery and resilience plans to send by 30 April 2021.

The operational tool to define national strategies for use of the RRF is the national recovery and resilience plan (NRRP), which Member States have developed in accordance and integration with the national reform and investment programme envisaged by the governance mechanisms regulating the European Semester.

The requirements for accessing the resources include:

- **a clear explanation of the responses** to the economic and social situation of the Member State concerned and in relation to the six pillars, taking into account any specific challenges;
- **the detailed set of measures for monitoring and implementation**, including milestones and targets and estimated costs, as well as the expected impact of the plan itself on growth potential, job creation and economic, social and institutional resilience, including through the promotion of policies for children and the youth, and on the mitigation of the economic and social impact of the Covid-19 crisis, contributing to the implementation of the European Pillar of Social Rights;
- **the measures that are relevant for the green transition**, including biodiversity, and the digital transition, with an explanation of how they contribute to effectively addressing the relevant country-specific challenges and priorities identified in the context of the European Semester;
- **the expected contribution** to gender equality and equal opportunities for all;
- **a summary of the consultation process** conducted with relevant national stakeholders (including with the Regions, in particular).



Italy has submitted the latest version of the plan in accordance with the 30 April deadline, following intense discussions with EC services to hone and refine the document as best as possible.

The document was approved by the EC on 22 June last and by ECOFIN on 13 July. The potential resources available to Italy amount to 191.5 billion euros, of which 68.9 billion euros is represented by subsidies and 122.6 billion euros by loans. The first 70 percent of the subsidies is already fixed by the official version of the RRF Regulation, while the remainder will be definitively determined by 30 June 2022 based on the GDP trends of the Member States for 2020-2021, as reported in the official statistics. In any case, the amount of RRF loans to Italy was estimated based on the maximum limit of 6.8 percent of gross national income, as determined by the Commission's task force.

With regard to the 6 Recovery Instrument missions, the government has assigned 59.47% of resources to the green transition, 40.32% to digitalisation, 30.88% to universities and research, 25.40% to infrastructures for sustainable mobility, 19.81% to social inclusion and 15.63% to health.

In addition to the NGEU resources, the plan also considers the complementary resources of the Recovery Assistance for Cohesion and the Territories of Europe Package (REACT-EU), which represent 13.5 billion euros, and the National Fund of 30 billion euros, allocated according to multiannual budgetary slippage.

For Italy, and for Europe as a whole, the Recovery Fund will be the most important opportunity to unleash potential at a highly critical time. As we said in the **White Paper Engineering The New Normal**, Covid-19 has not only uncovered the things that did not work, but has also significantly accelerated the Digital Transformation, which has now become a priority for both public organisations (especially public administrations) and companies. The time has now come to turn this sudden push for innovation, which came about at a time of great emergency, into a process that can revolutionise the Country. **The Recovery Fund must become an opportunity not only to fix things that didn't work, but to apply and speed up that Explore & Evolve**, which we have identified as the last of the First Steps designed to support our partners in building their New Normal.

For over 40 years we at Engineering have been helping our stakeholders to find, manage and evolve their Digital Transformation strategies. We do this using our technological skills and our knowledge of the markets, in the firm belief that innovation comes about where business needs meet opportunities provided by technology, creating new digital ecosystems. We will do this also and above all now that the Recovery Fund will push Italy not only to invest, but to finalise those reforms that will change its face and ambitions. It is a drive towards the future that will find the fundamental engine for making our Country more competitive, more modern, and more sustainable in a total and systemic digitalisation, which we have always supported and enabled in all sectors.



From the first tactical responses to react and manage the crisis to the definition of a strategy to explore and evolve new paths of Digital Transformation

1 WHAT IS RECOVERY FUND?



On 16 December 2020, after lengthy negotiations, the European Parliament (and the following day the European Council) approved the Multiannual Financial Framework (MFF) for the years 2021-2027.

This new MFF, worth 1,074.3 billion euros, was strengthened by the Next Generation EU (NGEU), which allows the European Commission to take out loans up to 750 billion euros on the capital markets on behalf of the EU, to be used solely to deal with the consequences of the pandemic. Specifically, 390 billion euros are earmarked for grants and 360 billion euros for loans.

The NGEU is therefore an emergency, temporary and one-off instrument that will reinforce the EU budget with new funding to be used by 2026.

The NGEU is structured around 3 pillars:



**HELPING
MEMBER STATES
TO RECOVER**



**DRAWING
LESSONS FROM
THE CRISIS**



**BOOSTING THE ECONOMY
AND SUPPORTING
PRIVATE INVESTMENTS**

The most substantial instrument envisaged in the package is the Recovery and Resilience Facility (R&RF), also known as the 'Recovery Fund'. This is the main instrument of the NGEU, as it will provide unprecedented support of 672.5 billion euro in loans and grants.

Of these resources, 70% must be committed by 2022, and the remaining 30% by 2023: it involves legally binding commitments, and therefore the result of careful operational planning to ensure that these sums are used by 2026.

The aim of the Recovery and Resilience Facility is to provide large-scale financial support for reforms and investments undertaken by the Member States, with the dual purpose of mitigating the social and economic effects of the pandemic and making EU economies more sustainable, resilient and prepared for the challenges of the green and digital transitions.

The two underlying principles of the European strategy for recovery and growth are:

- **the European Green Deal**, with which the EU commits to achieving climate neutrality by 2050 through a cost-efficient, equitable and socially balanced transformation of Europe's society and economy;
- **a more widespread diffusion and adoption of digital technologies** that can make Europe a leader in the transformation process.

Europe's digital challenge

The Covid-19 pandemic demonstrated the importance and centrality of digital technologies in our daily lives.

The impact of the crisis could have been much worse without digital means, structures and skills. Digital technologies are not only changing the way we communicate, but also the way we live and work. They also have the potential to provide solutions for many of the challenges facing Europe and Europeans in general. Supported by appropriate infrastructures, they can facilitate teleworking (not merely as an emergency solution but as a structured mode of operation), e-commerce and online retailing. Not to mention the important impact they can have on the world of healthcare, which includes the provision of remote healthcare services as well as the collection of data that can be combined with Artificial Intelligence to contribute significantly to scientific research, including the discovery of new vaccines.



The crisis has demonstrated not only the importance of these technologies and the opportunities they offer, but also the limits and risks associated with their non-strategic use exclusively in emergency situations. This is where the Recovery Fund plays a key role.

These funds are the basis for achieving key objectives such as:

- the development of the next generation of digital technologies;
- accelerating the deployment of secure, high-capacity network infrastructures;
- improving the European Union's ability to protect itself against cyber threats;
- unleashing the full potential of technologies to achieve the ambitious goal of a carbon-neutral EU by 2050.

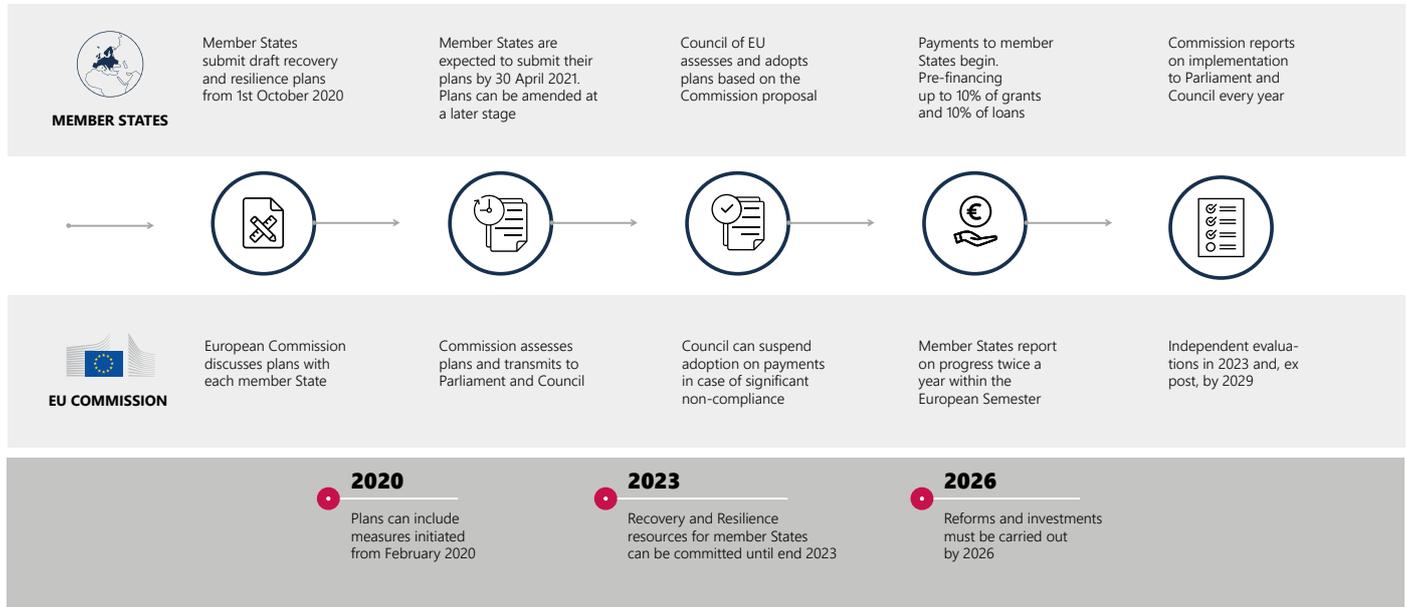
The changes forced by the pandemic have driven a big 'digital leap', even in countries considered to be behind in terms of digital transformation - but we still need to make sure that no one is left behind again. The model adopted by Greece, which has long been at the bottom of the European digital economy league table, should give pause for thought. Greece has announced that it will invest more than a fifth of the funds it receives in this transition process, with more than 400 projects - ranging from digital infrastructure to strengthening cybersecurity - compiled in what has been called the 'Digital Transformation Bible 2020-2025'.

As European Council President Charles Michel said: "Technological progress is pointless if it doesn't make people's lives better". For this reason we must make sure these technological developments actually advance the basic values of our European societies.

2 NEXT GENERATION EU: A EUROPEAN CHALLENGE



In order to access the **Recovery and Resilience Facility**, Member States worked out Recovery and Resilience Plans that incorporate reforms and investments for the next five years, to be implemented by 2026.



Therefore, the plans outline a coherent package of reforms and investments to address the challenges identified in the context of the European Semester, in particular those related to green and digital transitions.

In transposing these recommendations into specific reforms and investments, Member States should focus on those that will have the most lasting impact and strengthen growth potential, job creation, health systems, economic and social resilience and regional cohesion.

Specifically, the Commission assessed national plans that meet the following targets:

- **at least 37%** of climate-related expenditure in the areas of energy, transport, decarbonisation of industry, circular economy, water management and biodiversity (in line with the National Climate Plan);
- **at least 20%** of expenditure relating to digitisation, with reforms and investments that improve connectivity, the development of digital skills at all levels (in particular in PA), facilitate the development of cutting-edge digital capabilities (AI & Artificial Intelligence, Cybersecurity, Cloud infrastructure and services, and Blockchain).

Finally, all reforms and investments must ensure equal opportunities, inclusive education, fair working conditions and adequate social protection.

The funds that the Member States will receive under the Recovery and Resilience Facility will be in addition to any funding they normally receive through the Structural Funds under the EU Cohesion Policy or from other EU sources. For this reason, the States have to ensure that they will work in synergy and together with all the resources received, with the possibility of combining funding from the different instruments to avoid duplication.

The Recovery Fund will be particularly beneficial for those States that use it in projects that take into account the focus and constructibility of their projects.

Since the time horizon for the commitment of funds is 2023, and since they have to be used by 2026, Member States will have to focus on nationally managed, large projects that are at a fairly advanced stage of preparation.

Our NRRR was approved by the EC on 22 June last and by ECOFIN on 13 July.



3

NATIONAL RECOVERY AND RESILIENCE PLANS



The National Recovery and Resilience Plan, as highlighted by Mario Draghi in his speech to the chambers on 26 April 2021, has **three main objectives**.

- The first pressing goal lies in repairing the economic and social damage caused by the pandemic crisis.
- The second medium to long-term objective addresses some weaknesses that have affected economic and social assets for decades: persistent territorial gaps, gender disparities, weak productivity growth and low investment in human and physical capital.
- Finally, the plan resources will be used to boost the ecological transition.

The resources earmarked for Italy equal 191.5 billion euros, of which 68.9 billion euros is represented by subsidies and 122.6 billion euros by loans. In addition to the NGEU resources laid out above, the plan also considers the complementary resources of the **Recovery Assistance for Cohesion and the Territories of Europe Package (REACT-EU)**, which represent 13.5 billion euros, and the National Fund of 30 billion euros, allocated according to multiannual budgetary slippage.

The first advance payment of 13%, amounting to some 25 billion euros, is scheduled for July and almost 14 billion euros will be spent by December. The projects and investments will reach their peak in the middle years of the plan, around 2023.

Furthermore, an additional 26 billion has been allocated for the construction of specific infrastructure works by 2032. Finally, the resources relating to the cohesion policy from the "ordinary" multiannual budget should not be overlooked. Discussions with the European Commission Offices to define a new partnership agreement for the 2021-2027 Structural Funds have reached an advanced stage. The overall endowment of available resources amounts to approximately 83 billion euros (including co-financing).

Furthermore, the Development and Cohesion Fund for 2021-2027 (with a budget of 50 billion euros assigned by the 2021 Budget Law, to which a further 23 billion will be added by the 2022 Budget Law) must be used in line with the sectoral investment and reform policies envisaged in the NRRP, based on the principles of complementarity and additionality of resources. **In accordance with this objective, the NRRP must plan for the national implementation of the 2021-2027 Fund**, with a value of approximately 15.5 billion euros, to accelerate the availability of resources and investments. These resources will be reintegrated into the fund, thereby ensuring full additionality.

On 15 October 2020, informal discussions began with the European Commission on the draft Plan.

On 11 January 2021, the **Council of Ministers approved the new draft of the Recovery Plan**, which was submitted for negotiation by the European Commission by 30 April 2021.

The bearing in mind that this draft is being reviewed and finalised by the new Government, the following is a brief overview of what is currently outlined in the document.

Our National Recovery and Resilience Plan (NRRP) is developed around three main axes:



**DIGITISATION
AND INNOVATION**



**ECOLOGICAL
TRANSITION**



**SOCIAL
INCLUSION**

The plan is then based on 3 horizontal dimensions:

- equitable territorial distribution of resources and interventions: to be implemented in strategic coherence with the 2030 Plan for the South and the coordination of implementation with European and national cohesion policies, as defined in the Partnership Agreement for the 2021-2027 programming cycle;
- gender equity;
- 2030 Agenda for Sustainable Development for people, planet and prosperity.

The challenges of the NRRP will be addressed through **6 missions organized in 16 components:**



**DIGITISATION, INNOVATION
AND COMPETITIVENESS
OF CULTURE AND TOURISM**



**GREEN REVOLUTION
AND ECOLOGICAL
TRANSITION**



**INFRASTRUCTURE
FOR SUSTAINABLE
MOBILITY**



**EDUCATION,
TRAINING,
RESEARCH**



**COHESION
AND
INCLUSION**



HEALTH

As required by the EC guidelines and the specific recommendations for Italy for 2019 and 2020, the plan is based on a series of reforms in order to enable the entire strategy.

To this end, the plan covers three different types of reforms:

- **Horizontal or contextual reforms**, which are of general interest to all the plan missions, consisting of structural innovations to improve the system in terms of equity, efficiency and competitiveness and, as a result, the economic climate of the country;
- **Enabling reforms**, i.e., functional interventions to ensure the implementation of the plan and to remove the administrative, regulatory and procedural obstacles that may affect the economic activities and the quality of the services provided;
- **Sectoral reforms**, which are contained within the individual missions. These regulatory innovations are tied to specific areas of intervention or economic activities, working to introduce more efficient regulatory and procedural regimes in the respective sectors.

Finally, in addition to these types of reforms, there are further measures which, although not included in the scope of the plan, are concurrent to the achievement of the general objectives of the NRRP. For the implementation of the plan, these accompanying reforms must include the interventions planned by the government to ensure the rationalisation and fairness of the tax system and to expand and strengthen the social safety net.

The areas covered by horizontal reforms include:

- The justice system: implementing legislative reform and reorganisation measures, in addition to strengthening the digitalisation of justice through the use of advanced knowledge tools, document recovery, software and technological upgrades, and further strengthening telematic trials (civil and criminal). Furthermore, the plan aims to ensure better access to jurisprudential sources through the improvement of technological platforms and full public access.
- Public Administration: working to bridge structural gaps and delays in terms of regulatory and administrative simplification and the digitalisation of procedures.

There are four key concepts:

- access, to streamline and make selection procedures more effective and targeted and to encourage generational turnover;
- sound administration, to simplify and digitalise rules and procedures;
- skills, to align knowledge and organisational abilities with the new needs of the world of work and modern administration;
- digitalisation, a comprehensive tool to better implement these reforms.

In terms of the plan's operations, enabling reforms are linked to regulatory simplification and the promotion of competition. All the areas of reform included within the plan serve a purpose in the 6 missions.



4 HOW CAN WE HELP?

”

The NextGenerationEU, in the response to the shocks brought about by Covid-19, puts in place a potentially extraordinary instrument to help stimulate economic and social recovery: the so-called “Recovery Fund.”

At the heart of the EU’s new vision is the objective to build a “digital decade” so that all citizens and companies can access all the best of what the digital world has to offer, live and contribute to a stronger and more inclusive society.

These are also the objectives that Engineering has been committed to for many years. We believe we bring value through the Digital Transformation which places People at the centre.

For this reason we believe the NextGenerationEU shouldn’t be simply seen as a “the largest stimulus package ever,” but should instead represent a great boost to design new innovation paths from which to spark the “digital renaissance.”

Dario Buttitta

General Director Public Administration & Healthcare, Engineering

Smart Government

What Recovery Plan says today

With regard to the use of the NRRP funds, one of Italy's most important objectives is to accelerate the Digital Transformation of the Public Administration to ensure the success of the reforms. The watchword is simplification.

The implementation of the reform and investment programme is based on four key concepts:

- **Access**, to streamline and make selection procedures more effective and targeted and to encourage generational turnover (by way of a single platform);
- **Sound administration**, to simplify rules and procedures;
- **Skills**, to align knowledge and organisational abilities with the new needs of the world of work and modern administration;
- **Digitalisation**, a comprehensive tool to better implement these reforms. By giving new impetus to digitalisation, processes can be optimised, thereby speeding up administrative procedures and facilitating services for businesses and citizens.



This element is divided into two parts:

- The first aims to create the necessary enabling technologies to offer citizens and businesses effective, safe and fully accessible services: infrastructures, interoperability, platforms and services, and cybersecurity.
- The second promotes and supports the preparatory measures for the full implementation of the key reforms.

The digital infrastructure interventions for public administration will be completed by way of investments to improve the digital services offered to citizens. Firstly, the adoption of national digital service platforms must be strengthened, increasing the spread of PagoPA and the "IO" app. Secondly, new services will be introduced, such as a centralised digital notification platform (to send notifications with legal value by entirely digital means, making notifications safer and cheaper), allowing the greatest possible volume of interactions to be shifted to digital channels without eliminating the option of physical interaction for people who want or need it.

Mobility-as-a-Service experiments are also underway to improve the efficiency of urban transport systems.

Additionally, to ensure the smooth orchestration of all the services described above, the digital identity system must be strengthened, starting from the existing systems (SPID and CIE) and moving towards an integrated and increasingly simple solution for users.

Finally, **an organic intervention programme is also envisaged to improve the user experience of digital services and their accessibility "for all"**, coordinating public administrations in the pursuit of common quality standards (e.g., functionality and navigability of websites and other digital channels).

The next stage is the widespread reorganisation and rationalisation of training, starting with the preparation of specific online courses (MOOCs) to train public administration personnel on the new skills covered by the NRRP, with certified quality standards.

Specific actions are also planned to support medium-sized local administrations (provinces and municipalities of 25,000 to 250,000 inhabitants), based on the model of the future of the work environment from the European Commission (behaviours, bricks and bytes, COM(2019) 7450), providing financing for programmes that aim to revise decision-making and organisational processes (behaviours), reorganise work spaces (bricks), and increase the digitalisation of procedures (bytes), driven by the acquisition of specific skills through training or hiring of new staff. NRRP funds will finance the first pilot projects in this area, while systematic actions at the national level could make use of the resources from the new 2021-2027 community programming.

In addition to the infrastructure interventions, large-scale digitalisation of administrative procedures is envisaged, with **a particular focus on key areas for the competitiveness of production**, in addition to improving the operations of one-stop-shops for production and construction through effective and efficient back-office management and standardised online forms.

The final step in the process lies in the complete digital re-engineering and simplification of a set of 200 critical procedures, selected according to consultations with stakeholders.

Alongside the "horizontal" actions for the modernisation of the PA and the quality of services, the plan provides for a series of "vertical" actions on key areas in which the Public Administration and the relevant players must be equipped with the best skills and tools to ensure that certain "structural" weaknesses are overcome. It is worth mentioning, *inter alia*, the provision of an advanced and integrated monitoring and forecasting system to identify and predict risks within Italy, as a consequence of climate change and inadequate spatial planning. The use of advanced technologies will allow the remote monitoring of large territorial areas, thus optimising the allocation of resources. The monitoring data will form the basis of the development of risk prevention plans, including for existing infrastructures and climate change adaptation infrastructures. The tool will also make it possible to tackle cases of illegal waste disposal.

Our approach

For over thirty years, Engineering has been working alongside the Italian Public Administration to promote innovation and digitalisation in various areas of government (central public administration, local administration, agencies) and different fields of activity: welfare, resources and economic development, environment and the land, school, tourism and culture, etc. Today, this systemic vision allows us to build real digital ecosystems around citizens and businesses, which will be the driving force behind our economic recovery, in addition to facilitating a digital citizenship model that will play a vital part in the new normal.

Thanks to our skills and knowledge, at this stage we are able to:

- **define the country's digital strategy** with regard to the individual areas of Smart Government for which we have an in-depth understanding of the governance, execution and reporting processes; support strategic governance by way of the monitoring and management systems for the specific sources of funding that will be available;
- **consolidate the development and systematisation activities** for the infrastructures and public platforms entrusted with facilitating the digital transformation process: cloud-based data centres, connectivity and multi-channel services, digital registry and identity services, electronic payment service providers, storage services, etc.;
- **manage innovative systems** (and redesign the existing systems) through the use of "Ecosystem & Platform design" approaches that allow us to create digital citizenship services that are not verticalised by individual service areas, but instead are able to build public service ecosystems that respond to the multi-channel "citizen experience" (physical and digital) in a personalised and predictive way. Putting all the players impacted by innovation at the centre of the digital transformation process also means co-planning the services in a collaborative and systemic manner, paying close attention to relationship management. The result should therefore be capable of evolving, ensuring that the services are accessible and usable, alongside the processes, organisation, skills and the legislative/regulatory apparatus that guarantees their effective management and measures satisfaction;
- **enable the use and sharing of data** from the various areas of the public administration, allowing for the creation of innovative services by public and private entities: this is a key factor in the establishment of increasingly comprehensive information ecosystems.

E-Health

What Recovery Plan says today

The chapter n. 6 of the National Plan for Recovery and Resilience concern the world of health.

To bring about definitive innovation in the health system, it will be necessary to have a systemic approach to digital health; this means not only having technological infrastructures, which are certainly indispensable, but also rethinking the entire model of governance and service according to digital processes, dynamics and dimensions.

Ultimately, it means making all the potential offered by cutting-edge skills and expertise accessible to structures, organisations, operators and citizens, in order to guarantee the quality of the services provided, the effectiveness of prevention and the full dignity of the person according to his or her specific needs.

There are two fundamental aspects:

- community care and telemedicine
- innovation, research and digitisation of health care

Community care offered by telemedicine can be innovated through:

- an overall integration of social and health care services;
- the local implementation of a digital model of integrated home care;
- the primary and secondary prevention and control of transmissible and non-transmissible diseases, also thanks to the inclusion of technological solutions;
- the establishment of Territorial Operational Centres;
- the improvement of care services offered in nursing homes;
- a network of local centres to combat health poverty;
- the development of an ecological public health model ('One Health').

Innovation, research and the digitalisation of health care must include:

- technological modernisation—through "total and specialised digitalisation"—of the health system;
- the strengthening of the technological infrastructure and tools for collecting, processing, and analysing data and simulation (strengthening the ESF and the New Health Information System (NSIS), or enhancing the Ministry of Health infrastructure and analysis tools to monitor levels of support and the

- planning of health care services for the population);
- the improvement and enhancement of the SSN's biomedical research by strengthening the response capacity of the centres of excellence in Italy in the field of rare diseases and by promoting technology transfers between research and businesses.

In this context, the investments aim to strengthen training in basic medicine, introduce an extraordinary training plan for hospital infections, and improve the managerial and digital skills of healthcare personnel.

It will also be necessary to think about the restructuring and modernisation of hospital structures, in particular the Emergency and Acceptance Departments.

Our approach

Thanks to our specific role, Engineering has a unique insight into the sector, allowing us to specialise our services and focus on the most relevant areas of intervention over the last few years. **Our contributions throughout the entire prevention-access-diagnosis-treatment-support chain and vertical presence at all levels of government (Ministry of Health, regional/local facilities)** has solidified our involvement in the initial co-planning of the new healthcare system. We prioritise digital technology, but people are always at the centre, pushing us to look beyond health and truly understand their needs.

Thanks to our skills and knowledge, at this stage we are able to:

- **work with users to design specific models and solutions for local healthcare**, using our technological and process skills to ensure continuity and integration with the hospital and other health and public health services, adopting a multidisciplinary and personalised approach to care;
- **facilitate home care services by providing our next-generation tools** using the most innovative technologies (including AI, data analytics and IoT), which can be used to build teleservice platforms (e.g., telemonitoring and telesupport) that are fully integrated with company information systems;
- **implement "data-driven" healthcare thanks to our ability to manage and exploit data**, which we use to build tools to acquire, aggregate and analyse information from diverse sources for scientific research, innovative diagnosis and treatment services, as well as prevention and population health management. The Eng-DE4Bios biosurveillance platform used by two Italian regions for the Covid-19 crisis is a concrete example;
- **digitalise health processes on a large scale and become increasingly "information-intensive"**, allowing data to automatically flow into systems that work alongside health professionals, supporting their management and care decisions. Our new healthcare platform, ellipse, was born from this exact area of interest.

Smart Energy & Utilities

What Recovery Plan says today

The Recovery Fund represents a great opportunity for the Utilities sector, primarily for the more traditional and established areas.

Firstly, the water sector, where important questions relating to the optimisation of supplies, efficient purification, the reduction of network losses, and counteracting hydrogeological instability could finally be answered.

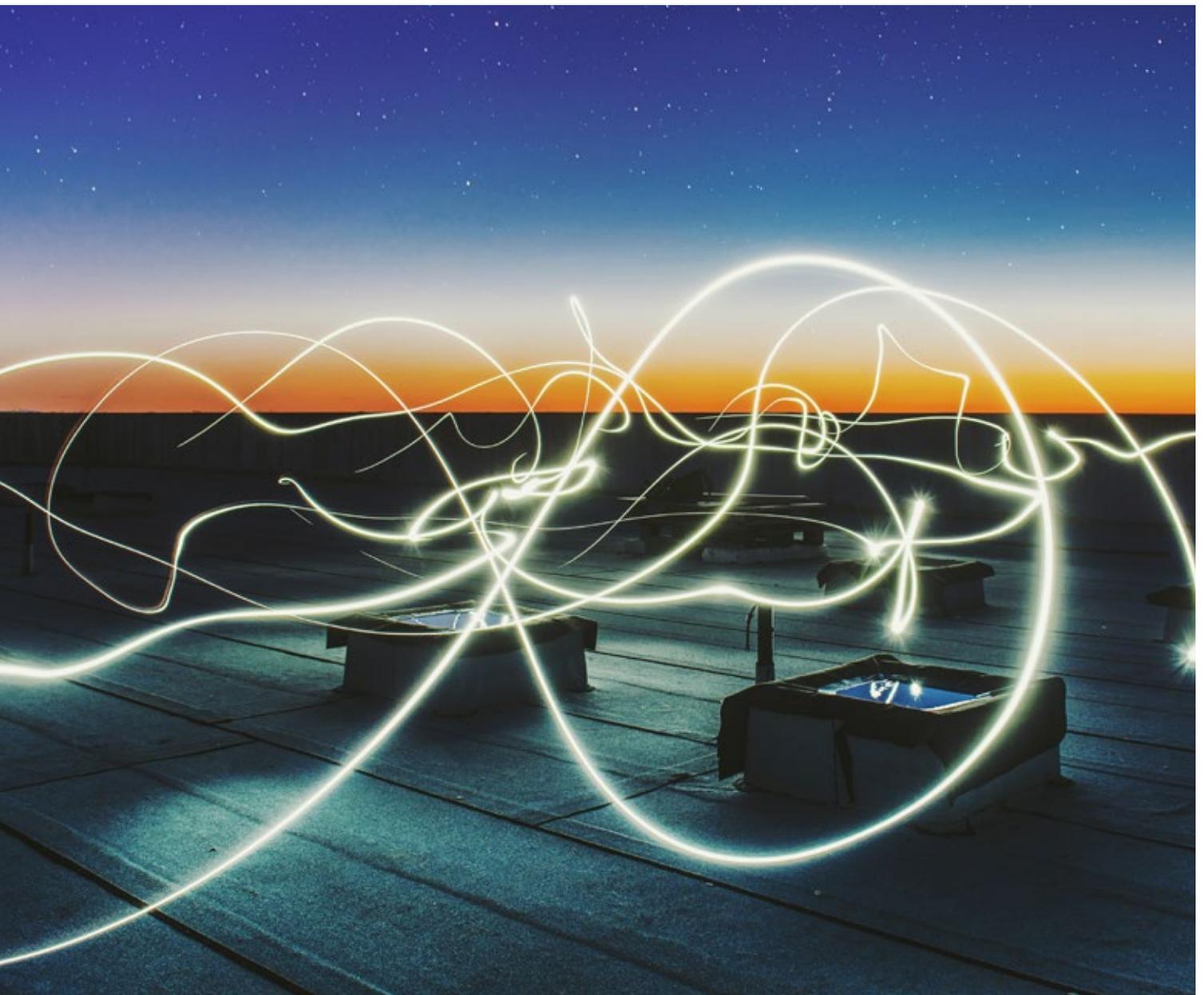
There are also some major issues at stake for the energy sector: decarbonisation (focusing on hydrogen and renewable energy); the energy efficiency of buildings and district heating; smart grids and microgrids; and the development of energy communities. Finally, in the environmental sector, we need to strengthen the waste sorting system, expand pay as you throw, utilise sewage sludge and construct new recycling plants, giving new impetus to the circular economy.

The role that the utilities sector can play in the field of sustainable transport should not be overlooked, with a particular focus on the world of electric transport and the necessary infrastructures for its development. The post-pandemic new normal will also require companies to review their customer relationship processes, developing ecosystems backed by digital platforms.



Our approach

We at Engineering believe that digital technology plays a central role in our future and hope that the "pillar" of digital transformation does not develop in isolation, but instead exponentially increases the value of planned interventions in various areas of activity. In this sense, we hope that the shortcomings of the bonuses and super bonuses—which left very little space for the digital field and the added value that it can provide to structural interventions over time—will be overcome.



Digital Finance

What Recovery Plan says today

As stated in the NRRP, “strengthening the Country” also means sustaining the growth of SMEs, the true driving force of the Italian system, by increasing the capacity of Italian firms to compete internationally and to cope with economic crises. It will be essential to encourage the merger and capitalisation processes of micro and small enterprises, also by stimulating the creation of networks that can facilitate the spreading of knowledge and technologies. **It will also be important to strengthen financial instruments to support and improve the competitiveness of enterprises** on the global market. Enabling SMEs to survive in international competition means investing heavily in research and development, paying adequate wages to attract a skilled workforce, and investing in marketing and financial services.



Our approach

We at Engineering see ourselves as a link between finance and local businesses, a hub of open ecosystems based on the collaboration between business advisors and fintech, public and private operators, credit consortia, regional banks and financial institutions, and we also make our client network available.

We help banks to transition from being 'credit providers' to 'business advisors' by entering into the business processes of SMEs. Banks must have the ability to identify the specific economic needs and prospects of the companies they work for, which requires in-depth knowledge of the company itself and of the current and potential markets it serves, in addition to the processes involved in managing working capital.

The banking and insurance industry must accelerate the process of digital transformation not only to better serve the market: in Italy, this means specifically SMEs and individuals but also to contribute to the transformation of the underlying system. Digitalisation must be broad and pervasive. The SME system is strategic and must be at the top of these priorities. In particular, their processes need to be streamlined, a process of transformation that banks can support, and we at Engineering can be the hub and driver of this evolution.

In 2020, Covid-19 signalled the need to accelerate the digitisation of the banking and finance industry, transforming it into an opportunity. What we do expect today, however, is a transformation of the entire business and operating model and not only a change in the distribution model. **A key factor will be the ability to innovate the interpersonal and knowledge model of SMEs**, to create partnerships in order to build new value, not just in economic terms, by developing new professional skills and a new culture of sustainability. These are areas in which we can bring our cross-industry experience and expertise in innovation in order to build relationships and networks to achieve this development.

Augmented City

What Recovery Plan says today

The NRRP (National Recovery and Resilience Plan) will allow Italy to implement the NGEU programme. Over 70% of the resources are allocated to public investments. The ultimate goal is the digital transformation of the country, starting with the municipalities, to ensure real structural change. Digitalisation impacts all NRRP missions across the board, with a particular focus on the automation and digitalisation of public administration.

Technology and innovation will play an instrumental role in planning the cities of the future. The creation of a Smart City/Augmented City represents the greatest current challenge in terms of digital transformation. The road to inclusive and sustainable cities is paved with innovation: IoT-based infrastructures, E-government tools, big data and analytics to collect and process data and information, electric and shared mobility, energy efficiency, environmental sensors, smart street lighting, and much more.



Our approach

Thanks to Municipia, the Group company that supports cities of all sizes through the digital transformation process, Engineering has the knowledge, skills, new technologies and financial tools to bring this change to life, taking action in crucial sectors such as mobility, welfare, financial sustainability, energy efficiency, urban safety, waste management, and cultural and tourism development.

We also strive to enhance the design abilities of local authorities, increasing access to available resources and supporting local public investment processes, in line with the digital and environmental transition. We are able to achieve these results by assisting local administrations with regard to needs analysis, testing available assets, and the establishment of territorial alliances/financial strategies that utilise public resources and other assets.

The private sphere is therefore a key partner. In fact, according to the Italian Government guidelines for the NRRP, the project proposals to be presented for the Recovery Fund resources must be developed through co-planning processes that involve other potential partners, who should be identified according to the principle of transparency among stakeholders and potential implementation partners.

The potential that the introduction of resources on this scale into the country represents could be multiplied if we are also able to facilitate access to capital. The systematic and efficient use of tools such as public-private partnerships or project financing will be absolutely essential, escaping from the current system of carrying out small operations to compensate for a lack of resources. **It will also be necessary to take advantage of new financing opportunities**, using European planning resources, where possible, and seeking national and EU funds (such as Horizon Europe 2021-2027, InvestEU, Digital Europe, Smarter Italy) for investments of interest, freeing up resources that may remain at the organisation's disposal.

Local authorities have to aim for a flexible investment strategy, which takes into account the main funds that are currently available and additional financial instruments from alternative funding sources, such as funds that are directly managed by the European Commission and forms of private finance.

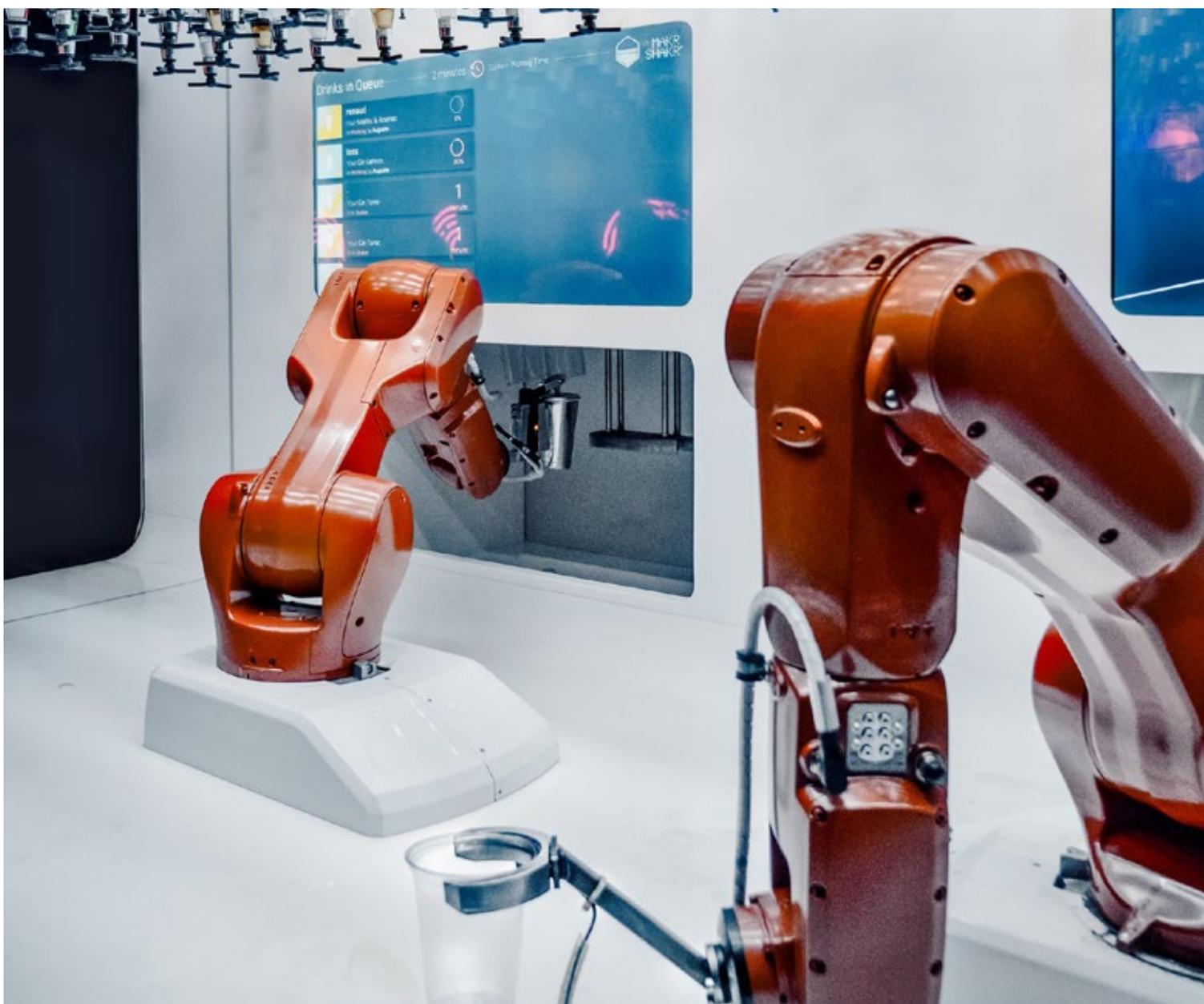
Digital Industry

What Recovery Plan says today

The Italian National Recovery and Resilience Plan (Piano nazionale di ripresa e resilienza/PNRR) is based on three main pillars: ecology, digitization and infrastructure development. The plan aims to relaunch the Italian manufacturing sector economy and, above all, give companies the chance to develop their own competitive advantage.

The enormous resources made available by the Plan have been channelled into projects that aim to increase performance, efficiency and competitiveness. These projects, in turn, will put the sector on a vital path towards innovation.

The plan also encourages a 4.0 transition in production. This will play out in an Italy where digital interaction systems may drive greater competitiveness.



Our approach

Engineering's organizational, process-related, applied and infrastructure skills make it a benchmark strategic partner. As such, we help manufacturing companies take advantage of all 4.0 transition opportunities and, in this way, construct their own competitive advantage. By applying the most advanced enabling technologies, Engineering supports its clients in digitizing all their business processes.

In a factory setting, **we at Engineering help stakeholders boost productive efficiency by adopting IoT principles.** For example, this may mean implementing MES options that allow careful analysis and tackling of unwanted downtimes, under-performance or any general production-phase bottlenecks. In order to better coordinate line operators or operator-machine interconnections, Engineering has studied innovative interaction methods, such as using wearable devices.

In this way, applying IoT technologies can be an engine driving new business opportunities. For example, considering options that interconnect finished products may generate new service offers. One might consider, as well, continually optimizing finished product parameters, identifying predictive maintenance interventions or providing suggestions for final product use and the like.

In terms of tracking end-to-end processes, we offer options for managing optimal production schedules, maintaining adequate resupply, keeping an ideal inventory level, getting reliable sales forecasts or demand projections and handling overall supply chain issues.

Furthermore, particular attention should be paid to managing clients and Field Service relations. A hard-to-predict and competitive market requires a comprehensive focus on clients. Through our CRM implementation projects, Engineering helps its partners monitor commercial opportunities, optimize lead management, increase brand awareness and undertake accurate post-sales supervision. **We also support addressing all contact points and processes along the Customer Journey.** Dedicated tools can be used to organize teams in the field. Virtual or augmented reality technologies, for example, can help teams promptly carry out and wrap up any intervention.

Using our team of interdisciplinary consultants, we can implement Artificial Intelligence concepts and Digital Twin technology simulations to solve complex problems. This may include historical-data based forecasting or optimizing production paths, lines and construction site configuration. These are all becoming key areas for developing a competitive advantage.

Smart Agriculture

What Recovery Plan says today

Commitments and regulations have been defined through the Community Agricultural Policy (e.g. income instruments), the new European "Green Deal " and "Farm To Fork " strategy guidelines and the National Recovery and Resilience Plan for "Green and Digital" Agriculture. **These measures will encourage Italian and European farmers to adopt innovative technological tools** and enabling platforms for better managing the new challenges linked to environmental protection, climate change mitigation and ecosystem conservation. The spread of more widely accessible and transparent knowledge throughout the entire agri-food chain has also been encouraged. In the future, this process will be governed more by citizens and consumer market choices that increasingly heed and demand healthy foods and products. New labels indicating "Carbon" or "Water Footprints" will distinguish food products and farms via certification systems verifying sustainability.

The market thus demands products that promote combining sustainability and productivity in the agri-food sector. This means integrated ecosystems which draw on technologies and options that let farms monitor and control their processes. **These systems must also guarantee quality and efficiency for components**, involved stakeholders and internal or logistic company operations as well as throughout the entire agro-food chain.



Our approach

In this context, Engineering offers ready solutions based on cutting edge digital and geospatial technologies for monitoring and optimising farm production processes. It does this via the use of the Internet of Things, Advanced Analytics, GIS and Remote Sensing. These allow even small and medium-sized farms to optimise fertiliser and crop irrigation inputs by using vigour and water stress indexes derived from Remote Sensing data (Copernicus Open Data). Prescription maps can also be developed using VRT (Variable Rate Technology) for use on board field vehicles as can remote estimates of future production yields using real DSS.

Furthermore, the market will need new tools to manage crop pathologies. These include Mobile Apps that automatically recognise phytosanitary pathologies through cloud-based scouting techniques. **It may also draw on new instruments for correctly managing livestock manure and digestates** or spreading slurry and fertilisers in line with the administrative obligations set by cross-compliance rules.

Developments in sensor technology already make it possible to track field vehicles and tools, provide for proper machine maintenance and anticipate breakdowns. It also allows using control systems and information technology to automate production processes. This reduces the need for manual intervention while optimising load transport and collection.

Agro-meteorological information will become increasingly essential in forecasting and managing farm production as well as in handling pathogens, phytopathological attacks, irrigation systems, fertilisers and phytosanitary treatments. This, in turn, will reduce environmental impacts and allow coping with the consequences of climate change.

5 NEXT STEPS

”

Research and innovation provide fundamental leverage for intelligent and sustainable market growth. Growth conditions will inevitably be different in the post-COVID era and once the 'new normal' is reached. The National Recovery and Resilience Plan sees digitization and innovation as one of three, shared, strategic axes at the European level.

On one hand, projects will likely have to meet feasibility, accountability and monitoring criteria. On the other, they will not be able to pass up the extraordinary chance of developing new and innovative products, processes and services. All of these will make it possible to boost productivity, industrial competitiveness and, ultimately, national prosperity.

Therefore, research and development play an essential role in directing and supporting strategic choices based on Digital Transformation. These choices, in turn, will allow meeting market needs and benefiting from the opportunities new technologies offer.

Lanfranco Marasso

Smart City Program Director, Engineering

The National Recovery and Resilience Plan that was approved lays out a vision, a plan that will develop according to a **"three-dimensional" perspective**:

- addressing the present emergency and the immediate impacts of the crisis
- taking into account the lessons learned and the weaknesses inherited from the failed reforms of the past
- looking to the future, driven by the goal of supporting green and digital transition in the name of sustainability and social and territorial cohesion.

The National Plan also presents an outline of the solutions for effectively supervising implementation and the actual impact on growth potential, job creation and economic, social and institutional resilience, as provided for in Chapter VII of Regulation EU 2021/241.

The "scheme" of responsibilities and functions largely reflects the mechanisms and organisational solutions already adopted in the governance of the European structural funds, which recognises the MEF as the "National Reference Centre" for the collection and transmission of monitoring data (through a single platform for all funds called "ReGis"), while the Administrations responsible for each policy or territorial area are directly responsible for implementation.

As in the case of the cohesion policy funds, a technical and political governance structure, the "Cabina di Regia" (literally: director's booth) will also be set up at the Presidency of the Council of Ministers, with the task of guaranteeing the supervision, impetus and guidance to ensure the overall effectiveness of the Plan. Sound financial management and the prevention of irregularities will be supported through appropriate organisational and procedural solutions along the lines, also in this case, of what already occurs in the management of structural funds and other complementary resources.

The next steps must carefully follow the deployment of the interventions, defining real and practical solutions to support their implementation, monitoring and control. **Promoting the assets and experience gained by way of the structural funds is a good starting point**, in addition to "strengthening" human resources and ensuring unified management coordination. However, the most effective tools must be utilised in order to support the individual administrations that will manage the interventions in terms of operational management, bolstering process integration and exchanges between the various players involved at a central and local level. As we move towards a new future, **the expansion of operational collaboration by innovation stakeholders will represent a decisive factor**, allowing us to embrace the full the potential offered by new skills and the digital sphere and undertake a realistic approach to the New Normal.

How will the Plan be "grounded"?

Much has been said in recent months about the so-called 'governance of the Plan, but only in relation to the control of resources.

Missions are undergirded by already determined projects or investment lines, for which the Central Administrations identified by policy area will be chiefly responsible.

The role of the regions will be defined according to the areas of action, but they will not own resources as in traditional funds but will rather receive funding for defined operations. There is also a "lack of clarity" in the definition of procedures by which the projects will be financed, whose areas of intervention are strictly the responsibility of the municipalities and metropolitan cities.

In order to access resources, the right governance "chains" of the various intervention sectors will therefore need to be anticipated.

However, the key factor in ensuring that the funds are actually disbursed is to establish the methods of operation and interaction between and with the institutions usually responsible for managing the areas covered by the Plan, without neglecting the regional dimension and the role of the Regional Authorities, especially in their respective areas of competence, such as the health sector among others.

Given the well-known weaknesses as regards administrative capacity in the management of European funds in many of the entities that are candidates for the governance of the various project lines contained in the Plan, there is clearly a need for exceptional support in technical and procedural terms, in order to avoid the typical 'Russian doll' model whereby responsibility for implementation is passed from one Public Administration to another or – worse still – to more or less in-house entities without producing results beyond plans, agreements, task forces and announcements.

Essentially, what is needed is for the plan to be 'grounded', and thus a strategy for technical support and administrative capacity, as suggested by the EU, which, alongside the 'Recovery Fund', has promoted the 'technical support facility', allocating a further EUR 864 million to those who request such a facility.

The overall driver, to guarantee the aggregate effectiveness of the Plan from the implementation perspective, is the digitalisation of tools and processes, which is embodied in the development of the national eProcurement system, the single accounting system, and the aforementioned single monitoring system that will rely on data mining and business intelligence tools.

The expected development of process standards aimed at the simplification and homogeneous and effective assessment of performance levels, together with the use of transversal and highly cooperative IT tools, will provide an organisational framework that focuses strongly on effective management; drawing on its long and rich experience in supporting Public Administrations involved in the management of European funds, engineering can make a significant contribution to this.

To respond to the priorities called for by the need to ensure rapid and effective implementation based on sound financial management and data transparency, it is indeed essential to have tools that exploit cutting-edge digital skills and make it possible to support the production, traceability and interoperability of data and systems, from individual Administrations to common platforms.

Our long-standing experience, backed by the most innovative solutions in the design and modelling of processes in the specific field of EU funds, enables us to make an essential contribution to the overall rethinking of the administrative system towards the objectives of digital transformation and overall governance of the implementation of the National Plan for Recovery and Resilience, as well as programmes related to the programming of structural and additional funds.

What is the role of the Public-Private Partnership?

Last but not least, there is still the question of partnership, which has now become a fundamental principle for the use of EU funds (as stated in the European Code of Conduct on Partnership), and which cannot be interpreted merely as a 'liturgical' step in the various stages of defining the plan and programmes.

The creation of a structured way of monitoring the effectiveness of interventions, which would broaden the vision to include the fundamental contributions of stakeholders and competences, could even become a means of multiplying resources. If it were possible, as hoped for in European guidelines, to involve private stakeholders in a process of participation, including financial participation in investments, this could generate a leverage effect on available resources, in the spirit of what is and must be a pact for recovery and resilience of the national and European system.

6 WORKING TOGETHER FOR THE NEW NORMAL

We are dealing with a framework of resources and tools never before implemented by the EU, together with ambitious objectives that must be implemented in a short time. This comes at a time when the economy and society are left exhausted by a crisis which remains difficult to predict and Italy is suffering from structural weaknesses, as also demonstrated in its poor capacity to absorb EU funds.

This is an opportunity that, even more so than in the past, calls for a system to be set up with all players on the economic and social scene, public and private bodies, profit and non-profit companies, cultural associations, citizens and businesses.

There is a need to simplify and perform modelling to implement a centrally-empowered, multi-level intervention strategy supported by intelligent process management systems. It is also necessary to skilfully streamline, monitor, measure and evaluate the effects of the actions undertaken almost in real time.

All management processes need to be streamlined and rethought in light of the opportunities offered by digital technologies.

So how are we preparing?

- By developing a **long-term vision**
- By training ourselves to be **more timely and responsive** as critical success factors
- By developing a **systemic approach** that considers impacts and opportunities in an integrated and shared framework
- By developing and consolidating **strategic alliances**
- By **creating the task force** as of now based on a vision that includes key players who define or can improve the value chain of your organisation
- By networking
- By implementing **risk management strategies**, to forecast opportunity scenarios and identify efficiency safeguards to mitigate the impacts of external factors
- By promoting a **cultural change and a "disruptive" intervention approach**, with investments in skills, techniques, tools and innovative solutions for managing processes, projects and organisations.

The next steps must carefully follow the deployment of the interventions, defining real and practical solutions to support their implementation, monitoring and control.

Drawing on our wealth of experience, enriched by the most innovative solutions in process design and modelling in the specific area of EU funds, we are able to:

- offer essential support in comprehensively rethinking administrative machinery
- utilise the most effective tools in order to support the operational management of trade flows and process integration between the various players involved publicly and privately and at a central and local level.

How do we respond?

With a value proposition embracing all NRRP missions in an innovative way

By working alongside clients to stimulate them to explore new paths of transformation by "equipping" them to access resources.

By networking and cooperating within the company as well, using discussions to share the main initiatives in which we are involved.

With in-house structures specialising in European and national public funds, which spearhead monitoring and participation in the strategic development process and can act as an "information and technical support desk" for the procurement of resources.

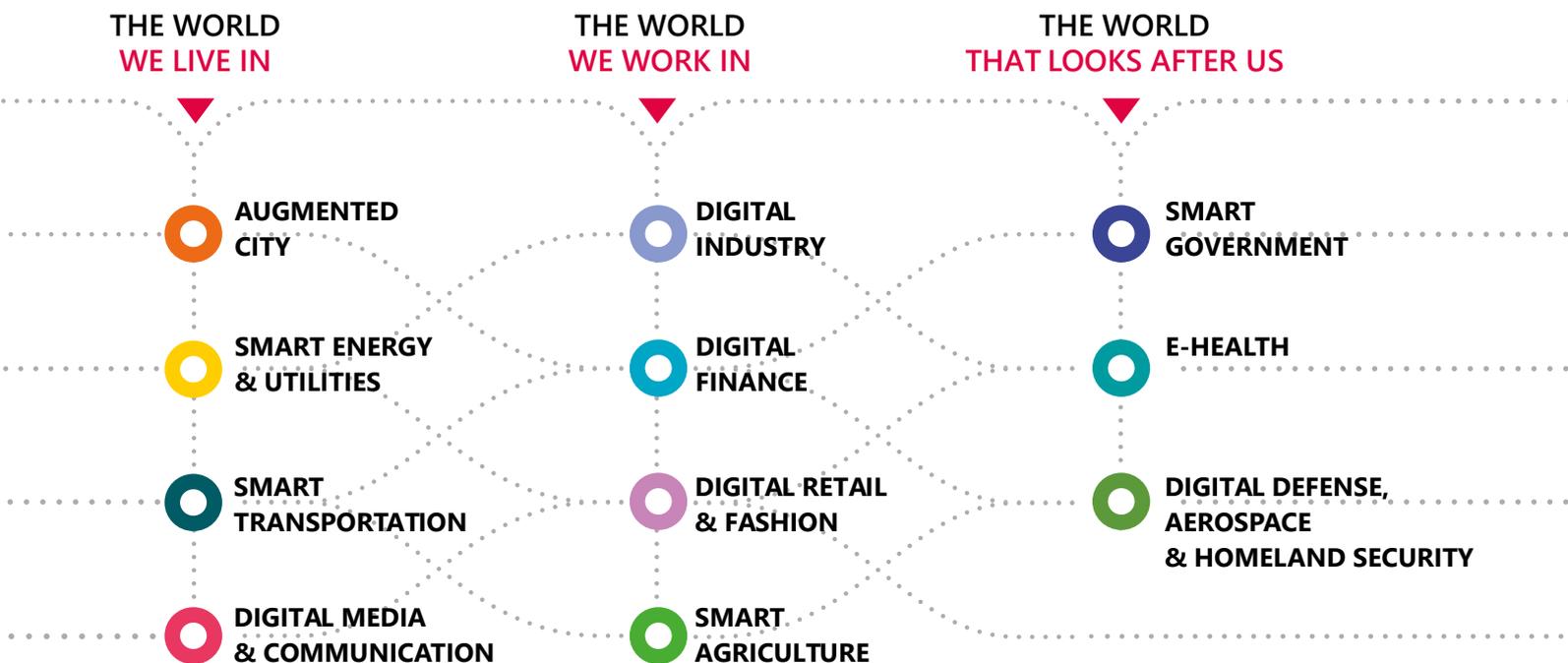


ENGINEERING

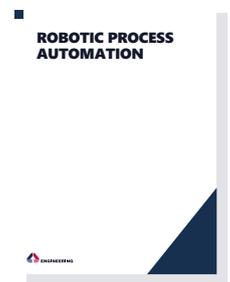
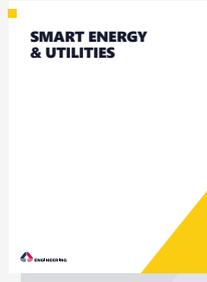
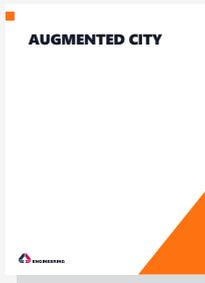
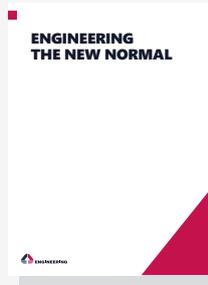
For more than 40 years Engineering has been one of the main actors in the digital transformation of both public and private companies and organisations, with an innovative range of services for the main market segments.

With approximately 11,600 professionals in 40+ locations (in Italy, Belgium, Germany, Mexico, Norway, Serbia, Spain, Switzerland, Sweden, Argentina, Brazil, and the USA), the Engineering Group designs, develops, and manages innovative solutions for the areas of business where digitalisation generates major change, such as Digital Finance, Smart Government & E-Health, Augmented Cities, Digital Industry, Smart Energy & Utilities, and Digital Media & Communication. In the course of 2020, Engineering has supported its partners in the continuation and protection of their businesses and key processes, assisting in the design of their 'New Normal' and the mapping of new digital ecosystems. With its activities and projects, the Group is helping to modernise the world in which we live and work, combining specialist skills in the final frontier of technologies, technological infrastructures organised in a unique hybrid multi-cloud model, and the ability to interpret new business models. With important investments in R&D, Engineering plays a leading role in research, coordinating national and international projects with a team of 450 researchers and data scientists and a network of scientific and academic partners throughout Europe. One of the Group's strategic assets is the expertise of its employees, whose development is promoted by a dedicated multi-disciplinary training school that provided more than 15,000 training days over the last year.

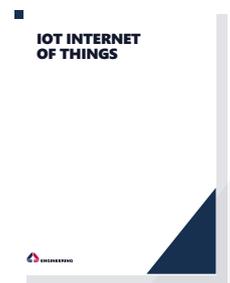
www.eng.it/en



Our point of view on



Coming Soon



 www.eng.it

 @EngineeringSpa

 Engineering Ingegneria Informatica Spa