

# Deliverable 5: Public-private coordination levers

**Technical Support Instrument**

*Supporting reforms in 27 Member States*



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## Public-private coordination levers


Examples of international resilience programs

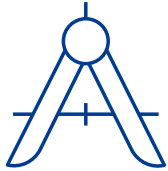
# Methodology for the selection of interventions that could increase the resilience of the supply chain in Spain

SMEI pillars		Resilience mechanisms	Type of intervention	Difficulty of intervention
Pillar 1	Contingency planning levers	Mechanisms to increase resilience in times before a crisis	<ul style="list-style-type: none"> <li>Stress testing</li> <li>Finding substitutes</li> <li>Gaining visibility on key capabilities of manufacturers</li> </ul>	
Pillar 2 and Pillar 3	Monitoring of supply chain	0 Alternative sources of supply	Verify and drive alternative import sources	<p>Low</p> <p>High</p>
		1 Creation of capacities that allow a rapid increase of production in a possible crisis situation	Develop ever-warm production capacities to cope in case of crisis	
	Minimum capacities mechanisms	2 Cost effective/efficient storage of the product	Stockpiling	
		3 Last-resource actions to build national capacities	Develop new domestic production capacity	

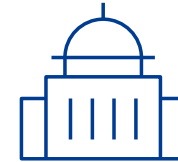
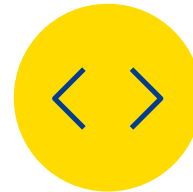
# Resilience mechanisms could be implemented through public-private levers, which include mandates, incentives and partnerships

could be done through...

 Focus of this document



## Resilience mechanisms



## Regulatory framework

Pillar 1	Contingency planning levers	<ul style="list-style-type: none"> <li>• Stress testing</li> <li>• Finding substitutes</li> <li>• Gaining visibility on key capabilities of manufacturers</li> </ul>
Pillar 2 and Pillar 3	Monitoring of supply chain	<b>0</b> Verify and drive alternative import sources
	Minimum capacities mechanisms	<b>1</b> Develop ever-warm production capacities to cope in case of crisis
		<b>2</b> Stockpiling
		<b>3</b> Develop new domestic production capacity



### Mandates

Legal command or precept to force companies become more resilient



### Incentives

Legal, tax or regulatory benefits to those who take resilience mechanisms




### Partnerships

Collaboration between a government agency and a private-sector company to build national capacities



### Public-private coordination levers

# Spain's Government could create a more resilient national industry by mandates, incentives or partnerships

 Focus of this document

## Key levers

## Description

Key levers	Description
<b>Mandates</b> 	<b>Legislation mandates</b> Legislation requiring manufacturers to maintain extra available capacity/ increase their capacity and direct production in case of crisis
	<b>Temporal intervention of facilities</b> Legislation that allows the Government a temporary requisition of factories of essential products
	<b>Rated orders</b> Legislation that allows the Government issue rated orders (e.g., order that must be prioritized by the Industry)
<b>Incentives</b> 	<b>Focused tenders</b> Tenders to ensure production in Spain or specific clauses to benefit companies that e.g., stockpile, comply with local content requirements
	<b>Priority vouchers</b> Regulatory or legal priority in exchange for capacity
	<b>Tax incentives</b> Tax benefits to those companies that e.g., stockpile, carry out R&D, build new factories
	<b>Grants</b> Grants to those companies that e.g., stockpile, carry out R&D, build new factories
	<b>Extended exclusivity</b> Extension of originator's exclusivity time in exchange for capacity
	<b>Concessional loans</b> Financing under favorable terms to companies building factories of critical products
<b>Partnerships</b> 	<b>Subscription models</b> Fixed annual fees in return for a sufficient product supply guarantee or supply prioritization
	<b>Protection of emerging capacity</b> Investment in initiatives allowing self sufficiency for specifically targeted aspects of the value chain that are not at scale in Spain
	<b>Capacity reservation</b> Contract with one/multiple originator(s) to reserve capacity to be used when and as needed
	<b>Joint Venture</b> Partnership between government and private entities to develop industrial capabilities

# Advantages and disadvantages of key levers (1/2)

Key levers	Description	Advantages	Disadvantages	
<b>Incentives</b>	<b>Focused tenders</b>	Tenders to ensure production in Spain or specific clauses to benefit companies that e.g., stockpile, comply with local content requirements	<ul style="list-style-type: none"> <li>✓ No public spending involved</li> <li>✓ Activation of national economy due to network effects</li> </ul>	<ul style="list-style-type: none"> <li>⊗ No control over suppliers of manufacturers</li> <li>⊗ Potential loss of competitiveness</li> </ul>
	<b>Priority vouchers</b>	Regulatory or legal priority in exchange for capacity	<ul style="list-style-type: none"> <li>✓ No public spending involved</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Potential loss of competitiveness</li> </ul>
	<b>Tax incentives</b>	Tax benefits to those companies that e.g., stockpile, carry out R&D, build new factories	<ul style="list-style-type: none"> <li>✓ No public spending involved</li> <li>✓ Activation of national economy due to network effects</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Reduction of fiscal revenues</li> </ul>
	<b>Grants</b>	Grants to those companies that e.g., stockpile, carry out R&D, build new factories	<ul style="list-style-type: none"> <li>✓ Existence of a legal framework for grants in Spain</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Potential break of “levelled-playing field” principle</li> <li>⊗ No direct benefit due to lack of commitment</li> </ul>
	<b>Extended exclusivity in exchange for e.g., “warm capacity”</b>	Extension of originator’s exclusivity time in exchange for capacity	<ul style="list-style-type: none"> <li>✓ No public spending involved</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Capacity does not guarantee supply</li> <li>⊗ Low control over production</li> </ul>
	<b>Concessional loans</b>	Financing under favorable terms to companies building factories of critical products	<ul style="list-style-type: none"> <li>✓ No net public spending involved (i.e., loans will be paid back)</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Uncertainty / Lack of capabilities in the Public sector to identify “future winners”</li> </ul>



# Advantages and disadvantages of key levers (2/2)

Key levers	Description	Advantages	Disadvantages	
<b>Partner- ships</b>	<b>Subscription models</b>	Fixed annual fees in return for a sufficient product supply guarantee or supply prioritization	<ul style="list-style-type: none"> <li>✔ Payments distributed over time</li> <li>✔ Activation of national economy due to network effects</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Payment continued over time may be difficult to justify in non-crisis times</li> <li>⊗ Low control over production and final supply</li> </ul>
	<b>Protection of emerging capacity</b>	Investment in initiatives allowing self sufficiency for specifically targeted aspects of the value chain that are not at scale in Spain	<ul style="list-style-type: none"> <li>✔ Activation of national economy due to network effects</li> <li>✔ Creation of national industrial capabilities for targeted (i.e., essential) aspects</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Uncertainty / Lack of capabilities in the Public sector to identify “future winners”</li> <li>⊗ Long-term option</li> </ul>
	<b>Capacity reservation</b>	Contract with one/multiple originator(s) to reserve capacity to be used when and as needed	<ul style="list-style-type: none"> <li>✔ Reduction of dependency on a single supplier</li> <li>✔ Activation of national economy due to network effects</li> </ul>	<ul style="list-style-type: none"> <li>⊗ Payments to several originators whose capacity may never be used</li> <li>⊗ Reserved capacity does not guarantee supply</li> </ul>
	<b>Joint Venture</b>	Partnership between government and private entities to develop industrial capabilities	<ul style="list-style-type: none"> <li>✔ Control over production and supply</li> <li>✔ Lower margin (compared to fully private entity) would allow for a price reduction</li> </ul>	<ul style="list-style-type: none"> <li>⊗ High investment required</li> <li>⊗ Uncertainty / Lack of capabilities in the Public sector to identify optimal partners</li> </ul>





Public-private coordination levers

**Examples of international resilience programs**

# Analysis of four key international examples

- France, Germany, Italy, and United States have plans / national resilience programs that include large components around industrial resilience
- A fact-based analysis of best practices of these programs can inform decision-making in relation to industrial resilience strategy in Spain
- National Recovery and Resilience Plans of both Germany and Italy are analogous to PERTE Spanish plan

 Detailed next



**France Relance (2020)**



Germany's National Recovery and Resilience Plan (2021)



Italy's National Recovery and Resilience Plan (2021)



Inflation Reduction Act (2022)

# France Relance is a €100 Bn plan designed to offset COVID19 impacts and return to pre-pandemic level of activity by 2022



Focus of this document

## Context

The **COVID19** pandemic and the sanitary measures put in place to contain it **triggered a major economic downturn** : French GDP dropped by -5.9% in Q1 2020 and by -13.8% in Q2 2020

On September 3<sup>rd</sup>, 2020 the French government announced a **recovery plan aiming to limit the economic downturn**

**100 Bn€**  
investment

**4%** of  
France's  
**GDP<sup>1</sup>**

## Main pillars



**Green transition (€30 Bn)**

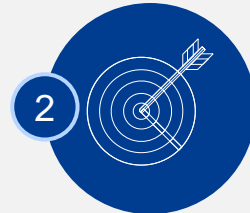
## Key levers

Improve buildings energy efficiency (€7 Bn)

Decarbonate French industry, support green energies and technologies (€9 Bn)

Develop green infrastructures and mobility (€9bn)

Protect biodiversity, fight against land artificialization (€6 Bn)



**Industrial Competitiveness (€34 Bn)**

Lower production taxes for companies (€20 Bn)

Strengthen small and medium companies equity capital (€3 Bn)

Relocate industrial production in France (€1Bn)

Invest in technologies of the future and most impacted sectors (€10 Bn)



**Social and territorial cohesion (€36 Bn)**

Modernize healthcare and invest in R&D (€9 Bn)

Support employment (youth plan, long term partial activity) and professional training (€16 Bn)

Support local authorities' investments and most vulnerable households (€10 Bn)

NOTE : figures may not add up due to rounding

1. Refers to pre-COVID GDP (€2.429 Bn in 2019)

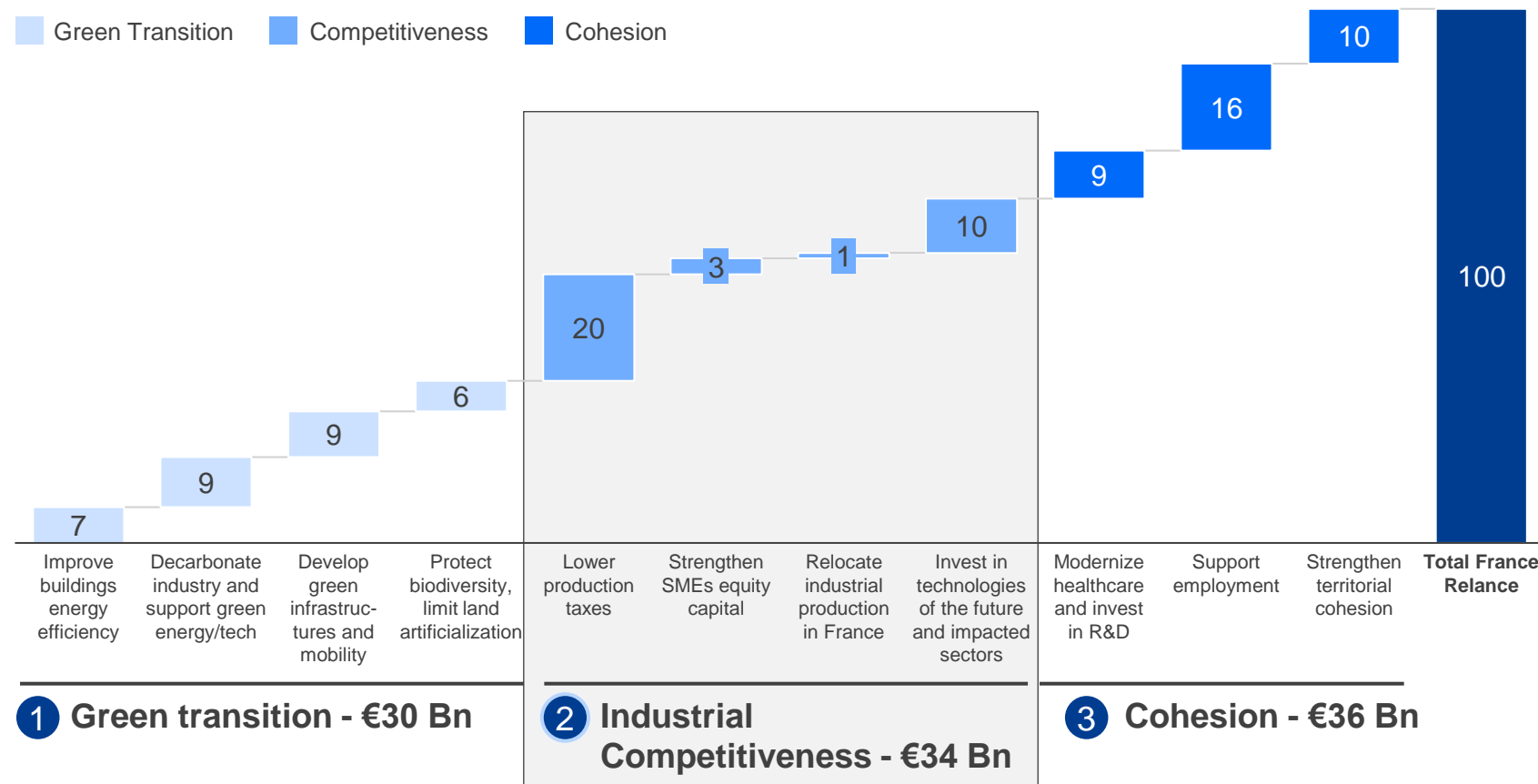
Sources: France Relance press release (Sept 3rd, 2020) ; INSEE

# Industrial competitiveness accounts for +30% of the total France Relance budget (€34 Bn out of €100 Bn)



## France Relance budget split In € Bn

Green Transition Competitiveness Cohesion



□ Focus of this document

France Relance budget will amount to **€100 Bn**, which represents ~8% of total annual public spending in previous years, and **4% of French GDP** in 2019

**€40 Bn** will be funded by European contributions and **€60 Bn** will be funded by France through 2020, 2021 and 2022 finance laws<sup>1</sup>

Independently from this plan, a total of **€470 Bn was engaged<sup>2</sup>** from March to July 2020 by the government to support French economy through COVID19 crisis

Note: figures may not add up due to rounding

1. Based on government declaration, includes €26 Bn for partial activity, €45 Bn for emergency support for most affected sectors (e.g., tourism, aerospace, automotive), €300 bn in bank loans guaranteed by the state for companies

Source: Ministry of Economy and Finance, France Relance press release (Sept 3<sup>rd</sup>, 2020)

# 2 €34 Bn are dedicated to increase competitiveness of French companies



Main levers 	Key initiatives (non-exhaustive) 	Budget 
<b>Lower production taxes</b>	Reduction by half of the <b>contribution on added value</b> for all companies liable for this tax Reduction by half of <b>property taxes</b> for industrial establishments (32k companies are concerned) Diminution of the cap on the " <b>territorial economic contribution</b> " from <b>3% to 2%</b> for all companies eligible for this tax	€20.0 Bn <i>(0,82% of France's GDP)</i>
<b>Strengthen VSE/SMEs and ETIs equity capital</b>	Restoration of VSE <sup>1</sup> s, SME <sup>2</sup> s and ETI <sup>3</sup> s' <b>investment capacities</b> using to a <b>public guarantee on financial investments</b> granted to companies with the label "France Relance <sup>4</sup> " Implementation of a <b>participative loans</b> from <b>€10 Bn to €20 Bn</b> granted to VSEs, SMEs and ETIs in needs, deposited by banks and guaranteed in part by the State	€3.0 Bn <i>(0,12% of France's GDP)</i>
<b>Relocate industrial production in the territories</b>	Raise <b>industrial investment projects in the territories</b> with the creation of a <b>€400 Mn funds</b> to make territories more independent economically and technologically Increase <b>investment support in 5 strategic sectors</b> (health, industry critical inputs, electronics, agri-food and 5G industrial applications) with a budget of <b>€600 Mn</b>	€1.0 Bn <i>(0,04% of France's GDP)</i>
<b>Invest in technologies of the future and most impacted sectors</b>	Financial support and <b>exceptional investments</b> in critical industries (e.g., technologies of the future) and most impacted sectors <sup>5</sup> <b>Funding guarantee for higher education research and innovation</b> projects	€10.2 Bn <i>(0,42% of France's GDP)</i>

1. Very Small Enterprises

2. Small and Medium size Enterprises

3. Midcap companies

4. This label is accorded to companies' financial investments with a high economic added value

5. Digital technologies, medical research and health industries, carbon-free energies, responsible agriculture, sustainable transport and mobility, the city of tomorrow, digital education, cultural and creative industries

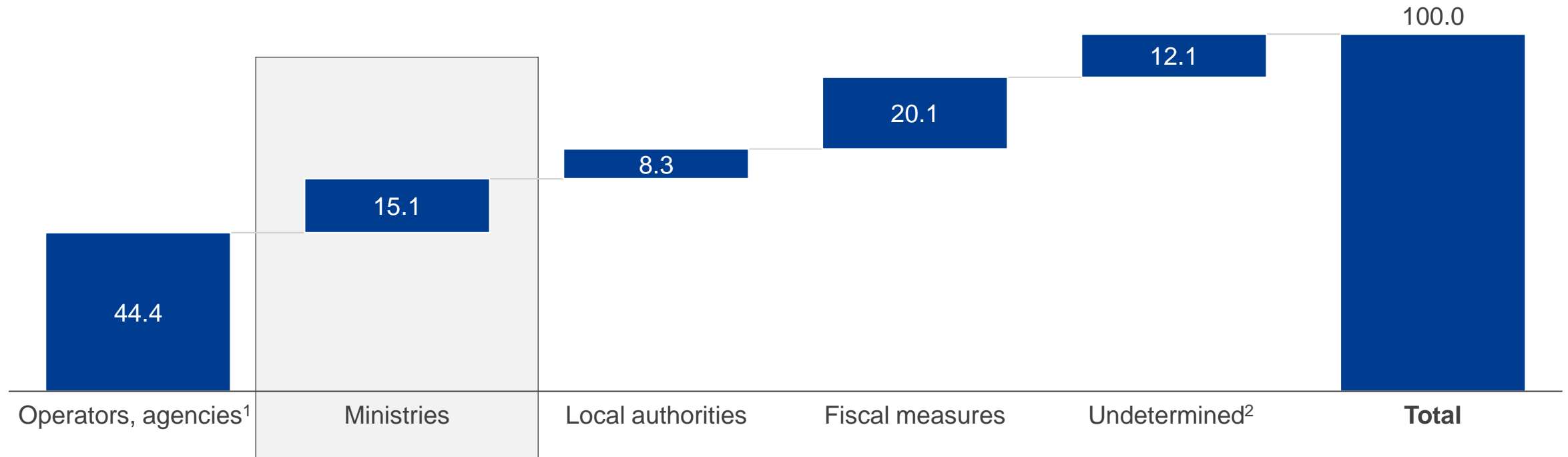
# 44% of France Relance funds are transferred to state operators or agencies, and 15% remain in the hands of ministries



## Breakdown of France Relance funds by lead carrying organization (%)

□ Detailed next

In billion euros, *Autorisations d'Engagement*<sup>3</sup> opened over for 2020-2024



1. Category including operators, agencies, public industrial and commercial establishments, SNCF...

2. The consulted public documents did not enable the identification of the lead organization at this stage

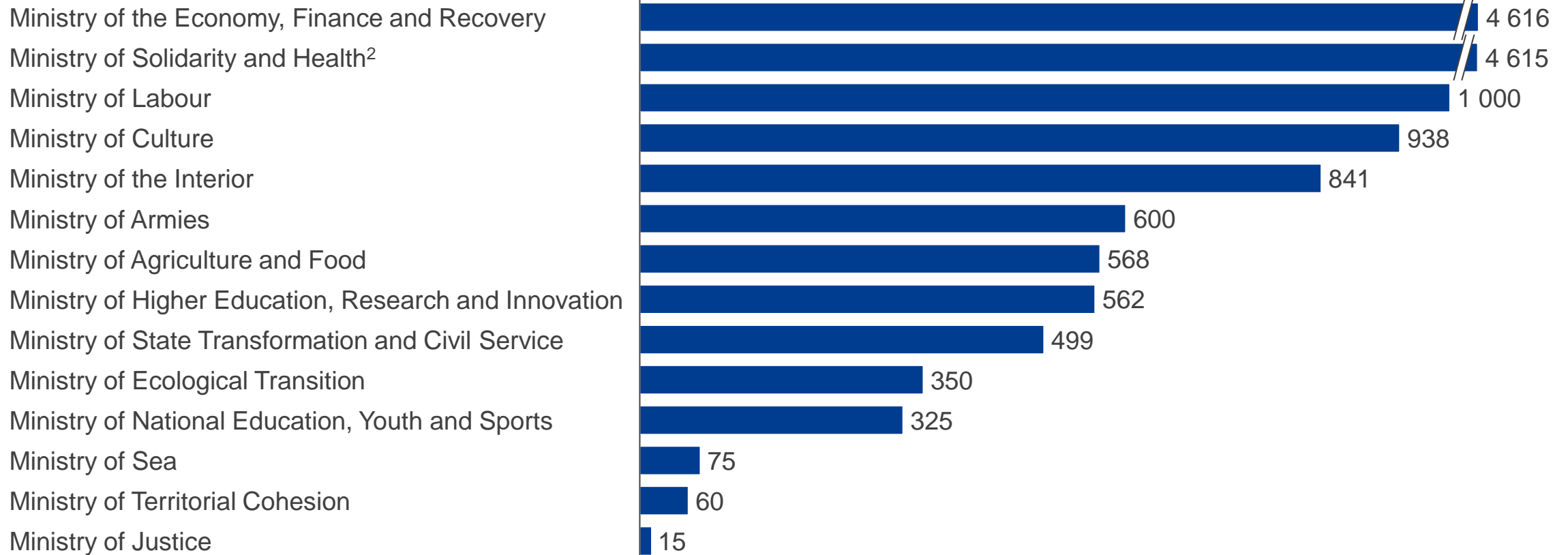
3. The *Autorisations d'Engagement* (or commitment authorizations) represent the upper limit of the expenditure which can be committed. In French public accounting, differ from *Crédits de Paiement* (payment credits), which represent the upper limit of expenditure that can be authorized or paid during the year to cover commitments made under the *Autorisations d'Engagement*

# The Ministry of the Economy and the Ministry of Health are the main ministries mobilized for the recovery



## Ministry in charge of funds

## Funds received, € Mn, AE<sup>1</sup>





1. *Autorisation d'Engagement* (commitment authorization) open to date for the 2020-2024 period

2. Are included €4.5 Bn entrusted to the Fund for the Modernization of Public and Private Health Establishments (FMESPP) as part of the *Ségur de la Santé* program

# France Relance makes use of 4 public-private coordination levers out of the 10 proposed to increase industrial resilience in Spain



Key levers	Description	Included in France Relance?
<b>Incentives</b> 	<b>Focused tenders</b>	Tenders to ensure production in Spain or specific clauses within them to benefit companies that e.g., stockpile, comply with local content requirements <input checked="" type="checkbox"/>
	<b>Priority vouchers</b>	Regulatory or legal priority in exchange for capacity <input type="checkbox"/>
	<b>Tax incentives</b>	Tax benefits to those companies that e.g., stockpile, carry out R&D, build new factories) <input checked="" type="checkbox"/>
	<b>Grants</b>	Grants to those companies that e.g., stockpile, carry out R&D, build new factories) <input type="checkbox"/>
	<b>Extended exclusivity</b>	Extension of originator's exclusivity time in exchange for capacity <input type="checkbox"/>
	<b>Concessional loans</b>	Financing under favorable terms to companies building factories of critical products or guarantee on loans <input type="checkbox"/>
<b>Partnerships</b> 	<b>Subscription models</b>	Fixed annual fees in return for a sufficient product supply guarantee or supply prioritization <input checked="" type="checkbox"/>
	<b>Protection of emerging capacity</b>	Investment in initiatives allowing self sufficiency for specifically targeted aspects of the value chain that are not at scale in Spain <input type="checkbox"/>
	<b>Capacity reservation</b>	Contract with one/multiple originator(s) to reserve capacity to be used when and as needed <input checked="" type="checkbox"/>
	<b>Joint Venture</b>	Partnership between government and private entities to develop industrial capabilities <input type="checkbox"/>



## Analysis of four key international examples

- France, Germany, Italy, and United States have plans / national resilience programs that include large components around industrial resilience
- A fact-based analysis of best practices of these programs can inform decision-making in relation to industrial resilience strategy in Spain
- National Recovery and Resilience Plans of both Germany and Italy are analogous to PERTE Spanish plan



**France Relance (2020)**



**Germany's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Italy's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Inflation Reduction Act (2022)**

# Germany's National Recovery and Resilience Plan was launched after COVID-19 in collaboration with EU, who funded +90% of the plan



## Context

Germany's Recovery and Resilience Plan is the **7<sup>th</sup> largest national plan** under the unprecedented **EU response** to the crisis triggered by the **coronavirus** pandemic

Out of the €28 Bn investment, **€26 Bn were funded by the European Union** (all in form of grants)

Plan provides a **comprehensive and balanced response** to the **economic and social situation** through six main pillars under the RRF

**28 B€**  
investment




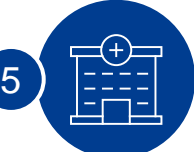


**1%** of  
Germany's  
GDP

NOTE : figures may not add up due to rounding

Source: National Recovery and Resilience Plans (including annexes) - retrieved from [EC website](#), Team analysis

## Main pillars and key levers

Focus of this document

<p><b>1</b> </p> <p><b>Climate policy and energy transition (€11 Bn)</b></p> <ul style="list-style-type: none"> <li>Climate-friendly mobility (€5 Bn)</li> <li>Decarbonization, especially through renewable hydrogen (€3 Bn)</li> <li>Climate-friendly building and renovation (€3 Bn)</li> </ul>	<p><b>4</b> </p> <p><b>Strengthening social participation (€1 Bn)</b></p> <ul style="list-style-type: none"> <li>Strengthening social participation (€1 Bn)</li> </ul>
<p><b>2</b> </p> <p><b>Digitization of the economy and infrastructure (€6 Bn)</b></p> <ul style="list-style-type: none"> <li>Digitization of the economy (€3 Bn)</li> <li>Analysis, tests and campaigns for greener transport (€3 Bn)</li> </ul>	<p><b>5</b> </p> <p><b>Strengthening a pandemic-resilient health (€5 Bn)</b></p> <ul style="list-style-type: none"> <li>Strengthening a pandemic-resilient health system (€5 Bn)</li> </ul>
<p><b>3</b> </p> <p><b>Digitization of education (€1 Bn)</b></p> <ul style="list-style-type: none"> <li>Digital educational campaign (€1 Bn)</li> </ul>	<p><b>6</b> </p> <p><b>Modern administration (€4 Bn)</b></p> <ul style="list-style-type: none"> <li>Modern public administration (€4 Bn)</li> <li>Analysis, tests and campaigns for greener transport (&lt;€1 Bn)</li> </ul>

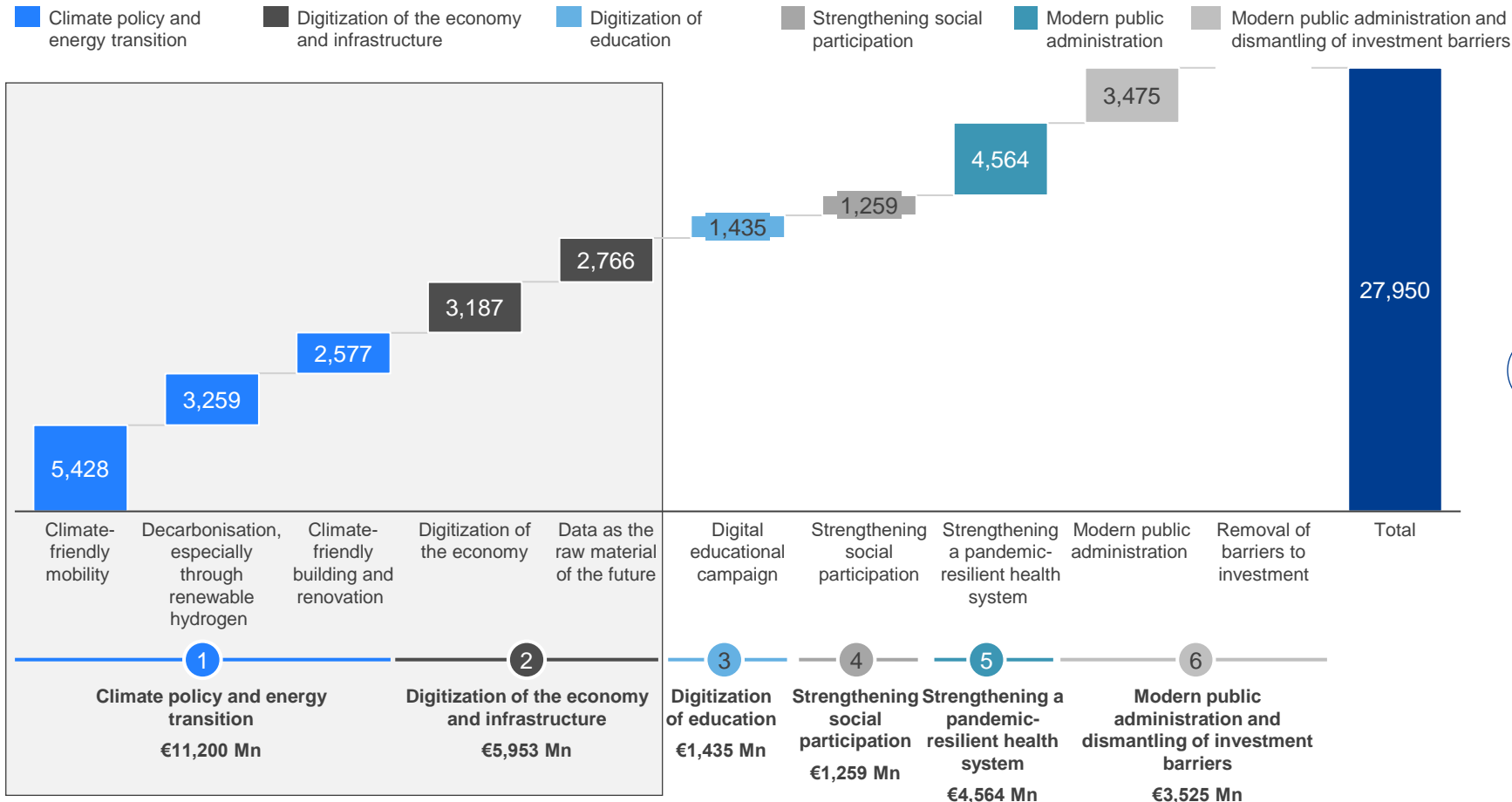
# Germany's National Recovery and Resilience Plan was launched after COVID-19 in collaboration with EU, who funded +90% of the plan



□ Focus of this document

## Germany's NRRP budget split

In € Mn



Germany's NRRP budget amount to **€28 Bn**, which represents **1% of Germany's GDP** in 2019




Measures relating to **climate protection** –including key actions on mobility and housing – reach at least **42%<sup>1</sup>** of the allocation

Plan shows an even stronger **digital ambition**, reaching at least **52%<sup>1</sup>** of the allocation and ranging from industry, to education, social policy and healthcare, to public administration

1. According to "Next Generation EU (NGEU) delivery – How are the Member States doing?" by the European Parliament

# 1 €11.2 bn will be invested in Climate policy and energy transition



Main levers 	Key initiatives (non-exhaustive) 	Budget 
<b>Climate-friendly mobility</b>	Innovation bonus to promote sales of electrically powered vehicles (€2,500 Mn) Promotion of the purchase of buses with alternative drives (€1,085 Mn) Subsidies for the construction of tank and charging infrastructure (€700 Mn) Promotion of the vehicle and supplier industry for hydrogen and fuel cell applications in traffic (€546 Mn) Extension of the initial registration period for the granting of the ten-year tax exemption for purely electric vehicles (€295 Mn) Subsidies to promote alternative drives in rail transport (€227 Mn) Electromobility funding guidelines (€75 Mn)	€5.4 Bn <i>(0,15% of Germany's GDP)</i>
<b>Decarbonization, especially through renewable hydrogen</b>	Hydrogen projects within the framework of IPCEI <sup>1</sup> (€1,500 Mn) Lead projects on research and innovation in the context of the National Hydrogen Strategy (€700 Mn) Pilot program for climate protection contracts based on the principle of Carbon Contracts for Difference <sup>2</sup> (€550 Mn) Funding decarbonization program in industry (€450 Mn) Project-related research (climate protection research) (€60 Mn)	€3.3 Bn <i>(0,09% of Germany's GDP)</i>
<b>Climate-friendly building and renovation</b>	CO2 building renovation: BEG innovation bonus <sup>3</sup> (€2,500 Mn) Municipal real laboratories of the energy transition (€57 Mn) Further development of the climate-friendly Building with wood initiative (€20 Mn)	€2.5 Bn <i>(0,07% of Germany's GDP)</i>

1. Important Projects of Common European Interest; 2. Contract between a public administration and a company that sets a fixed carbon price over a given period ; 3. Federal Subsidy for Efficient Buildings

# 2 €5.9 bn will be invested into Digitization of the economy and infrastructure



Main levers	☆	Key initiatives (non-exhaustive)	💡	Budget	👉
Digitization of the economy		Vehicle manufacturer / supplier industry investment program (€1900 Mn) Center for Digitization and Technology Research of the Bundeswehr (€750 Mn) Promotion of the digitization of the railways by replacing conventional signal boxes / high-speed program to accelerate the rollout of the "Digital Rail Germany" (€500 Mn) Federal program "Development of further training associations" (€38 Mn)		€3.2 Bn (0,09% of Germany's GDP)	
Analysis, tests and campaigns for greener transport		IPCEI <sup>1</sup> microelectronics and communication technologies (€1,500 Mn) IPCEI <sup>1</sup> Next Generation of Cloud Infrastructure and Services/ IPCEI <sup>1</sup> -CIS (€750 Mn) An innovative data policy for Germany (€516 Mn)		€2.8 Bn (0,08% of Germany's GDP)	

1. Important Projects of Common European Interest

Source: National Recovery and Resilience Plans (including annexes) - retrieved from [EC website](#), Team analysis

# Germany's NRRP makes use of mainly 2 public-private coordination levers out of the 10 proposed to increase industrial resilience in Spain

Key levers	Description	Included in IRA?
<b>Incentives</b> 	<b>Focused tenders</b>	Tenders to ensure production in Spain or specific clauses within them to benefit companies that e.g., stockpile, comply with local content requirements 
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## Analysis of four key international examples

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**France Relance (2020)**



**Germany's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Italy's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Inflation Reduction Act (2022)**

# Italy's National Recovery and Resilience Plan was launched after COVID-19 in collaboration with EU, who funded +80% of the plan



## Context

Italy's Recovery and Resilience Plan is the **largest national plan** under the unprecedented **EU response** to the crisis triggered by the **coronavirus** pandemic

Out of the €235 Bn investment, **€191 Bn were funded by the European Union** (€69 Bn in form of grants and €122 Bn in form of loans)

Plan aimed to promote the **recovery** of the Italian economy, while addressing **structural weaknesses** and pursuing **major objectives** such as the green transition

**235 B€**  
investment

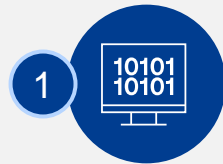
**13%** of  
Italy's GDP

NOTE : figures may not add up due to rounding

Source: National Recovery and Resilience Plans (including annexes) - retrieved from [EC website](#), Team analysis

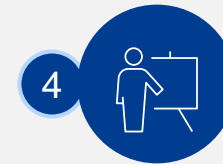
## Main pillars and key levers

Focus of this document



**1**  
**Digitalization, Innovation, Competitiveness, Culture and Tourism (€50 Bn)**

- Digitization, innovation, and competitiveness in the productive system (€30 Bn)
- Digitization, innovation, and security in the Public Administration (€12 Bn)
- Tourism and Culture 4.0 (€8 Bn)



**4**  
**Education and Research (€34 Bn)**

- Empowering education: from kindergartens to universities (€21 Bn)
- R&D in the productive system (€13 Bn)



**2**  
**Green Revolution and Ecological Transition (€70 Bn)**

- Energy transition and sustainable mobility (€25 Bn)
- Energy efficiency and buildings renovation (€22 Bn)
- Environment and water resource protection (€15 Bn)
- Sustainable agriculture and circular economy (€7 Bn)



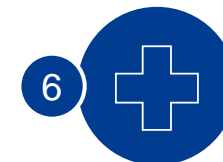
**5**  
**Inclusion and Cohesion (€30 Bn)**

- Social infrastructures, families, communities, and non-profit industry (€13 Bn)
- Active labor market policies (€13 Bn)
- Special interventions for social cohesion (€4 Bn)



**3**  
**Infrastructures for a sustainable mobility (€31 Bn)**

- High speed railways and road safety (€28 Bn)
- Intermodality and integrated logistic (€3 Bn)



**6**  
**Health (€20 Bn)**

- High speed railways and road safety (€28 Bn)
- Intermodality and integrated logistic (€3 Bn)

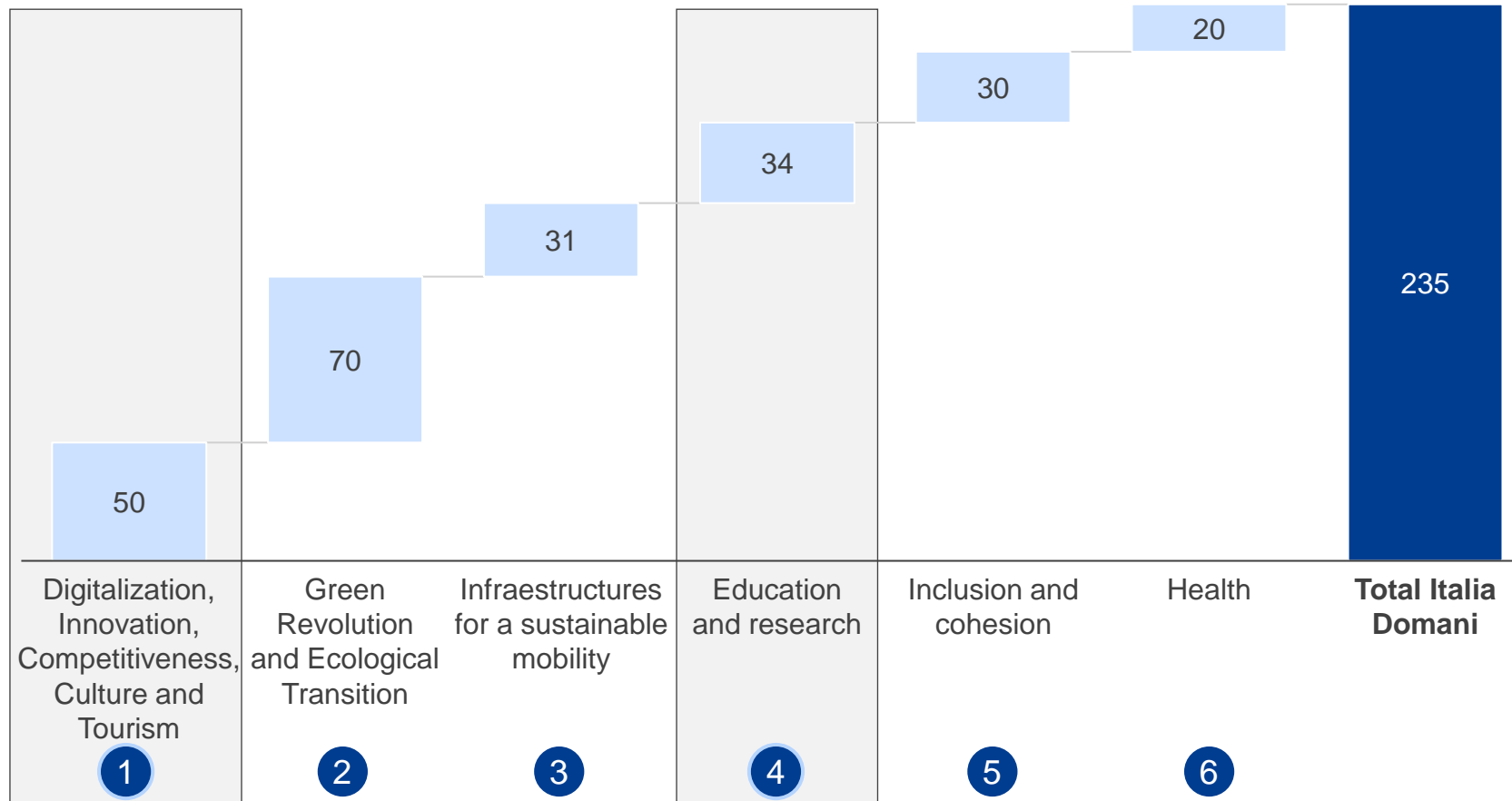


# Italy's NRRP was funded with €235 Bn, which represent 28% of the average annual spending and 13% of GDP



Italy's NRRP budget split  
In € Bn

□ Focus of this document



Italy's NRRP budget will amount to €235bn, which represents ~28% of total annual public spending in previous years 13% of GDP in 2019

Plan's objectives are to:

- i) help Italy recover from the severe socioeconomic impact of the coronavirus pandemic
- ii) contribute to addressing structural weaknesses of the Italian economy
- iii) lead the country along a path of ecological and environmental transition



NOTE : figures may not add up due to rounding

Source: National Recovery and Resilience Plans (including annexes) - retrieved from [EC website](#), Team analysis

# 1 €50 Bn are invested to accelerate digitization and innovation processes in the Italian economy





\* Most relevant lever of the pillar

Main levers 	Key initiatives (non-exhaustive)	Budget 
<b>Digitization, innovation, and competitiveness in the productive system</b> *	Transition 4.0: aimed at increasing the productivity, competitiveness and sustainability of Italian companies (€13.4 Bn) Ultra-fast networks/ ultra-broadband and 5G (€6.7 Bn) Industrial supply chain and internationalization policies (€1.9 Bn) Satellite Technologies and Space Economy (€1.5 Bn) Other investments (€7.1 Bn)	€30.6 Bn <i>(1,71% of Italy's GDP)</i>
<b>Digitization, innovation, and security in the Public Administration</b>	Investment in human capital to strengthen the trial office and overcome disparities between courts (€2.3 Bn) Digital services and digital citizenship (€2.0 Bn) Enabling and facilitating migration to the cloud (€1.0 Bn) Digital infrastructure (€0.9 Bn) Data and interoperability (€0.6 Bn) Cybersecurity (€0.6 Bn) Other investments (€4.0 Bn)	€11.5 Bn <i>(0,64% of Italy's GDP)</i>
<b>Tourism and Culture 4.0</b>	Integrated funds for the competitiveness of tourism businesses (€1.8 Bn) Attractiveness of the villages (€1.0 Bn) Seismic safety in places of worship, restoration of the cultural heritage of the Cultural Heritage Fund (FEC) and shelter sites for works of art (€0.8 Bn) Other investments (€4.5 Bn)	€8.1 Bn <i>(0,45% of Italy's GDP)</i>

# 4 €34 Bn are allocated in support to education, research, and training activities



\* Most relevant level of the pillar

Main levers 	Key initiatives (non-exhaustive)	Budget 
<b>Empowering education: from kindergartens to universities</b>	Plan for kindergartens and preschools and early childhood education and care services (€4.6 Bn) Safety plan and redevelopment of school buildings (€3.9 Bn) School 4.0 - innovative schools, new classrooms and laboratories (€2.1 Bn) Extraordinary intervention aimed at reducing territorial gaps in cycles I and II of upper secondary school (€1.5 Bn) Development of the tertiary vocational training system (ITS) (€1.5 Bn) New skills and new languages (€1.1 Bn) Other investments (€6.2 Bn)	€20.9 Bn <i>(1,16% of Italy's GDP)</i>
<b>R&amp;D in the productive system</b> *	Fund for the National Research Program (PNR) and Research Projects of Significant National Interest (PRIN) <sup>1</sup> (€1.8 Bn) Expanded partnerships extended to universities, research centers, companies and funding of basic research projects (€1.6 Bn) Strengthening of research structures and creation of “national R&D champions” on some Key Enabling Technologies (€1.6 Bn) Public support (through incentives) for the participation of Italian companies in strategic value chains through the financing of projects of considerable importance for the production and technological development of the country (€1.5 Bn) Other investments (€6.4 Bn)	€12.9 Bn <i>(0,72% of Italy's GDP)</i>

1. Funding allocation mechanisms whose goal is the strengthening of national scientific bases, as well as promoting interactions between public and private entities. Eligible applicants include universities and private and public entities. Maximum eligible amount is €1 Mn

# Italy's NRRP contains 4 public-private coordination levers out of the 10 proposed to increase industrial resilience in Spain



Key levers	Description	Included in IRA?	
<b>Incentives</b> 	<b>Focused tenders</b>	Tenders to ensure production in Spain or specific clauses within them to benefit companies that e.g., stockpile, comply with local content requirements	✓
	<b>Priority vouchers</b>	Regulatory or legal priority in exchange for capacity	✗
	<b>Tax incentives</b>	Tax benefits to those companies that e.g., stockpile, carry out R&D, build new factories)	✓
	<b>Grants</b>	Grants to those companies that e.g., stockpile, carry out R&D, build new factories)	✓
	<b>Extended exclusivity</b>	Extension of originator's exclusivity time in exchange for capacity	✗
	<b>Concessional loans</b>	Financing under favorable terms to companies building factories of critical products or guarantee on loans	✓
<b>Partnerships</b> 	<b>Subscription models</b>	Fixed annual fees in return for a sufficient product supply guarantee or supply prioritization	✗
	<b>Protection of emerging capacity</b>	Investment in initiatives allowing self sufficiency for specifically targeted aspects of the value chain that are not at scale in Spain	✗
	<b>Capacity reservation</b>	Contract with one/multiple originator(s) to reserve capacity to be used when and as needed	✗
	<b>Joint Venture</b>	Partnership between government and private entities to develop industrial capabilities	✓

## Analysis of four key international examples

- France, Germany, Italy, and United States have plans / national resilience programs that include large components around industrial resilience
- A fact-based analysis of best practices of these programs can inform decision-making in relation to industrial resilience strategy in Spain
- National Recovery and Resilience Plans of both Germany and Italy are analogous to PERTE Spanish plan



**France Relance (2020)**



**Germany's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Italy's National Recovery and Resilience Plan (2021)<sup>1</sup>**



**Inflation Reduction Act (2022)**

# The Inflation Reduction Act (2022) directs new federal spending worth \$393 Bn towards creating a green industry in the United States



Focus of this document

## Context

The Inflation Reduction Act contains \$500 billion in **new spending** and **tax breaks** that aim to boost clean energy, reduce healthcare costs, and increase tax revenues

The act aims to catalyze investments in **domestic manufacturing capacity**, encourage **procurement of critical supplies** domestically or from free-trade partners, and jump-start **R&D** and commercialization of leading-edge technologies such as carbon capture and storage and clean hydrogen

**500 B€**  
investment

**2%** of  
US's GDP

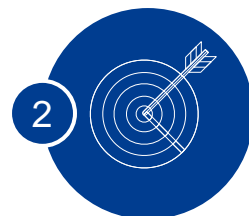
## Main pillars

## Key levers



**Clean energy**  
(\$393 Bn)

- Hand US competitive edge in the **energy** transition (\$171 Bn)
- Transform the nation's **buildings** (\$52 Bn)
- Reduce the **financial risks** associated with key green projects (\$45 Bn)
- Decarbonize polluting **industrial** applications (\$37 Bn)
- Promote clean **transportation**, including EV (\$37 Bn)
- Invest in industrials and **cross-cutting** solutions (\$22 Bn)
- Other (\$28 Bn):
  - Incentivize environmental programs
  - Conservate regional partnerships



**Healthcare**  
(\$108 Bn)

- Extend **Affordable Care Act** (ACA) subsidies for three years (\$64 Bn)
- **Medicare** Part D redesign, **vaccine** coverage and others (\$44 Bn)
  - Allow Medicare to negotiate prices with drug companies
  - Put an inflation cap on drug prices
  - Lower out-of-pocket expenses for Medicare recipients

# Inflation Reduction Act directed to create clean energy is distributed across several sectors



□ Focus of this document

## Inflation Reduction Act budget split

In € Bn

Green Energy Healthcare



Inflation Reduction Act budget will amount to **€500 Bn**, which represents **2% of US GDP** in 2022

This is the **third piece of legislation** passed since late 2021 that **seeks to improve US economic competitiveness, innovation, and industrial productivity**. The Bipartisan Infrastructure Law (BIL), the CHIPS & Science Act, and IRA have partially overlapping priorities and together introduce \$2 trillion in new federal spending over the next ten years

Source: Inflation Reduction Act (2022)

# 1 Main initiatives include tax credits, funding, grants programs and concessional loans



Main levers 	Key initiatives (non-exhaustive)	Budget  
Hand US competitive edge in the energy transition	<ul style="list-style-type: none"> <li>Extend and modify production tax credit (PTC)</li> <li>Technology-neutral investments in generation and storage</li> <li>Nuclear lifespan extension of existing reactors</li> </ul>	\$171 Bn
Transform the nation's buildings	<ul style="list-style-type: none"> <li>Energy efficiency upgrades and retrofits</li> <li>Building code upgrades and contractor training</li> </ul>	\$52 Bn
Reduce the financial risks associated with key green projects	<ul style="list-style-type: none"> <li>Green banks funding</li> <li>Department of Energy Loan Program Office programs</li> </ul>	\$45 Bn
Decarbonize polluting industrial applications	<ul style="list-style-type: none"> <li>Advanced manufacturing investment tax credit</li> <li>Domestic conversion grant program</li> </ul>	\$37 Bn
Promote clean transportation, including EV	<ul style="list-style-type: none"> <li>Consumer tax credits for new and used EVs</li> <li>Tax credits for qualified commercial vehicles</li> </ul>	\$37 Bn
Invest in industrials and cross-cutting solutions	<ul style="list-style-type: none"> <li>Hydrogen and carbon capture tax credits</li> <li>Climate pollution reduction grants</li> </ul>	\$22 Bn



# Corporations, individuals, and state and local governments are all eligible to receive funding in the energy portion of the IRA

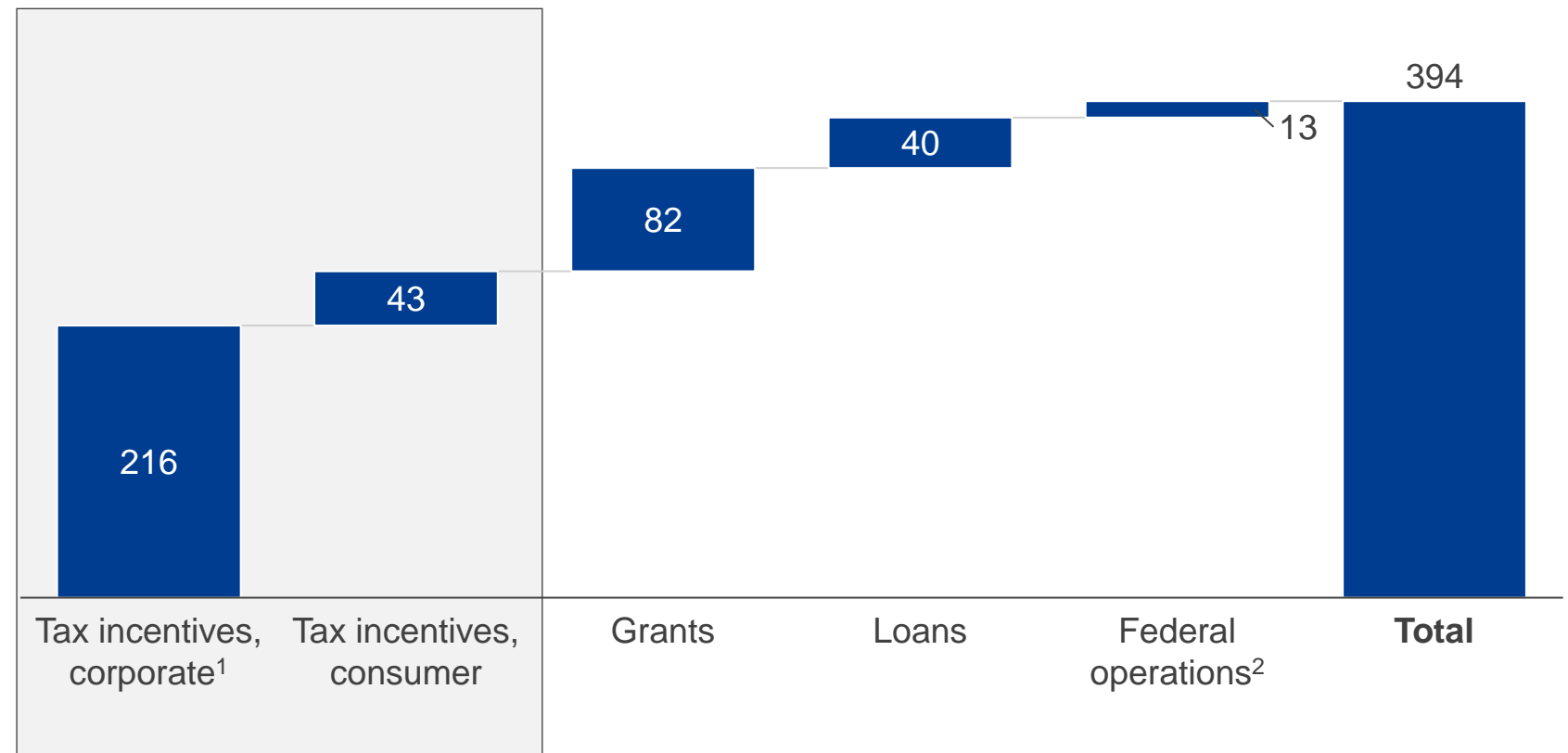


□ Detailed next

## Provide incentive for private investment

- The majority of the \$394 billion in energy and climate funding is in the form of tax credits
- Corporations are the biggest recipient, with an estimated \$216 billion worth of tax credits
- These are designed to catalyze private investment in clean energy, transport, and manufacturing
- Many of the tax incentives in the bill are direct pay, meaning that an entity can claim the full amount even if its tax liability is less than the credit

Energy and climate funding in the inflation reduction act, \$ billion



Note: This exhibit reflects analysis of the appropriation figures contained in the inflation reduction Act, as well as those reported by the congressional budget office and joint committee on taxation. This analysis may differ from other analyses due to difference in methodology.

# Buy America and meeting domestic content provisions are core requirements of major IRA tax credits



## Domestic content bonus credits

**IRA provides 10% bonus tax credits to incentivize the use of domestic manufactured goods in energy investments and production**

- 100% of any iron/steel products that are components of the facility must be produced in the US
- 40% of the total cost of all “manufactured products” that are components of the entire facility must be produced in the U.S. to earn the bonus tax credit

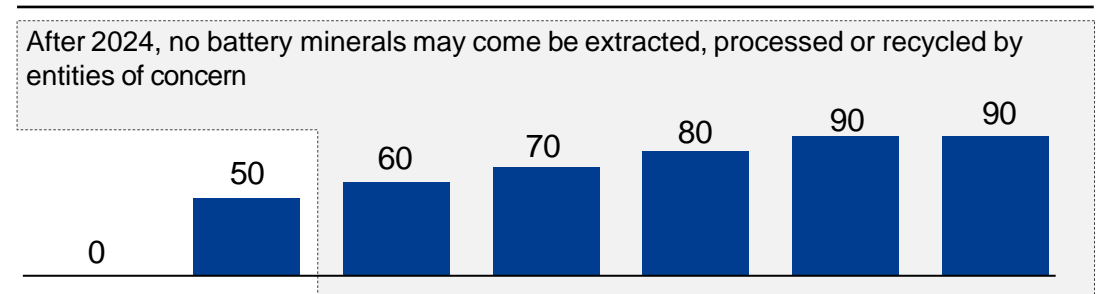
Certain tax-exempt entities (e.g., state and local governments, electric cooperatives) are allowed to receive tax credits as “direct pay” if the energy facility’s construction meets domestic content requirements

**IRA builds on Buy America requirements in the Bipartisan Infrastructure Law—requiring >55% of domestic content of manufactured goods**

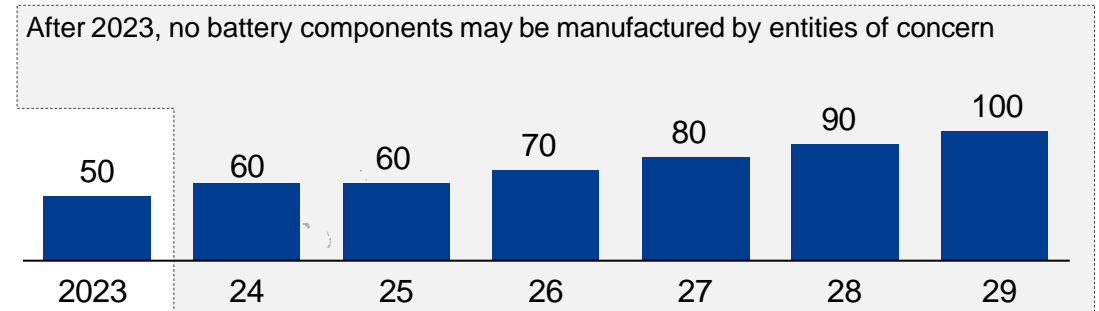
1. Recycled materials only qualify if recycled in North America

## Example of expected impact: Batteries

**Share of battery materials extracted/processed in US or country with free trade agreement<sup>1</sup> percent**



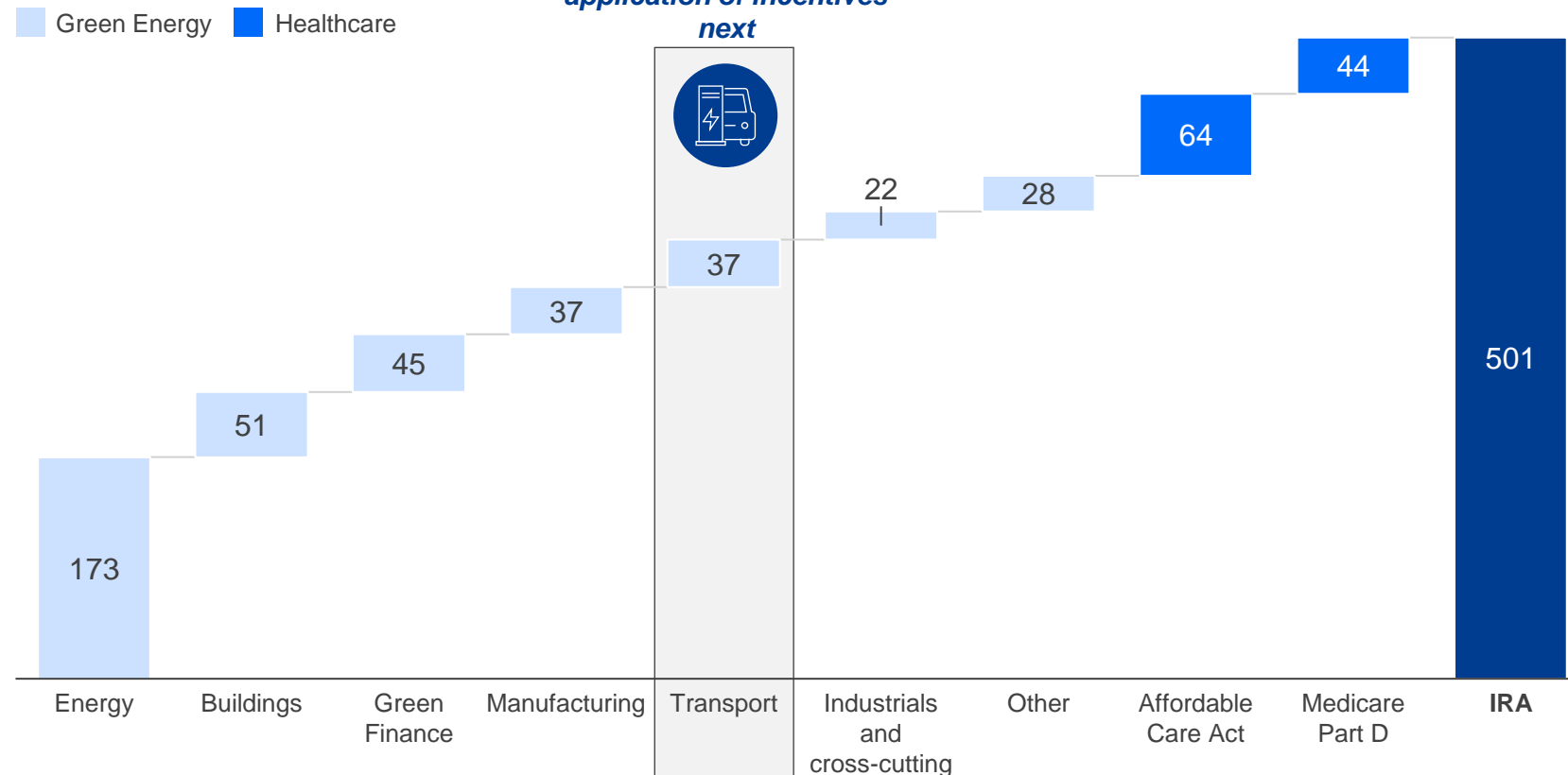
**Share of battery manufactured in North America percent**



# \$37 Bn out of the \$393 Bn have been directed towards a cleaner transportation, namely electric vehicles



## Inflation Reduction Act budget split In € Bn



*Detailed example of application of incentives next*



Inflation Reduction Act budget will amount to **€500 Bn**, which represents **2% of US GDP** in 2022

This is the **third piece of legislation** passed since late 2021 that **seeks to improve US economic competitiveness, innovation, and industrial productivity**. The Bipartisan Infrastructure Law (BIL), the CHIPS & Science Act, and IRA have partially overlapping priorities and together introduce \$2 trillion in new federal spending over the next ten years

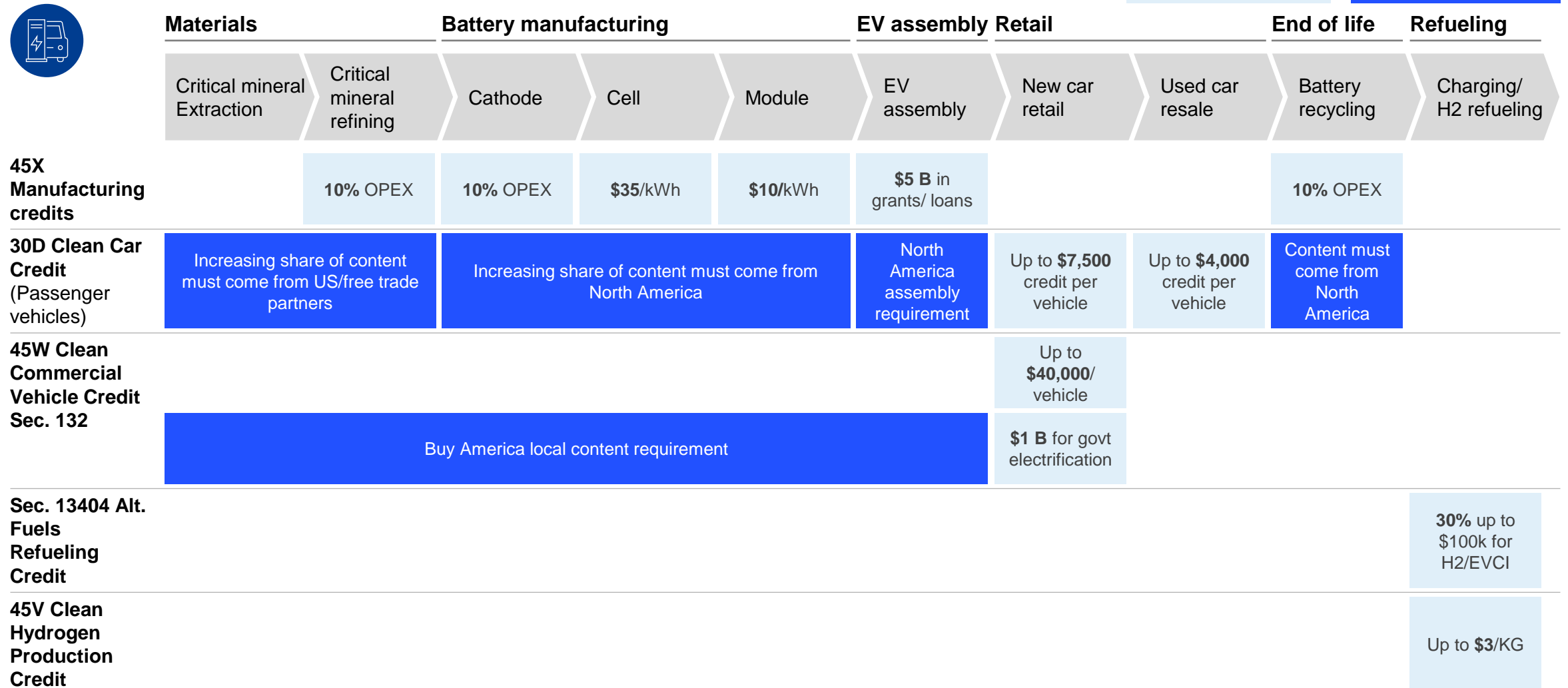
**1 Clean energy - \$393 Bn**

**2 Healthcare - \$108 Bn**

# IRA tax credits and incentives cover the lifecycle of the electric vehicles and clean transportation value chain















## EXAMPLE OF APPLICATION OF INCENTIVES IN THE TRANSPORT SECTOR









Note: 45X, 30D and 45W refer to IRA sections

Source: Inflation Reduction Act, Treasury Department, Department of Energy

# The Inflation Reduction Act makes use of 4 public-private coordination levers out of the 10 proposed to increase industrial resilience in Spain

Key levers	Description	Included in IRA?
<b>Incentives</b> 	<b>Focused tenders</b>	Tenders to ensure production in Spain or specific clauses within them to benefit companies that e.g., stockpile, comply with local content requirements 
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	<b>Capacity reservation</b>	Contract with one/multiple originator(s) to reserve capacity to be used when and as needed 
	<b>Joint Venture</b>	Partnership between government and private entities to develop industrial capabilities 

# Summary of public-private coordination levers included in France Relance, Germany's and Italy's NRRP and IRA

Key levers	 France Relance	 Germany's NRRP	 Italy's NRRP	 IRA	
<b>Incentives</b> 	Focused tenders	✓	✗	✓	✗
	Priority vouchers	✗	✗	✗	✗
	Tax incentives	✓	✓	✓	✓
	Grants	✗	✓	✓	✓
	Extended exclusivity	✗	✗	✗	✗
	Concessional loans	✗	✗	✓	✗
<b>Partnerships</b> 	Subscription models	✓	✗	✗	✓
	Protection of emerging capacity	✗	✗	✗	✗
	Capacity reservation	✓	✗	✗	✓
	Joint Venture	✗	✗	✓	✗

# Back-up

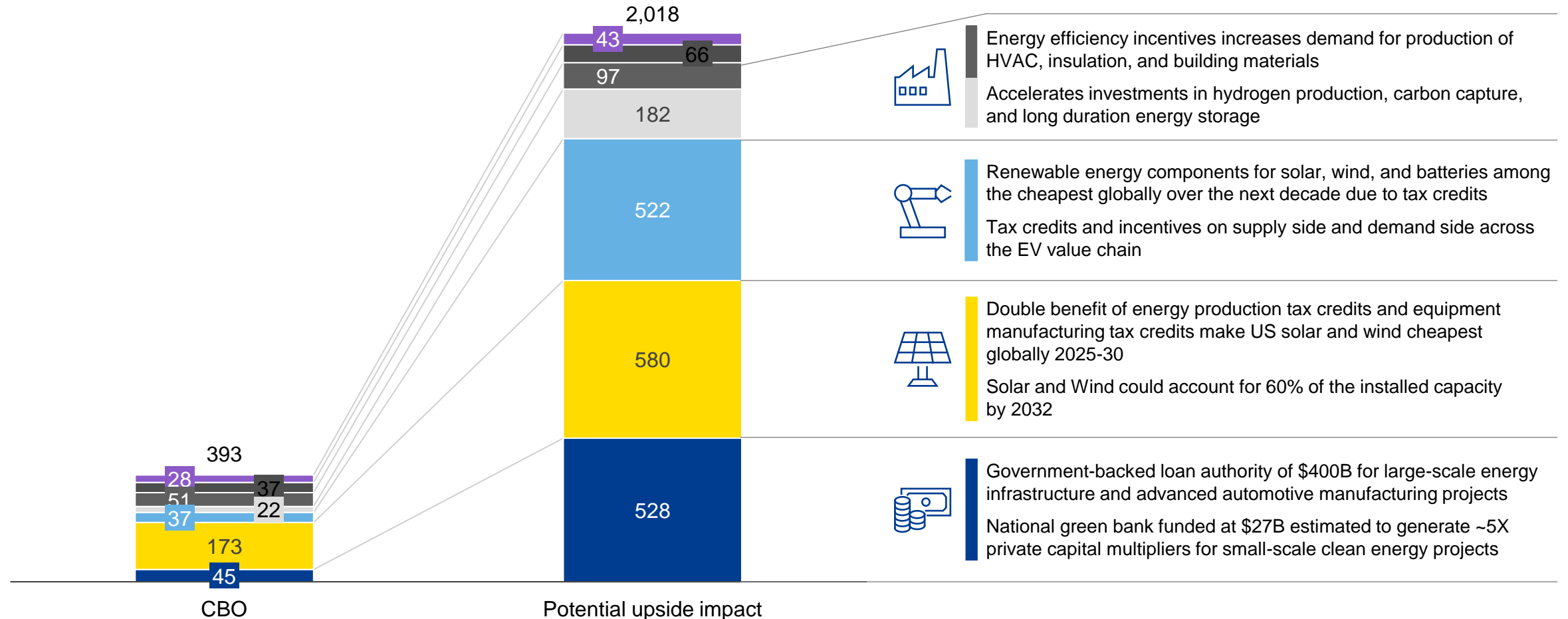
# The \$393 Bn is expected to have a 5X impact due to uncapped tax credits, loan authority, and private spending multiplier



Sector ■ Other ■ Transportation ■ Buildings ■ Industrial ■ Manufacturing ■ Clean Energy ■ Green Finance

## Estimated spending and modeling for the Inflation Reduction Act, \$B

## Market drivers







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