Blockchain Eco-System, European Public Funds and Citizen-Centric Finance

EU Recovery and Resilience Plan & Green Deal
A Winning Organizing System in the Digital Age

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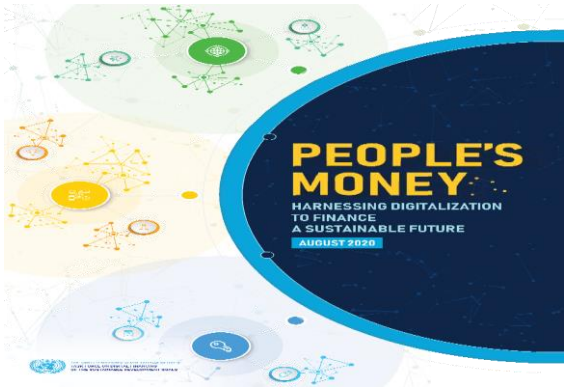
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DRAFT 7 – January 19, 2021-

"Digitialization must democratise the governance of finance to democratise finance itself"

United Nations Secretary-General António Guterres[1]

The Task Force has set out five catalytic opportunities to move public and private money into alignment with the SDGs. There is work to be done on all of these. But, what has truly drawn my attention is the conclusion that digitalization will make a difference by giving people greater control over how global finance — their own money — is used. Whether it is channelled through markets or through State intermediaries, global finance is accountable to ordinary people. Taxpayers hold Governments to account, while savers and investors need to hold financial institutions to account.



And people, whether they are taxpayers, savers or investors, care deeply about their families, communities and our planet. So, I fully endorse the Task Force's vision of citizen-centric finance, and its conclusion that the digitalization of finance must be inclusive and empowering so that it becomes a force for good. (…)

We now have an ambitious set of ideas to deliver financing for the Sustainable Development Goals, by shifting the centre of gravity of the financial system towards empowered citizens

United Nations Secretary-General António Guterres

[1] Throughout this report for ease of reading, some direct quotes are included in *italics* without quotations.

The task force report '*People's Money: Harnessing Digitalization to Finance a Sustainable Future'* and its invitation *to harness digitalization to advance citizen-centric finance and accelerate financing for the SDGs* are providing us the framework for a series of proposals related to Blockchain and the EU Recovery Plan, the European Green deal, the EU Multi years Financial Framework (MFF).

A Pivotal Moment

A European Pilot

A partnership with the UN?

- Blockchain is a digital tool to promote decentralization, for restoring confidence
- If applied in the right way, it can considerably increase our efficiency, help measure our impact to protect our values, and reorient our economy and finances
- It has the power to ensure the well-being of all and a "safe operational space for humanity", a feat that we have failed to accomplish in the past 40 years.
- It would be a 'pivotal moment' for Europe, towards a sustainable and just development and of a resilient and happier society because we could have advanced confidence:
  - (i) confidence in democracy,
  - (ii) confidence in cooperation and solidarity,
  - (iii) confidence in our values and our identity,
  - (iv) confidence in the common project.
- We can create a new generation of multi-stakeholder partnerships between the UN, a « geopolitical Europe », and interested parties of other regions of the world in both fields of citizen-centric finance and sustainable trade.

A cooperation with 30 government members of the European Blockchain Partnership?

"In the future, all public services will use blockchain technology. Blockchain is a great opportunity for Europe and Member States to rethink their information systems, to promote user trust and the protection of personal data, to help create new business opportunities and to establish new areas of leadership, benefiting citizens, public services and companies. The Partnership launched today enables Member States to work together with the European Commission to turn the enormous potential of blockchain technology into better services for citizens."

Mariya Gabriel, Commissioner for Digital Economy and Society,

European governments members of the *European Blockchain Partnership* preparing the launching of the *European Blockchain Services Infrastructure* include priorities such as '*notarisation of audit documentation'* related to public funds.

Summary

After the greening of the EU Treaty the adoption of the Charter of Fundamental Rights, and the European social principles **now is the time to take a major step towards a new development model: an inclusive and sustainable finance scheme that seeks out community participation** *supported by an eco-system of blockchains* for a *winning organizing system in the digital age.*

The inclusive element reflects the conclusions of the UN Secretary General's Task Force on Digital Financing for the Sustainable Development Goals where SG Guterres endorsed the Task Force's vision of "citizen-centric finance, and its conclusion that the digitalization of finance must be inclusive and empowering so that it becomes a force for good. [..] to deliver financing for the Sustainable Development Goals, by shifting the centre of gravity of the financial system towards empowered citizens."

To implement decisions related to Next Generation EU (the European Recovery Plan) and the Green Deal, **public authorities will need a new form of leadership and empowerment.** In order to make a leap in societal capabilities, we will need to deal with sustainability in a holistic manner addressing cross-cutting issues relating to finance, biodiversity, climate, inequality and health. The organizing framework should be a multi-stakeholder, **open method of coordination towards systemic change to build resilience and regeneration supported by new tools such as blockchain.**

Connecting Data related to public funds to Incentivize Trust in relation with Europe's Public Funds (CDIT-EF)

Blockchain, a Digital Solution for Modern Democracies

"If managed properly, blockchain can have a huge impact on the relationship between governments and citizens, saving tremendous amounts of resources, reducing mistrust in politicians and offering new avenues for citizen participation."

"In this respect, blockchain can indeed strengthen democracy, transparency and accountability, introducing new modes of societal interaction and governance."

- Jesse Colzani, Pro Bono Manager at The Good Lobby

https://www.iai.it/en/pubblicazioni/blockchain-digital-solution-modern-democracies

The proposals are directly inspired by the Commission guidance to member states recovery and resilience plans.[2] We are inviting Governments National, Regional and Local to join CDIT-EF which stands for ***Connecting Data to Incentivize Trust - European Funds*** (pronounced Seed it- EF). CDIT-EF is a platform having for objective an open coordination for '*Responsibility- Resonance- Resilience- Regeneration'* .

The "**blockchain and EU public funds eco-system CDIT-EF**, here proposed aims to monitor "commitments". It should strengthen the tracing and accountability system of public funding related to Next Generation EU (the European Recovery & Resilience Plan) and the Green deal.

In a time where a "tsunami" of financial resources is made available, *and much of this stimulus funding is set to flow into existing sectors with no attempt to look forward and support the medium and long-term sustainability and resilience of these sectors. There remains significant scope for governments to more pro-actively ensure this funding strengthens sustainability and resilience (*Green Stimulus Index).

The development of this CDIT-EF initiative, is one step for member countries and the European Union to *demonstrate a high level of ambition when defining reforms and investments enabling the digital transition as part of their recovery and resilience plans. It should be part of the Commission request to devote a minimum level of 20% of expenditure related to the application of digital technologies.*[3]

Blockchain can implement great levels of transparency and this is why entities from across the world are using the technology to track actions which rely on verification and trust in their authenticity. It is important when developing blockchain applications that their structure match with their intended purpose and users'

The **European Blockchain Services Infrastructure** launched by the Commission and 30 European Governments is a private blockchain with control remaining with the Commission and Member States. Private permissioned vs public permissioned blockchain has extremely important implications in terms of transparency, security and efficiency.

Although it may have other uses, the EBSI private blockchain option left alone isn't desirable for the purposes outlined in CDIT-EF. Because it can be changed by the organization running it, in this case the Commission and Member States, there is an obstacle built into its structure that impairs its ability to restore actions spearheaded by these same institutions.

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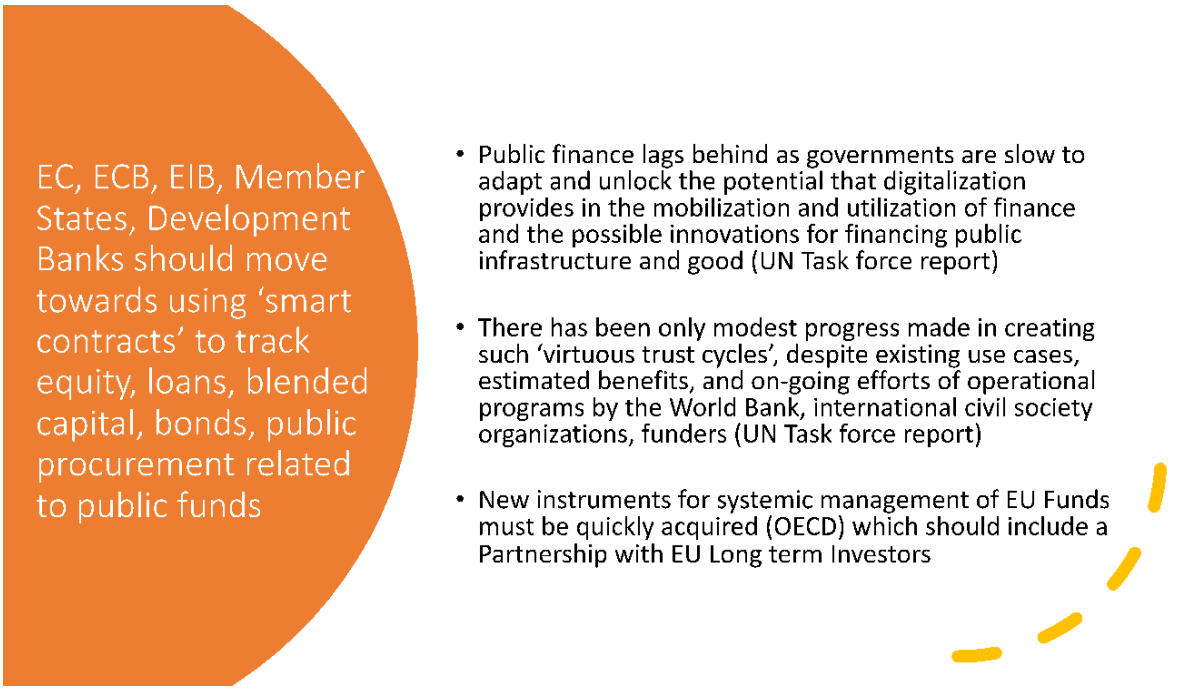
[2] COMMISSION STAFF WORKING DOCUMENTGUIDANCE TO MEMBER STATESRECOVERY AND RESILIENCE PLANS
SWD(2020) 205 final

[3] EU digital finance strategy https://ec.europa.eu/info/publications/200924-digital-finance-proposals_en

This is why the **"blockhain and EU public funds eco-system CDIT-EF" should integrate a "CDIT-EF situation room" at EU level to provide citizen centric governance and "CDIT-EF platforms" at Member States level managed in a similar participatory manner.** This governance structure will address the limitations of private blockchains to fully assure that every transaction is reported and remains traceable into the future.

It will also help to manage the challenges that are unavoidable given currently technological limitations and their intersection with the scope of the data required to provide the needed transparency from end-to-end where public funds are involved.

Consequently, to address technological and scope limitations present in today's environment, this report proposes, as a first step, a public funds monitoring solution. This solution is built around collaboration within an eco-system of existing and new blockchain use-cases reporting to a "**situation room'.** The situation room oversees elements related to the Green Deal, SDGs and the Rule of Law .



The European Member States, all members of the European Blockchain Partnership, should do the same. This initiative and the development of a **national platform 'CDIT-EF blockchain and public funds' and citizens capabilities development should be part of their digital investment plan** in the framework of their recovery and resilience plan in line with the UN task force recommendation : Create 'Virtuous Trust Cycles' in Public Financing

The Commission proposes that each national "recovery and resilience plan" includes a minimum level of 20% of expenditure related to digital

- CDIF-EF should be a part of the Member States' strategy as each should provide details about the measures they will put in place to avoid any risk of fraud, corruption or maladministration in general in the award of contracts.
- A CDIT-EF multi-stakeholder partnership across the Member States will require leadership by a few countries – who will step forward?

In the framework of **Europe** geopolitical role, this 'blockchain and public funds' initiative to support the implementation of the SDG should be presented at international forums such as the G20 in Italy, at the COP in UK , at the Africa-EU Summit and at the UN Food Systems Summit.

By doing so, Europe will harness "sustainability and fintech" to secure the implementation of its own objectives, build trust and create value for society as well as to catch up with the fintech digital leading initiatives of other parts of the world.

In addition to putting these concepts in the public view, it will be complemented by adoption in other countries whose economic activities are interconnected with Europe's through supply chains and other relationships. Therefore, no European system will be comprehensive unless it secures agreement by other countries and regions to participate through their own similar initiatives.

We are inspired by an OECD-IIASA report of the imperative that new instruments for systemic management of EU funds must be quickly acquired.[4] This development will encourage societal innovation for a 'leap forward' towards more resilience and well-being and **is the primary objective of this project.**

[4] Hynes, W., M. Lees and J. Müller (eds.) (2020), Systemic Thinking for Policy Making: The Potential of Systems Analysis for Addressing Global Policy Challenges in the 21st Century, New Approaches to Economic Challenges, OECD Publishing, Paris, https://doi.org/10.1787/879c4f7a-en.

We are at a pivotal moment in human history where the way we deploy blockchain offers the possibility - thanks to a digital decentralized empowerment tool - of restoring confidence, considerably increasing our efficiency, measuring our impact and protect our values, reorienting our economy and finances - to ensure the well-being of all and a "safe operational space for humanity", a feat that we have failed to accomplish in the past 40 years. **This is the lever that this project will use to achieve its objective.**

As the Commission is inviting Governments *to describe any consultation and contribution of social partners, civil society and other relevant stakeholders, in the drafting and implementation of the recovery and resilience plan*, as well as the **European Climate Pact** adopting and engaging through the CDIT-EF multi-stakeholder open coordination platform will demonstrate leadership.

CDIT-EF will include pilots related to specific mechanism and specific policies for which the consortium partners are seeking financial support



- **European Raw Materials Alliance** (blended capital and ethical supply chain)
- **Food Systems** and public funding (EU grants in support to farmers and loans by European Development Banks)
- **Buildings retrofit** (grants and sustainable procurement)
- **Nature Conservation** (green bonds)
- **Industrial sectors** and public funding (loans-equity) in the framework of the Recovery Plan for Electricity, Gas & Fuel, Vehicles.*
- **Africa-EU Partnership**.(green bonds)

* When it comes to rescuing key sectors (tourism, aeronautics, automotive), this initiative could accompany aid by a monitoring mechanism to ensure a proper degree of action on the ecological transition.

Report Introduction

The Commission communication on the European Green Deal announced:
"Active public participation and confidence in the transition are essential".
"He must put people first and pay attention to the regions, industries and workers who will face the greatest challenges."
"Citizens are and must remain an engine of transition".
"Game-changing policies work if citizens are fully involved"

This blockchain initiative concerns:

EU policies as identified i.a. in the *Commission communication: Repair and prepare for the next generation as:*

- the European Green deal and its European Green Deal Investment Plan
- the European Climate Pact
- the Next Generation EU recovery plan
- From Farm to Fork & the Common Agricultural Policy (CAP),
- the European Renewed Sustainable Finance Strategy,
- the EU initiatives related to due diligence along the supply chain
- the Africa-Europe Partnership.

EU policy platforms :

- The European Semester as budget spending will be geared by it
- the multi-level governance initiatives of the European Blockchain Partnership (EBP).
- The European Innovation Partnerships on Raw Materials and Sustainable Agriculture
- The European Alliance o Raw Materials
- The EU Sustainable Finance Platform

EU support mechanisms :

- The European Blockchain Services Infrastructure (EBSI).
- the Invest EU Portal (and the Invest EU Advisory Hub) and be presented at the Annual Sustainable Invest Summit
- The Strategic Investment Facility to support cross-border investments to help strengthen and build European strategic value chains linked with the twin green and digital transition
- The EU Green & Social Taxonomy

This blockchain initiative is based on a European observation - Banks are beginning to use blockchain but nothing relevant yet to public funds use - similar to observations of the Task force report :

- *Public finance lags behind, as governments are slow to adapt and unlock the potential that digitalization provides in the mobilization and utilization of finance and the possible innovations for financing public infrastructure and good.*

- *there has been only modest progress made in creating such 'virtuous trust cycles', despite existing use cases, estimated benefits, and on-going efforts of operational programs by the World Bank, international civil society organizations, funders*[5]

The CDIT-EF system proposed should contribute to a *citizens-centric financial system* with an efficient use of public funding along the value chain leading to *Responsibility-Resilience-Regeneration*. It will build trust, and fight against corruption. It will be linked with the respect of EU Treaty and the rule of law as well as UN principles, responsibilities and rights.

It should contribute to improve performance and encourage innovation in relation with carbon reduction, biodiversity protection, people's health and environment [6] and the implementation of the SDGs.

It should answer the European Commission concerns on :

- How to ensure efficient management accounting of businesses' total environmental impact?
- How to improve disclosure by businesses and financial institutions on their social and environmental performance?

CDIT-EF is proposing an eco-system of 'clusters' of blockchain initiatives all addressing specific instruments used in the framework of the recovery plan and the MFF, in relation with specific policies

1. Grants
2. Loans
3. CAP support to farmers
4. Blended capital
5. Equity
6. Green bonds
7. Sustainable procurement[7]

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[5] European governments members of the *European Blockchain Partnership* preparing the launching of the "*European Blockchain Services Infrastructure*" include priorities such as ''*notarisation of audit documentation*" related to public funds but not the tracing of public funds itself.

[6] *For its part, the EU has so far failed to provide its citizens with adequate access to data generated by industry, and to allow compliance promotion and benchmarking. For the EEB, this is largely due to badly designed reporting obligations for member states, the absence of an EU-level centralised reporting portal, and a complacent attitude towards the way information is provided*. **Europe's worst polluters revealed**. EEB. Meta. September 2020.

[7] "*The future of public spending: why the way we spend is critical to the Sustainable Development Goals*" is an essay written by The Economist Intelligence Unit (EIU) and supported by UNOPS, the UN organisation with a core mandate for infrastructure and procurement. The research investigates the potential for less wasteful, more efficient government spending practices to help address a critical spending gap that countries face in

As the task force report states *The nexus between digitalization, finance and the SDGs is largely a new frontier of investigation and action. Digitalization amplifies the potential for the financial system to better serve the interests of people, whose money it manages, and whose collective interest is expressed by the SDGs.*

This initiative is in line with the tasks force recommendation Create 'Virtuous Trust Cycles' in Public Financing (p55) convinced that *digitalization can*

- *be harnessed to support vulnerable people, reduce inequalities, sustain livelihoods and strengthen solidarity. If unchecked, however, it could deepen exclusion, increase inequality and further divide us.*
- support financing that meets the priorities of the people it is intended to serve, by empowering them as savers, lenders, borrowers, investors, and taxpayers. These priorities are collectively represented by the SDGs, the shared agenda adopted by all United Nations Member States.

With this initiative, public finance accounting can become integrated with Carbon and Biodiversity Accounting to generate a new economy (crypto-economy or 'Token Economy') based on trusted transactions of stateful data.

This CDIT-EF eco-system contains as well pilot initiatives related to specific sectors :

- Buildings retrofit
- Agro-food systems
- Electricity
- Gaz & Fuel
- Automobiles
- Raw Materials

When it comes to rescuing key sectors (tourism, aeronautics, automotive), this initiative could accompany aid by a monitoring mechanism to initiate the ecological transition.

By using blockchain technology together with new web standards for verifiable claims (the ixo protocol, the ACT developed by ADEME and CDP) partners of this initiative , use-of-proceeds can be recorded, generate data assets (such as tokenized carbon and biodiversity credits). These data assets can be recorded on the same ledger systems as capital assets, which provides public financial accounting that is directly tied to performance accounting (and outcomes).

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achieving the Sustainable Development Goals (SDGs), and how social, environmental and economic sustainability objectives can be achieved through procurement This essay is aligned on the.European Commission's definition of sustainable public procurement, as "a process by which public authorities seek to achieve the appropriate balance between the three pillars of sustainable development—economic, social and environmental—when procuring goods, services

This initiative links with Climate-KIC *Transformation Capital Initiative* and Climate-Kic *Deep Demonstration*. This initiative contains as well as training and capacity building programme under the leadership of the Frankfurt Blockchain School Center. It will also encourage cross-countries exchanges as between Germany and Italy.
CDIT-EF might be part of the European Climate Pact

Section 1. Identify the role of blockchain in the framework of the Recovery & Resilience Plan, Green deal and MFF

What are the Recovery and Resilience Plans?

Member States can prepare recovery and resilience plans that set out a coherent package of reforms and public investment projects to be implemented up to 2026 in order to be supported by the Recovery and Resilience Facility.

The plans should demonstrate how the investments and reforms would effectively address challenges identified in the context of the European Semester, particularly the country-specific recommendations adopted by the Council. The plans should also include measures aimed at addressing the challenges faced by the Member States regarding their green and digital transitions.

When should Member States present their Recovery and Resilience Plans?

Member States can formally submit their recovery and resilience plans for assessment from the moment the Facility is legally in force. The Commission is expecting that the legislation will enter into force on 1 January 2021. The deadline for the submission of the plans is 30 April 2021. However, the Commission encourages Member States to submit their preliminary draft plans from 15 October 2020. Member States may finalise their plans following the initial presentation of the drafts to the Commission

The Commission will assess the recovery and resilience plans based on transparent criteria. In particular, the Commission assessment will consider whether the investments and reforms set out in the plans:

- *contribute to effectively addressing challenges identified in the relevant country-specific recommendations;*
- *contain measures that effectively contribute to the green and to the digital transitions; and*
- *contribute to strengthening the growth potential, job creation and economic and social resilience of the Member State.*

The Commission's assessment of the plans will be approved by the Council by means of an implementing decision following a proposal from the Commission.

In line with the conclusions of the European Council, a pre-financing of 10% of the financial contribution to each Member State should be paid. This payment could be made upon the approval of the plan through the Council implementing decision and adoption of the legal commitment by the Commission, meaning that the funds could start flowing in the first half of 2021 already.

The Commission strongly encourages Member States to include in their recovery and resilience plans investment and reforms in the following areas: (see page 6 and 7)

1. *Power up – The frontloading of future-proof clean technologies and acceleration of the development and use of renewables.*
2. *Renovate – The improvement of energy efficiency of public and private buildings.*
3. *Recharge and Refuel – The promotion of future-proof clean technologies to accelerate the use of sustainable, accessible and smart transport, charging and refuelling stations and extension of public transport.*
4. *Connect – The fast rollout of rapid broadband services to all regions and households, including fiber and 5G networks.*
5. *Modernise – The digitalisation of public administration and services, including judicial and healthcare systems.*
6. *Scale-up – The increase in European industrial data cloud capacities and the development of the most powerful, cutting edge, and sustainable processors..*
7. *Reskill and upskill – The adaption of education systems to support digital skills and educational and vocational training for all ages.*

For each flagship, Member States are invited to provide analysis of the existing national challenges (including the existence of market or systemic failures) related to the development of the European flagships. Member States are invited to describe the relevant reforms and investments supported by the Facility.



CDIT-EF has a major contribution to offer to the following guideline :*This description may include the delivery models to implement the measures (including how they would act as investments multipliers and would contribute to a maximum of beneficiaries who shall co-finance projects and minimise competition distortions) and the main actors involved.* Page 7

In the context of Europe seeking to achieve climate neutrality by 2050, and significantly increasing its greenhouse gas emissions reduction ambition for 2030, Member States should consider reforms and investments to support the climate transition as a matter of priority. All national recovery and resilience plans will therefore need to focus strongly on both reforms and investments supporting the climate transition. To follow the commitment of the European Council to achieve a climate mainstreaming target of 30% for both the multiannual financial framework and Next Generation EU, each recovery and resilience plan will have to include a minimum of 37% of expenditure related to climate. Progress towards other environmental objectives is also important, in line with the European Green Deal.

All reforms and investments included in the recovery and resilience plans will need to respect the 'do no harm' principle, meaning that they should not be to the detriment of climate and environmental objectives.

Member States will need to factor in the need to ensure a just and socially fair transition, across green policy areas. This means, in particular, that national recovery and resilience plans should be developed in full coherence with proposed Territorial Just Transition Plans under the Just Transition Mechanism.

Member States should ensure a high level of ambition when defining reforms and investments enabling the digital transition as part of their recovery and resilience plans. To ensure effective implementation, the Commission proposes that each recovery and resilience plan should include a minimum level of 20% of expenditure related to digital.

This includes, for instance, investing in the deployment of 5G and Gigabit connectivity, developing digital skills through reforms of education systems and increasing the availability and efficiency of public services using new digital tools.

In line with the Cpmmission guidance to Member stats Recovery and Resilience Plans [8] the blockchain eco-system and the situation room should contribute to

- *Promoting the Union's economic, social and territorial cohesion*
- *Strengthening economic and social resilience*
- *Mitigating the social and economic impact of the crisis*
- *Supporting the green and digital transition*

The CDIT-EF will contribute to the fight against

- Corruption
- Fake news
- Forgotten commitments and targets

CDIT-EF will contribute to the fight for

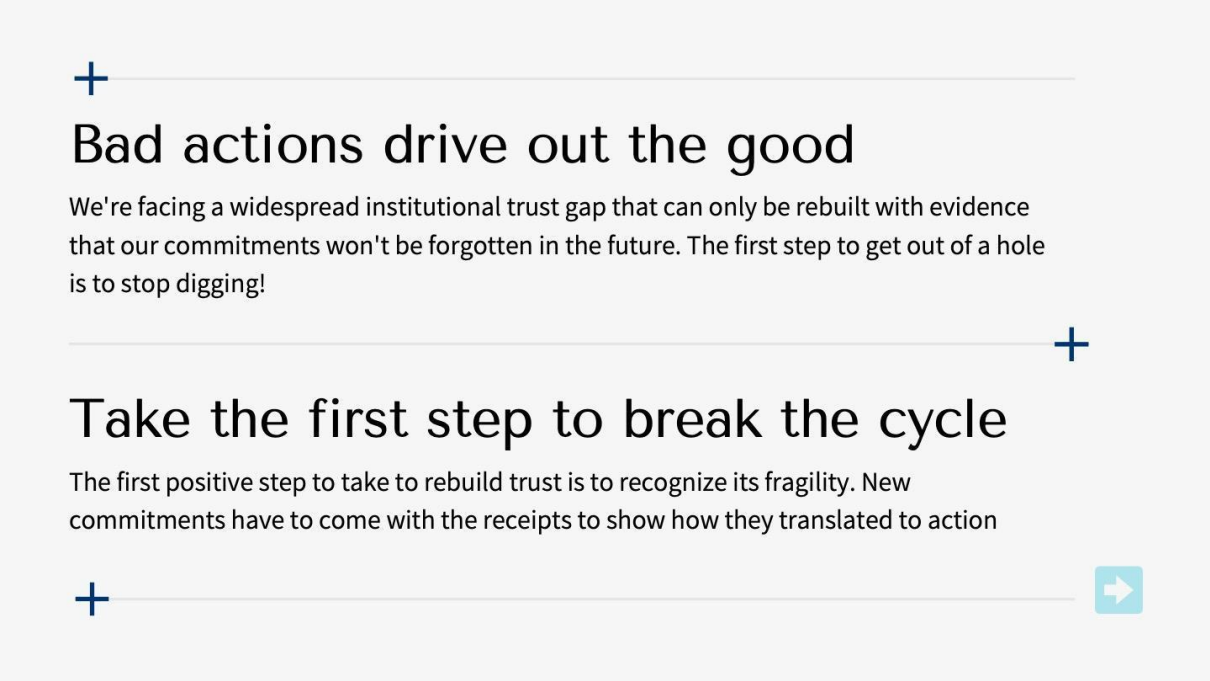
- Green deal efficient system management
- Transparency of public funds use and trust
- Risk management in the public interest
- Commitments and targets implementation
- Public and private finance cooperation in the framework of value chain

[8] Commission staff working document guidance to member states recovery and resilience plans Swd(2020) 205 final

- Inclusive and sustainable finance
- Fairness et less inequalities



Tracing public funds through blockchains should be a major tool to meet the EU objective *to reach the environmental goals and targets set at EU level, for instance the sustainable use and protection of water and marine resources, transition to a circular economy, waste prevention and recycling, pollution prevention control, and protection and restoration of healthy ecosystems, including forests, wetlands, peatlands and coastal areas, and the planting of trees and greening of urban areas as well as respect the do no significant harm principle (p5).*



By joining CDIT-EF initiative Member States will demonstrate how their plan will contribute to improving their digital performance as measured by the dimensions of the Digital Economy and Society Index (DESI)3. This could include, as relevant, and if feasible for the different areas: improving connectivity in line with the EU 2025 objectives, including via a wide-spread deployment of very high capacity networks, including fibre and 5G connectivity, and by reducing the cost and increasing the speed of network roll-out;ensuring effective digital public services; ICT research & development, and integration of digital technology by businesses; deploying digital capacities; promoting cyber-resilience, and increasing the digital skillsof EU citizens (including for vulnerable social groups)and the availability of digital technology experts. Targets and impact measurements should relate to the EU's digital strategy. (p6)

CDIT-EF should be a major component of the Recovery and Resilience Plans as they should be composed of reforms and investments, grouped in coherent public administration components (p10).

- *Making the public administration a facilitator for innovation*
- *Reducing risks of mismanagement and corruption*
- *Improving the effective management of public funds*

The Commission proposes that each recovery and resilience plan includes a minimum level of 20% of expenditure related to digital.

When proposing elements of the digital transition strategy, CDIT-EF could in particular contribute to (page 17)

- *human capital: developing digital capacity to support resilient and efficient education, training and research systems; enhancing digital skills and competences for the digital transformation, including audiovisual and media,and building a trusted*

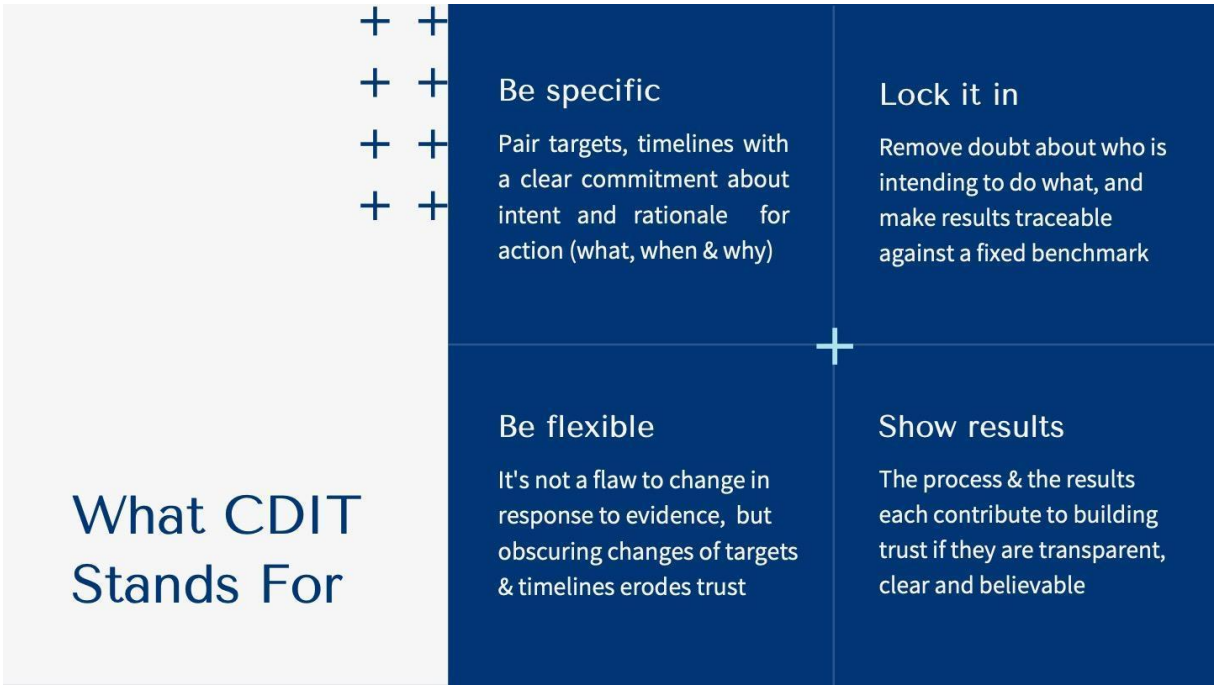
European digital education ecosystem of content, tools, services and platforms, including to improve access to and build digital skills

- *e-government, digital public services and local digital ecosystems: modernizing public administration using key digital enablers*

It is however 'surprising' that the non-exhaustive examples of typical reforms and investments linked to the green and digital transitions doesn't refer to blockchain (p18-19).

CDIT-EF should take into account *as stated in Article 8 of the Proposal, support under the Recovery and Resilience Facility is additional to the support provided under other Union funds and programmes. Reform and investment projects may receive support from other Union programmes and instruments provided that such support does not cover the same cost. Member States shall ensure the effective and efficient functioning of such synergies, through a consistent and harmonised approach of all involved authorities. To comply with Article 8, close coordination between all public actors is needed. Since the same expenditure cannot be financed twice, national authorities should clearly and strictly differentiate the specific measures, activities and projects funded under the Recovery and Resilience Facility from those financed under other Union programmes and instruments.*

European instruments and programmes may include cohesion policy funding, InvestEU, the Just Transition Mechanism, Horizon Europe, the Space Programme of the Union, the European Defence Fund, Digital Europe, Creative Europe, Connecting Europe Facility, ELENA and LIFE, Innovation Fund and Modernisation Fund. Member States are also invited to detail all other sources of (public) financing for the investment projects proposed in the plan. This may include direct budgetary support (such as subsidies or tax incentives) and/or financing mechanisms including de-risking, guarantees, renovation loans and subsidies, support for capacity building, etc (p31)



CDIF-EF should be part of the Member State strategy as the guidelines request Member States to explain how they intend to implement the proposed reforms and investments; following effective public procurement rules in line with the EU strategic objectives is essential in that regard. They should also provide details about the measures they will put in place to avoid any risk of fraud,corruption or maladministration in general in the award of contracts.(p32)

Trust in the EU and fight against fake news.

There will be no green and just sustainable development deal without also a profound transformation of methods and tools, as much those of the European Commission itself as of local authorities or even public and private Financial Institutions. And the key term in both cases is trust. Among all the indicators that exist, one of the most interesting is that which relates to the trust of people among themselves and towards institutions in the broad sense. We find that the level of happiness is correlated with the level of trust between people and vis-à-vis institutions. As P. Defeyt notes, '*we have built an economy of deception and part of the economy is not built on trust but on false information, consumer manipulation*. LLB May 6

Our ambition is to contribute to a "geopolitical Europe," leader of sustainable and just development and of a resilient and happier society because we could have advanced confidence: confidence in democracy, confidence in cooperation and solidarity, confidence in our values and our identity, confidence in the common project.

To adapt EU governance towards system leadership for transformational change in a digital age, the Milan 2019 Declaration of civil society groups invited by the European Movement Italy states : *While addressing the twin crises by design - inequality and the Planetary boundaries - bound together (as the Green New Deal for Europe) our system leadership should aim to* ***three objectives****:*

· the greatest mobilization of people and resources ever in peacetime;

· innovative governance schemes and societal innovation towards more resilience, solidarity, justice;

· in a digital age, to build trust, share knowledge and monitor use of EU funds.

To do this, we will need new systems approach systems that allow us to embrace at the same time three revolutions : the health, nature and environment, life style nexus, the inclusive and sustainable finance revolution, the digital revolution

Member States are invited to describe any consultation and contribution of social partners, civil society and other relevant stakeholders, in the drafting and implementation of the recovery and resilience plan (p33)

Member States will report on their progress at least biannually, when submitting payment requests. The information provided in the reporting by Member States will be used by the Commission to monitor the plans, to decide on payment requests, and to report on progress and performance of the Recovery and Resilience Facility.
(p34)

CDIT-EF Situation room should contribute to ensure transparency and accountability, the Recovery and Resilience Facility, as all parts of the EU budget, is embedded in an annualperformance framework. This performance framework is based on a clear description of how the implemented interventions contribute to the stated policy objectives and the selected indicators to trace progress against them. The performance framework will measureprogress towards the Facility's policy objectives and by measuring keyresults achieved on the ground. Given the high-level crosscutting objectives pursued by the Facility , it will be important to be able to show the aggregated results on the programme objectives of recovery, resilience, green and digital transition (p34)

A catalytic opportunity to advance Multi-stakeholder Partnership in a Digital Age Democracy to improve financing efficiency for specific Sustainable Development Goals (SDGs).

As Shaun Conway, CEO of IXO notes *Blockchain and data technologies can be used to sense and respond to changes in the ecological state of the natural world. Verifiable state changes can be used to program EU capital with incentives for recipients to prove how proceeds have been used to generate environmentally sustainable economic activities.*

This principle can be applied to all financing deals and economic activities of relevance to the Recovery Plan and Green Deal, by linking these deals to the EU Taxonomy Regulation, which introduced a classification system for environmentally sustainable economic activities. This is directly relevant to the EU Green Bond Standard (GBS) introduced in January 2020, which requires use-of-proceeds to be reported in accordance with the EU Taxonomy.

By using blockchain technology together with new web standards for verifiable claims (the ixo protocol), use-of-proceeds in the Africa context can be recorded with high levels of resolution and fidelity. This will generate data assets such as tokenized carbon and biodiversity credits. These data assets can be recorded on the same ledger systems as capital assets, which provides public financial accounting that is directly tied to performance accounting (and outcomes).

Public finance accounting can become integrated with Carbon and Biodiversity Accounting to generate a new economy (crypto-economy or 'Token Economy') based on trusted transactions of stateful data.

Next generation EU Recovery Plan
On 27 May Commission President Ursula von der Leyen unveiled the Next Generation EU recovery plan that aims to address the damage caused by the pandemic and invest in a green, digital, social and more resilient EU : a €750 billion economic stimulus plan that along with a revised proposal for the EU's 2021-2027 budget should help mitigate the shock from the coronavirus pandemic and pave the way for a sustainable future.
After the leaders of EU countries agreed a deal on the budget and the recovery plan in mid-July, MEPs adopted a resolution on 23 July laying out their position ahead of negotiations with the Council. Parliament welcomed the agreement on the overall size of the recovery plan, but deplored the decrease in the funds to be disbursed as grants. MEPs also insisted that Parliament, as the only directly EU institution, should be fully involved in decisions on the recovery plan.

Under the proposal, the Commission would borrow the money on the financial markets using its high credit rating, which should secure low borrowing costs. The Commission's plan envisaged that €500 billion would be distributed in grants, however EU leaders cut the level of grants to €390 billion at their summit on 17-21 July.
The funds will be used to reach the EU's objectives of climate neutrality and digital transformation, to offer social and employment support as well as to reinforce the EU's role as a global player.
According to S&P [9]
 The EU could become the main liquidity provider for a green safe asset with long duration by financing 30% (€225 billion) of its proposed €750 billion recovery fund through green bond issuance.
 EU green bond issuance on such a large scale would help respond to a fast-growing ESG investor base and increase the size of the global green bond market by around 89% compared with total issuance in 2019.

Table 1
Next Generation EU--Breakdown By Budget Commitments

	(Bil. €)
1. Single Market, Innovation, and Digital	69.8
of which InvestEU Fund	30.3
2. Cohesion and Values	610
of which Recovery and Resilience Facility	560
3. Natural Resources and Environment	45
of which Common Agricultural Policy	15
of which Just Transition Fund	30
4. Resilience Security and Defence	9.7
of which Health Programme	7.7
5. Neighborhood and the World	15.5
Total	**750**

Sources: European Commission, S&P Global Ratings.

The European Green Deal Investment Plan

The European Green Deal Investment Plan will mobilise EU funding and create an enabling framework to facilitate and stimulate the public and private investments needed for the transition to a climate-neutral, green, competitive and inclusive economy. Complementing other initiatives announced under the Green Deal, the Plan is based on three dimensions:

- *Financing: mobilising at least €1 trillion of sustainable investments over the next decade. A greater share of spending on climate and environmental action from the*

[9] (https://www.spglobal.com/ratings/en/research/articles/200715-environmental-social-and-governance-the-eu-recovery-plan-could-create-its-own-green-safe-asset-11572226).

EU budget than ever before will crowd in private funding, with a key role to be played by the European Investment Bank.

- *Enabling: providing incentives to unlock and redirect public and private investment. The EU will provide tools for investors by putting sustainable finance at the heart of the financial system, and will facilitate sustainable investment by public authorities by encouraging green budgeting and procurement, and by designing ways to facilitate procedures to approve State Aid for just transition regions.*
- *Practical support: the Commission will provide support to public authorities and project promoters in planning, designing and executing sustainable projects.*

1. How blockchain can support the Green Deal and Recovery Plan to reinvent society and economy.

- Public money spending and digital transformation. Opportunities for the EU, the 30 European states who are members of the European Blockchain Partnership and European citizens. This should be embedded within the procedures to fix national recovery plan and report to the EU on Green Deal alignment
- Overview - Public money and the Green deal objectives. How it relates with Recovery Plans and MFF in particular the CAP.
- The eco-system of sustainable finance, a value chain approach. Methodologies to distribute public funding: (i) Call for proposals followed by grants/contracts (ii) Loans (iii) CAP financial scheme (iv) Blended capital
- How a blockchain eco-system could contribute to efficiency
- Partnership with financial institutions: Central banks in Europe including the European Central Bank, Public Banks including development banks, Sovereign Wealth Funds of European Countries (Connecting Data to Incentiize Trust in Finance (**CDIT))**
- Partnership with territories, regions and cities

2. Blockchain contribution to the Green Deal with its European Climate Pact as well as the SDGs in relation with commitments and their follow-up mechanisms will be essential for the proper coherence between the recovery plan and the transformation of the economy towards the achievement of social and environmental objectives. with
    - Commitments towards carbon neutrality and long term objectives (2050) which are requiring a multi-dimensional transformation and first mover advantage/disadvantage : **the ACT methodology (ADEME-CDP)**

ACT (ADEME-CDP) is part of the CDIT-EF blockchain eco-system as the only international initiative that creates an “accountability framework and sectorial methodologies” to assess how companies’ strategies and actions are contributing to the Paris Agreement mitigation goals.

In the framework of CDIT-EF **ACT sectoral methods will serve as a pilot climate accountability framework for companies receiving public funding as part of the European recovery plan.**

ADEME will provide to the 'CDIT-EF situation room' the results of ACT evaluations of companies already evaluated (electricity and auto production sector, oil and gas to come by 2021) and the list of companies involved in ACT (working groups, experiments)

- Supply chain and business commitments made public with its consequences (legal, reputation etc.)
- Value chain commitments/pledges accountability much more efficiently managed (monitoring, reporting, multi-level dialogue, societal innovations) than what has been done since c. 1992
- Systemic changes accompanied by impact assessments
- New financial methods where citizens as retail investors, savers, borrowers and tax payers are empowered

3. *Blockchain and Commission plans gaps.*

Blockchains could be a place for dialogue and innovation in particular to address gaps as suggested here by some civil society statements related to finance, SDGs, climate, biodiversity.

- "We welcome the commitment to a 'human economy', so wellbeing must take primacy over GDP growth at the heart of EU policymaking," insisted Patrick ten Brink, the EEB's director of EU policy. However, he noted that the EU was not fully putting its money where its mouth is. "The promised 37% of the EU recovery fund allocated to the European Green Deal objectives is welcome but not enough. It is also important that the remaining 63% is not spent in ways that undermine those objectives."
- Promoting human wellbeing within the boundaries of the natural world requires EU policies and actions to be guided by sustainability principles. "It is a shame that the Commission President does not explicitly base her vision of a sustainable Europe on the 2030 Agenda and the Sustainable Development Goals (SDGs) adopted by the international community exactly five years ago," points out the EEB's Director of Global Policies and Sustainability Patrizia Heidegger.
- Although the 55% emissions reduction by 2030 proposed by von der Leyen is a far cry from the initial reluctance to even set an intermediate objective and is higher than the current 40%, it still falls considerably short of the 65% or more that scientists and environmentalists insist is necessary. It is also below the target floated by the European Parliament's Environment Committee of a 60% cut.
- This omission was all the more stark given the UN major new report sounding the latest alarm about the rapid speed of biodiversity loss, the threat it posed to human health and wellbeing, and how humanity was now at a crossroad.
- "Despite another stark reminder of biodiversity collapse and insufficient action by governments across the globe to reverse that trend, the President made little

mention of the EU's plans to put biodiversity on the path to recovery," said the EEB's Policy Manager for Biodiversity and Water Sergiy Moroz.

- Earlier this year, the European Commission released its proposed biodiversity strategy. Although the document presents an ambitious vision for protecting nature, its weakness on trade and enforcement spell potentially devastating consequences for biodiversity across the globe.

Blockchain and data technologies can be used to :

- *Monitor the use of public funding towards a citizens-centric financial system*
- *sense and respond to changes in the ecological state of the natural world. This principle can be applied to all financing deals and economic activities of relevance to the Recovery Plan and Green Deal, by linking these deals to the EU Taxonomy Regulation,*
- *By using blockchain technology together with new web standards for verifiable claims (the ixo protocol, the ACT), use-of-proceeds can be recorded, generate data assets (such as tokenized carbon and biodiversity credits). These data assets can be recorded on the same ledger systems as capital assets, which provides public financial accounting that is directly tied to performance accounting (and outcomes).*

4. The objective of this blockchain initiative: Implements the European Blockchain observatory report recommendations[10] and go beyond[11]
    - Change finance, *enabling evolution from financial inclusion to citizen-centric finance*
    - link with inclusive and sustainable public and private finance innovation platforms and initiatives such as the **Climate-KIC Transformation Capital Initiative** (https://www.climate-kic.org/programmes/transformation-capital/)

[10] European Blockchain Observatory Report 2020.

How can Europe proceed? In our recommendations section the Blockchain Observatory suggests and expands on these critical elements:

1. Set up the right infrastructure to make sure it is easy and fast for government agencies and institutions to build their own applications in a cost-effective and interoperable manner.

2. The ecosystem would benefit from **tailored policies and regulations**, clarifying and adapting current frameworks when relevant and implementing new rules if required.

3. Educating the general public, entrepreneurs and civil servants should be a priority.

4. The EU should take the opportunity to **drive high-impact projects through Member States and public/private collaboration**, as well as dedicated research and development.

[11] https://www.eublockchainforum.eu/sites/default/files/reports/eu_observatory_blockchain_in_government_services_v1_2018-12-07.pdf

- Mobllisation and empowerment of all, especially the left behind including women, youth, displaced and aged people
- Collective intelligence and Accelerators addressing nexus
- More efficiency along the value chain (supply and demand side)

With the wider application of every use of public funds end-to-end having its impact traced with blockchain, it's probably infeasible in the short run, because in a simplified model, for example, of public funded renewable energy, there would have to be a system to track:

- Budget allocation for public funds in support (e.g., a grant or guarantee)
- A private financial institution / public providing blended financing leveraging the public grant or guarantee
- The recipient project developer having a tracking system for the project construction
- Traceability through the supply chain for the solar panel construction
- Regular digital connection to the solar panels to get real-time operations & generation data (or from the offtaker that is taking delivery of the electricity)
- Footprint of the maintenance company's operations relating to that particular panel
- Tracking of the disposal of the panel at the end of its useful life

In some cases, there may be some development of blockchain applications for parts of this chain (e.g., tracking the power generation) because that information is being collected for other purposes and can have its records stored on blockchain by hashing the data to be able to trace its provenance ex post. However, in other cases (maintenance work, disposal, supply chain) the information won't be collected or centralized in a way that it can easily be connected in as a data source to be linked with the other data. Other operational details like budget allocation against spending may be tracked privately, and may rely on private blockchain like the EBSI project the Court of Auditors is developing.

So, we recognize that there are pieces of this universe that are ready for tracking with blockchain, there are some that will be tracked with private blockchains (with the loss of traceability and certainty about provenance, depending on the trust in whoever is managing it), and there is a lot of data that isn't collected at all or is of questionable data quality.

Any tracing of the euros as they are disbursed and spent will have to wait until there's a central bank digital currency from the ECB. This will allow a long term solution but one that would have enough institutional support to build onto the monitoring system with the full traceability of financial flows.

The important thing to take away as the monitoring system is recommended and developed using ecosystem partners' blockchain applications is to have some way to rank or provide transparency on the data quality issues such as whether it's built on a public or private blockchain, the robustness of data quality (of what data is tracked into the blockchain) and other items that will be dependent more on technical input both on the blockchain side (how to evaluate characteristics that make a given blockchain technology more or less robust and trusted, as well as to evaluate the quality of the 'off-chain' data before it gets hashed and a record stored on the blockchain).

Section 2 Build foundations for sustainable digital financing ecosystems,

Digitalize public financing and make public budgets and contracts transparent to pursue SDG priorities

The blockchain ecosystem partners' requirements

The very many blockchains in place[12] will have ADD in one way or another a 'tool' tracing public funds made available (European, national, regional, local) in different financial support forms (subsidies, equity, blended capital, sustainable procurement.

Existing blockchains part of the eco-system here proposed have reviewed how each were set up. They were designed to target some aspect of reporting related to SDG's and/or climate. They have integrated in their reporting the mapping of the different financial support forms (subsidies, equity, blended capital, sustainable procurement).

The blockchain ecosystem partners have identified how all the data they collect going forward could be tagged to include information related to location and use of public funds.

Or, since most likely some of that data is already included in what is being collected by other initiatives, each would have to provide details on how that data can be accessed (what fields store what information, how it could be accessed].

For some of the ecosystem blockchain partners whose data is public, it has been straightforward to include them, and for other data, there might need to be some form of agreement to make the data available.

5. Blockchain infrastructure: accessible, affordable connectivity, digital ID and data markets.

'Cross-chain' transfers. may have an impact on the technical ability to integrate data from different systems that have different levels of 'trust' in terms of greater or lesser number of miners, so different chains have different risk levels in terms of being manipulated to put bad data into the master system (linking the blockchain ecosystem into the operating system):

"Imagine a scenario where we bring data from a blockchain with only three miners to a blockchain with 10,000 miners. It is essential to establish a framework and mechanism to deal with the difference of trust, though interoperability is strongly needed."[13]

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[12] Positive Blockchain provided the following informations :

https://docs.google.com/presentation/d/1X5Fil5mG6uSm6zP_ndTZNsBEHeNpNuC3fySA1YPUs3E/edit#slide=id.g6d7893fe0d_0_3778

[13] https://cointelegraph.com/news/blockchain-interoperability-the-holy-grail-for-cross-chain-deployment

There are a few companies doing the 'cross-chain' work, including Cosmos, Hyperledger and one mentioned on the conference TokenBridge.

6. Planning, institutions, and learning: developing national and in some cases regional ecosystems that steer the evolution of SDG-aligned digital financing and incorporation of SDG-related risks.

7. Capabilities: building people's capacity to benefit from blockchain and digital finance, ensuring rights and protections.

With the help of the Frankfurt Blockchain School Center, train/capacity building if the government were interested in using blockchain when establishing a tracking system to monitor alignment of recovery plan spending to the Green Deal

Section 3 Strengthen inclusive governance

R**obust governance innovations and empowerment initiatives are needed to ensure that digitalization supports the alignment of finance and money with citizens' interests and sustainable development**. *These are highly information- and knowledge-intensive activities, requiring effective communication, engagement, coordination and collaboration across numerous and diverse groups of stakeholders, further complicated by the need to effectively balance the need to provide necessary transparency while safeguarding confidentiality and building trust.*

Attaining these development goals will require a range of new or enhanced systems and capabilities at the whole-of-society and whole-of-government scales[14]***..***
CDIT-EF will contribute to specific impacts, including:

- feeling of ownership and engagement through citizen deliberation and participation across Europe, empowering individuals, strengthening the social contract while reducing popular mistrust in decision makers; facilitating the introduction of alternative economic, social and political models, based on the principles of a shared economy and cooperative systems
- participatory identification of solutions contributing to the European Green Deal as by providing a means to easily track any type of transaction, blockchain has the potential to empower citizens and consumers
- enhanced involvement of citizens in the implementation of the European Green Deal and of the future Horizon Europe missions;
- stronger trust in policy and science institutions among citizens on European Green Deal issues;
- commitment and buy-in from a broad spectrum of social groups across Europe to support the European Green Deal targets and to engage in co-creation and co-implementation of transition pathways, including activation of citizens through social innovation;
- in the longer term, contribution to one or several of the Sustainable Development Goals[4].
- ***democratise the governance of finance to democratise finance itself, shifting the centre of gravity of the financial system towards empowered citizens, as states the* United Nations Secretary-General António Guterres**

Member States National Recovery Plan. Situation room

European and national government's , members of the European Blockchain Partnership, should require for demonstration of alignment with the Green Deal to make such date available.

[14] Multistakeholderism. Filling the Global Governance Gap? Research Overview for the Global Challenges Foundation Jan Aart Scholte School of Global Studies University of Gothenburg April 2020

To join the CDIT-EF blockchain ecosystem would not be only an opportunity to promote specific blockchain initiatives' but offers a new benefit to the ultimate data providers to work together to fulfill the European and national government's expectations.

Therefore a situation room , a mechanism for knowledge sharing, building on practice sharing. would be launched after the think tank event of end January 2021.

The European Situation Room

A '*Blockchain & Public Fund - Situation Room'* collecting and analysing data at the service of the parties of the value chains, from the UN and EU, and between the EU and non-EU governments to financial institutions, companies, trade unions and civil society

This situation room (or observatory) is focused on lessons out of blockchains dialogues on the use of public funds and the implementation of the SDGs, the European Green deal and the European and Member States recovery plans as well as blockchains related innovations. It aims to contribute to "*democratise the governance of finance to democratise finance itself"* a movement towards a *citzens-centric financial* system and a better management of risk reduction, climate change adaptation and resilience

CDIT-EF Situation Room will

- include transnational networks of experts, researchers, practitioners and relevant civil society organisations specialised in deliberative democracy and civic participation across Europe, including professionals in the field of public engagement. Experts on gender equality and climate justice and youth organizations will also be included.
- be strongly connected to decision-making bodies .
- connect with the interested parties of the blockchain eco-system so that they would be empowered to reflect, deliberate and propose change at a systemic level.
- Depending on their specific objectives, ensure consistency across Member States/Associated Countries for transnational comparability, or select a range of different methodologies to compare their effectiveness.
- Support policy coherence between major EU actions where public participation is key, including but not limited to Horizon Europe Missions, in close cooperation with the respective mission boards, and other R&I initiatives.

Specific topics for deliberation should be co-decided with the European Commission services involved in implementing the Green Deal.

National and local governments and administrations will be closely associated from an early stage, including, to the extent possible, links with existing debates and participatory processes at their levels and taking account of national/local specificities.

CDIT-EF will explore how to involve vulnerable and marginalised categories of the population, minorities and various age groups, including both youth and the elder generation, as well as urban, peri-urban and rural areas, in analysis and included in deliberations. Gendered issues will receive specific consideration. Training programs will have to be set up focused on empowerment and new jobs related to blockchain.

It would be managed by

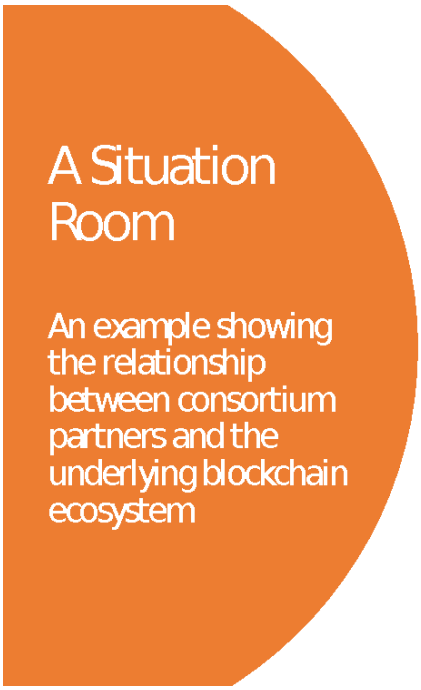
- The consortium partners (see above)
- Governments members of the European Blockchain Partnership supporting CDIT-EF experiment
- Representatives of the European Court of Auditor, Eurostat, European Commission, ECOSOC and Committee of Regions
- A representative of the Central Banks and Supervisors Network for Greening the Financial System (NGFS)
- A representative of the UN
- A representative of the African Union
- A representative of INATBA
- A representative of the OECD Global Blockchain Center
- A representative of the European Blockchain Observatory Forum

An advisory board should ensure the robustness, ethical and inclusive character of the planned deliberative processes and vet the methodologies and conditions of implementation of each individual exercise.

The advisory board owe its primary duty to the Commission and the European Parliament.

It will provide an annual report related to innovations.

CDIT-EF structure overview



Develop policies, regulations, standards and corporate governance arrangements at the international level, suited to securing SDG-aligned global digital financing platforms and markets.

8. Blockchain's opportunity to add value within the EU Recovery plan linked to
    - Member states action plans with multi-level dialogue, in particular to implement energy and climate plans (EU Law on climate)
    - Blended capital (public and private co-investments with guarantees). implementing one of the pilot action recommended by the UN report to "*develop a coalition of citizen representatives committed to ensuring citizen voice in decisions of financial intermediaries"*

9. Blockchain's role in building the new economy and avoiding stranded assets:
    - Collective intelligence to manage nexus and planetary limits
    - Check impact on do no harm / precautionary principle
    - Risk management in the public interest
    - Strengthen commitments efficiency
    - Support the weak links
    - Cross border alliances to address 'no one should be left behind" including fair redistribution
    - Empower SME's and citizens
    - Provide transparency and trust

10. Link between blockchain and open data to hold governments to account for the use of public finance. Open government data standards and portals and information crowdsourced from citizens allows civil society organizations, media and parliamentarians to track public spending on social services or infrastructure projects. For example, in Mexico, citizen groups used the "Budget Transparency Project"

11. Governance in a digital age and value chain partnerships.

11.1. **Governance related to sustainable finance** addressing links between

- public finance
- private financial institutions (supply side)
- Clients and citizens (demand side as saver, borrower, retail investor and tax payer).

CDIT-EF should be seen in relation with initiatives to digitalize public financing and make public budgets and contracts transparent to pursue SDG priorities, an objective of the OECD Global Blockchain Center and the *'notarisation of documents'* of the European Blockchain Partnership and the European Court of Auditors.

11.2. Governance aiming to provide the right

- Pressures made by other actors of the value chain in the form of governance, voluntary and mandatory disclosure and deriving in risks (reputational risk, legal risk) and business innovations.

- Incentives: guarantees, risk profile, reputation, access to business
- Opportunities: good mid and long term investments, help to select investments in SME's
- System: **Climate-KIC Deep Demonstration**

12. Capacity Building.

This initiative builds on the knowledge of the Frankfurt Blockchain School Center

Digital capacity-building has to be tailored to individual and national circumstances. Given variances within and among countries and regions, there is no one-size-fits-all approach, and better evidence is therefore needed of which capacity-building approaches are most effective, considering political, economic and social contexts (§34)

Digital cooperation is a multi-stakeholder effort and, while Governments remain at the centre, the involvement of the private sector, technology companies, civil society and other stakeholders is essential. It is vital to engage with the private sector, the technical community and civil society from the beginning if realistic and effective decisions and policies are to be made. §70

To ensure that the voices of those who are not fully benefiting from digital opportunities are heard, the UN Secretary General will establish a multi-stakeholder digital inclusion coalition – an informal network of like-minded Member States, civil society groups, the private sector and other stakeholders on digital inclusion. §81

The strong linkage between principles of digital trust and security and the ability to realize the 2030 Agenda must be acknowledged at the highest level

UN Road map for digital cooperation: implementation of the recommendations of the High-level Panel on Digital Cooperation 29 May 2020. §91

CDIT-EF in line with the Commission guidelines should include :

Ensuring that civil servants have the right skills to deal with the digital and green transition (p10)

Section 4. European Pilots



- **European Raw Materials Alliance** (blended capital and ethical supply chain)
- **Food Systems** and public funding (EU grants in support to farmers and loans by European Development Banks)
- **Buildings retrofit** (grants and sustainable procurement)
- **Nature Conservation** (green bonds)
- **Industrial sectors** and public funding (loans-equity) in the framework of the Recovery Plan for Electricity, Gas & Fuel, Vehicles.*
- **Africa-EU Partnership**.(green bonds)

* When it comes to rescuing key sectors (tourism, aeronautics, automotive), this initiative could accompany aid by a monitoring mechanism to ensure a proper degree of action on the ecological transition.

13. Pilot – European Raw Materials Alliance .

The European Commission, represented by Vice President Šefčovič and Commissioner Breton, launched the European Raw Materials Alliance (ERMA), The new alliance has been established in recognition of the critical importance of raw materials to the EU's security, sustainability and industrial leadership. If Europe is to deliver a Green Deal, a digital transition and remain a leader in future technologies, it faces a significant increase in demand for critical raw materials.

The European Raw Materials Alliance (ERMA) will identify barriers, opportunities and investment cases to build capacity at all stages of the raw materials value chain, from mining to waste recovery. In a first phase, the alliance focuses on the most pressing need, which is to increase EU resilience in the rare earths and permanent magnets value chains, as these are vital to most EU industrial ecosystems. In addition to rapidly rising demand driven by electric vehicles and energy storage, demand for rare earths critical for products like wind turbines could increase ten-fold by 2050. Later, it will expand to address other critical and strategic raw material and base metal needs, such as Materials for Energy Storage and Conversion.

The alliance is already supported by over 150 stakeholders across multiple industrial sectors and value chains. The alliance is open and will mobilise all industrial and innovation actors, Member States, regions, the EIB, investors and civil society. Supporters are asked to sign a declaration, committing to ERMA's shared vision, and to actively contributing to the alliance's work. The Alliance is managed by EIT RawMaterials, the world's largest knowledge and innovation community in the raw materials sector

A Pilot Blockchain – European Raw Materials Alliance as a key leverage for multi-stakeholder partnerships, supply chains, inclusive and sustainable finance in relation with raw materials value chains management for the common good is proposed.

The Raw Materials Blockchain eco-system objectives : "*accelerate the green and digital transition by reinforcing value chains, diversifying supplies and involving all willing partners in implementing the necessary actions*[15]" to improve the effectiveness, bring transparency and trust, generate societal innovations in relation with raw materials and the common good.

The European Raw Materials Alliance - in the framework of European Resilience Action Plan - should be able to demonstrate how it will *contribute to the common good* and strengthen the "capacities" for more confidence, solidarity and empowerment and "rebalancing of power", in particular :

- for the management of "rare" resources, especially natural resources,
- for the provision of "abundant" resources, including information
- for the transition to inclusive and sustainable finance
- for the reduction of inequalities

The members of the Alliance on Raw Materials and the related European Innovation Partnership's would be invited to join CDIT-EF pilot.

It will be focused on :

- demonstrating the origin of raw materials or products and supporting fair trade and the fair monetization of labor;
- allowing for a greater visibility of public spending and a greater transparency of administrative and production processes;
- participation in democratic decision-making by enabling accountability, rewarding of participation and/or anonymity;
- managing property, land registry or other public records;
- contributing to financial inclusion and exchanges of knowledge regarding a new development model, risk management in the public interest and the social good.

The Pilot of blockchains in relation with the Raw Materials would identify the potential regarding:

- enabling the vulnerable
- use of European public funds
- rebalancing power in relation with data
- land registry
- give assets value

[15] Thierry Breton, EU Commissioner

A blockchain like "eMin" to fight against slavery would be part of the eco-system. https://www.eminproject.com/

A toolbox would be made available to partners including guidelines related to raw minerals and mining as the Intergovernmental Forum (76 Member Stares) on Mining, Minerals, Metals and Sustainable Development (IGF) Guidance for Governments

14. Public Finance and Food systems,

The New Fork and Origin Chain Networks are redesigning the interface between farming and public sector funding for responsible food and farming, with blockchain. They aim to combine their ongoing work in The Netherlands and Ireland respectively and build a stronger compliance system between public funding and farm practices to reduce carbon emissions.

In relation to the EU Green Deal, initiating progress-based incentive schemes it is important for farmers to be able to respond with agility and assurance to new demands on their time and husbandry practices. Achieving measurable benefits to the environment and claiming climate neutrality with confidence requires asynchronous, real-time, quality data sharing. This demands a reimagining of the interface between the farming and public sectors responsible for food and farming oversight. Both companies are working on this technology in different public settings and are aligning their work for better end-results.

In March 2020 there was a call from 3600 scientists for assessment of CAP against climate and SDG indicators. Making agriculture sustainable is a global challenge. In the European Union (EU), the Common Agricultural Policy (CAP) is failing with respect to biodiversity, climate, soil, land degradation as well as socio-economic challenges.

The European Commission's proposal for a CAP post-2020 provides a scope for enhanced sustainability. However, it also allows Member States to choose low-ambition implementation pathways. It therefore remains essential to address citizens' demands for sustainable agriculture and rectify systemic weaknesses in the CAP, using the full breadth of available scientific evidence and knowledge.

In order to financially encourage the SDGs in Member States, accountability is of the utmost importance. Which attempts are being rewarded and how is the sustainability effort audited. Where are allocated funds being spent on? Blockchain is a tool that can not only help immutability store the SDG efforts, but also create insight in the spending on these efforts. This can help create accountability and creates a framework where conclusions on the effect of subsidy spending can be drawn.

The number of farms in the EU has been in steep decline, but the amount of land used for production has remained steady[16]. In the European Union there were 10.5 million agricultural holdings in the EU in 2016, two-thirds of which were less than 5 ha in size. EU

[16] (Eurostat 2020 https://ec.europa.eu/eurostat/statistics-explained/index.php/Farms_and_farmland_in_the_European_Union_-_statistics)

farms used 173 million hectares of land for agricultural production in 2016, 39 % of the total land area of the EU. This land has the opportunity to contribute to carbon sequestration if reward systems are put in place. Criticism has been levelled at the common agriculture policy for not compensating climate actions efficiently.[17] The green deal also provides an opportunity for these payments to be validated. The EU has announced 18th September specific calls dealing with carbon sequestration in the food system[18].

The New Fork is a company specialised in developing blockchain for the agrifood sector. It first started exploring the possibilities of blockchain for rewarding carbon sequestration in 2018. Carbon Coin became a project of The New Fork during StrikeTwo 2019 (https://striketwosummit.com/). Partners like the Dutch Ministry of agriculture (https://www.rijksoverheid.nl/ministeries/ministerie-van-landbouw-natuur-en-voedselkwaliteit), a group of Dutch farmers (https://flevofood.com/), the organic sector Bionext (https://bionext.nl/), Esti (https://esti.nu/en/), EY (https://www.ey.com/nl_nl), Wageningen UR (https://www.wur.nl/) and FAO (http://www.fao.org/home/en/) helped shape the project.

Farming is often seen as a key cause for climate change whereas farming is also an important part of the solution with carbon sequestration. With good farm practises, significant amounts of carbon are captured in the soils. Currently farmers don't get rewarded for this service they deliver to the global citizens.

By measuring the amount of carbon captured by an individual farmer with a tool like Cool Farm Tool (https://coolfarmtool.org/), connected to their existing administration, and by capturing the information in a blockchain, farmers can immutably proof their contribution, and aggregate.

Proving is a step to monetizing. Governments can for example use the proof to reward farmers by subsidizing the capture of carbon in the soil. This reward can also be immutably tracked in the blockchain. You could even automate these rewards by creating smart contracts that provide a certain reward to a farmer for a pre-agreed amount of captured carbon.
The StrikeTwo coalition was planning on creating blockchain pilots for rewarding farmers for carbon sequestration in the Netherlands, India and Kenya. However, due to Covid-19 these pilots were stalled. This gave the Carbon Coin project room to pivot and Origin Chain Networks was onboarded as a new partner, piloting in The Netherlands and Ireland.

Origin Chain Networks is an Irish technology company providing services the agri-food sector in Ireland. Origin Chain Networks' mission is to create a secure, stable and transparent food value-chain. Origin Chain Networks' Agri-trust and Aqua-trust initiatives provide mobile and smart-farming tools to the agri + aqua farming community to facilitate data collection on the fly. They use a farmer-first data ownership model and protect the rights of farmers as data

[17] https://besjournals.onlinelibrary.wiley.com/doi/full/10.1002/pan3.10080

[18] https://ec.europa.eu/info/news/eu104-million-achieve-climate-neutral-food-system-improve-knowledge-oceans-and-empower-citizens-move-greener-europe-2020-sep-18_en

owners to create, report and share information relating to their brand identity, product traceability and compliance records with key stakeholders in the food value chain.

Origin Chain Networks provides mobile tools for data-gathering on-farm and to compliance authorities to reconfigure the communication and reporting interface to allow for the inclusion of new compliance data streams:

- Map and manage incrementally habitat quality;
- Freshwater boundary management;
- Protected peatland and wetland schemes;
- On-farm biodiversity mapping and management - hedgerow, native woodlands, sparse/wasteland, streams and drainage systems.

Origin Chain Networks is contributing to SDG Goals: 14 life below water, 15 life on land and 17 Partnership for the goals.

This focus of Origin Chain Network - reporting and monitoring compliance - complements the Carbon Coin project of The New Fork. It includes aspects relevant to CAP payments to licenced farmers: soil, grassland and livestock management.

It is proposed to expand the blockchain solutions in both Ireland and The Netherlands. Ireland is a small country. There is a good technology infrastructure, 64,5% of the country is used as farmland and Ireland is a receiver of (EU) subsidies.

Another pilot country is Europe's largest exporter of agrifood, The Netherlands. While having less farmland than Ireland (53,31%), the Netherlands is the second largest exporter of agrifood worldwide, after the USA.

The pilot will integrate the work of the Carbon Coin project in The Netherlands and the Origin Chain Network in Ireland. The focus of the combined project is on measuring carbon sequestration in the pilot groups, identifying current public funding directed to these farms, and implementing a compliance system between public funding and farm practices.

There are some funding options that reward contributions to the SDGs with a focus on Carbon Capture. An example is the DEI+ (https://www.rvo.nl/subsidie-en-financieringswijzer/demonstratie-energie-en-klimaatinnovatie-dei-2020) and the Carbon Capture storage tender (https://www.rvo.nl/subsidie-en-financieringswijzer/subsidies-energie-innovatie-topsector-energie/carbon-capture-utilisation-and-storage-tender) and of course the European Horizon, Life and Green deal subsidies. There are also private funds and investors that are interested in contributing to the SDG's.

What all funds have in common is that they require reporting. What is the allocated money spent on? What are the successes of the project? This is a time consuming and complicated process and currently farmers don't have the time to spend on the reporting required for these funding options, while they might be eligible for the funding.

Using blockchain can give farmers an easy compliance tool. Carbon capture is something that can be measured, using a scientific method with the Origin Chain Network tool. These measurements will be immutably stored with blockchain technology, discouraging fraud.

Blockchain can provide auditors of the fund with the information they need to see the effectiveness. In this case how much carbon is captured. At the same time other compliance issues required for the funding can be monitored as well.

Blockchain can be used to monitor the funding payment. It is even possible to create automatic payments with the help of smart contracts, if farmers comply with pre-agreed conditions. This type of automation minimizes time spent on paperwork and gives clarity on the grant approval process.

15. Buildings retrofit.

In the European Union there are roughly 250 million houses, in a wide variety in energy performance. Besides this building stock there is the commercial real estate stock, with the same wide variety. Many of these buildings are large energy-consumers. The manufacturing of building materials, as well as the logistics and constructing is causing large amounts of CO2-emissions. In order to become a CO2 neutral continent in 2050, improvements need to be made to many of these houses in Europe and to the processes related to construction or renovation of buildings.

Because of the wide variety in the existing building stock, individual retrofit-plans need to be developed for most of these buildings. Most owners lack the information and expertise to make such plans. It starts with collecting all relevant information about the existing situation and history of the building. Then individual improvement-plans need to be developed, in order to be executed in the next several decades towards 2050. Home owners can then decide if, in what order and when which improvements fit in their individual forecasts.

Governments can then supervise and set incentives where needed to become compliant to the 2050- objectives of the EU Green Deal.

When a home owner decides to sell the property, it will become possible to sell it together with the set of all relevant information attached and well updated. A lot of the information concerned is already digitally available, or will in the next period become so. Many stakeholders are involved in these processes and may change in the lifecycle of the building in question. Accurate tracking of info, data and all relevant updates may be needed. Implementing blockchain-solutions in these information flows can create lots of benefits, not in the least to make the processes themselves more ecofriendly. The building industry is one of the largest co2-emitter of all, so the impact to foster climate mitigation can be huge.

With respect to the Green Deal objectives, we foresee possible blockchain-solutions for the real estate sector with regards to:

- creating efficiency for individual owners with digital building passports and building retrofit plans in the light of the EC Building Renovation Wave. Monitoring and supervising the status of these building retrofits plans can become very helpful in order to allocate government funding, trace latest developments and set additional incentives where needed,

- tracing public funds made available (European, national, regional, local) in different financial support forms (subsidies, equity, blended capital, sustainable procurement)
- 'Material certificates' enable identifying and trading of existing materials that become available at renovation- or demolition of existing buildings. This fosters a circular industry for re-usable materials or specific purposes (like tracking the specific steel-quality of beams). Such 'material certificates' will also become very helpful means for benchmarking carbon footprints of materials, so that conducting good praxis can be better supported and funded by governments and carbon taxation can be more precise targeted.
- collecting the right trusted data to help identifying and supervising the compliance of investment activities in the light of the Green Deal Taxonomy. With respect to real estate and construction of buildings, think of investing (or loan-providing) for a) new or existing buildings or building renovations, b) manufacturing of important construction materials like concrete and (high quality) steel and c) related transport and logistic processes.
- We have identified a Unique Object Identifier systematic (UOI), which is currently under development in collaboration with multiple public and private stakeholders. The UOI is an important but yet missing key infrastructure component that can be a very helpful and efficient means for creating a cross border uniform way of identifying and connecting interoperable information about built structures at its different multidimensional levels of detail of the building in question and also during the entire life cycle of it. A UOI can be essential for different frequent pan-European supervising or benchmarking purposes or for identifying specific points of attention or allocating support.

With repect to relevant European grants and funds made available in the framework of the building recovery, this proposal aims to find support from the Horizon 2020 grant 'Building and renovating in an energy and resource efficient way' (Call ID: LC-GD-4-1-2020) with opening date 22-9-2020 and deadline 26-1-2021 and, if still applicable, from the LIFE2020 programme for Climate Action.

16 Africa-EU Partnership. Blockchain and Digital Economy for Africa.

In view of the Africa-EU Summit 2021, we wish to draw your attention to the importance to complete the '*partnership for digital transformation'*, in the framework of the European Green Deal, and Sustainable Finance with a '**blockchain partnership'**. Indeed the blockchain technology and the increasing datafication of sustainability are acting as "accelerators of change" and as *equalizer - leveling the playing field* in favor of the "disadvantaged".

We are in a time of transformation 'in many areas, on the one hand due to the need for resilience and regeneration in the face of environmental challenges and on the other hand due to the impact of digital. We are also at a crossroads: "*We are at a fundamental*

crossroads where digitization can move us forward faster in achieving the Sustainable Development Goals or it can worsen exclusion, further divide us and increase inequalities."

In this context, to leave no one behind, how the conjunction of digital technologies and new 'business models' can enable the most vulnerable in Africa to take a leap forward is one of the objective proposed . "*Technology can be a formidable equalizer - leveling the playing field in areas that have historically been dominated by one demographic or another. Several promising solutions suggest a future (…) where women and girls are empowered to succeed thanks to new technological solutions*.

This is relevant for empowerment of many sectors of 'disadvantaged' :

- **Girls and women**, their human rights and wages
- **Small farmers** and rice, coffee, tea, bananas exports
- **Park wardens** and wildlife conservation
- **Local communities**, forests management and carbon credit.
- **Pygmies** and property rights
- **Child** labor and mining

We intend to present a scheme which could serve as an **EU renewed partnership with Africa, making this agreement the first international partnership of a new generation in the digital age**.

Within the framework of the Africa-EU partnership we wish to present, i.a. **3 blockchain pilots** which would contribute to regenerate the Earth, regenerate Finance, regenerate Import-Export Business:

16.1.Implementing EU Green Bond Standards in sustainable digital finance solutions for Critical Habitat Zones in Africa

We propose to demonstrate how the EU Green Bond Standard (GBS) announced in The European Green Deal Investment Plan of 14 January 2020can be used in Africa to report on the **use-of-proceeds** from both public and private capital invested into biodiversity, economic, and social development. This will demonstrate alignment with the **EU Taxonomy** - a new classification system for environmentally sustainable economic activities, with reference to localisation in the African context.

A key innovation will be the verification and validation of positive biodiversity impacts in close to real time, in other words increases in natural capital, achieved by the use-of-proceeds from the Green Bond, within biodiverse Critical Habitat Zones.

The pilot will demonstrate how financing deals can integrate programmable economic incentives for making verifiable contributions towards positive ecological state outcomes within closely monitored Critical Habitat Zones. This will integrate and incentivizes communities living within these zones to protect biodiversity, as opposed to being the current situation which incentivizes extraction/destruction of critical biodiversity habitats.

The pilot will lay the foundations for scaling the issuance of Green Bond investments in Africa, which meet EU standards for accessing capital markets in Europe and beyond.

16.2. Regenerate Imports-Exports Business. Pilot Blockchain and Supply/Value Chain

Due diligence through the supply chain and sustainable trade, the role of blockchain. How blockchain could contribute to new business models while risks, disclosure, due diligence, trust are re-visited..

Based on the European Parliament STOA report **Blockchain for supply chains and international trade?** [19] and with a focus on public funds

*The study examined the market readiness and potential impacts of e**ight promising use cases for blockchain technology in supply chains and international trade: decentralised marketplaces, letters of credit, cross-border payment systems, maritime insurance, supply chain management, e-certificates of origin, proof of authenticity for luxury products and ethical sourcing for the food industry**. The potential impacts of the use cases were considered from trade, economic, transparency, security, data protection, social and environmental perspectives. Overall, they are expected to contribute to the facilitation of trade through a combination of digitalisation, information exchange and automation. This could result in cost reductions and increased transparency. Security is considered strong overall, although standards, certification and audit procedures would help to ensure quality and compliance. The use of blockchain technology might also facilitate small and medium-sized enterprises (SMEs) to access trade and trade finance and help consumers to access product information, potentially enabling more ethical and environmentally responsible choices.*

16. Regenerate Finance. Pilot Blockchain and Blended Capital

How blockchain could build trust in a financial value chain perspective linking incentives, good investment opportunities , shared risks and guarantees, medium and long term investments, investments in SME's, citizens and clients demands for sustainability and transparence.

17. Smart Sustainable Bond Protocol - a PoC with a solar energy company

With the grant support of Web3 foundation Evercity has created an open-source blockchain protocol for issuance and investment of Sustainability-linked bonds in alignment with EU taxonomy, Sustainable Finance Strategy and UNFCCC concept paper. The protocol is based on the low carbon footprint Parity Substrate blockchain and launched in the Polkadot

19 https://www.europarl.europa.eu/RegData/etudes/STUD/2020/641544/EPRS_STU(2020)641544_EN.pdf

network that provides for blockchain interoperability. The protocol will also allow IoT (smart sensors)-based impact collection.

Within the PoC project, we aim to demonstrate issuance of a digital SDG-linked bond where the key financial parameters are linked to impact-related indicators. The key innovation within the PoC is development of a linkage between financial parameters and SDG impact performance. The PoC will be made in using real economy data from a solar power plant owned by Hevel Solar holding.

The PoC has three main parts:

1. Financial and economic feasibility study related to SDG-linked bond design;
2. Technical R&D of an open source blockchain protocol (set of blockchain smart contracts) for sustainability-linked bonds;
3. Piloting of developed solutions with interested market players on the Evercity platform.

The application will allow investors to input impact and financial parameters, collect and store data on renewable electricity generation on blockchain, as well as connect key sustainability-linked bond financial parameters with collected environmental data.
The PoC will be compliant with the EU taxonomy and several international standards.
The PoC also will be also compliant with the new UNFCCC approaches to Scope 3 assessment in the finance industry. The final result of the PoC will be presented in January 2021.

This PoC is based on 4+ years of impact tech R&D within DAO IPCI and Evercity platforms. In 2016, DAO IPCI enabled the world's first carbon credit transaction on blockchain, which was acknowledged by UNFCCC and World Bank. Since then, DAO IPCI carried out multiple projects on issuance of carbon credits, renewable energy certificates, as well as recording the data on carbon footprint of products and organizations into blockchain.

The solution will be further scaled in Luxembourg in partnership with the local green finance and fintech ecosystem. Evercity has recently been selected as a member of the Luxembourg Blockchain Lab which is a new initiative from five major actors of the Luxembourg fintech ecosystem: Infrachain, the LHoFT, LIST, SnT and LëtzBlock. In synergy with those players we are planning to create a Digital SDG Finance Centre in Luxembourg to further advance Smart Sustainable Bond protocol and other digital innovations for SDG financing .

Conclusion. Create 'Virtuous Trust Cycles' in Public Financing

Blockchain has a major role to play towards :

- Modern democracy
- Value chain management
- Confidence Building.

It's a key tool to address:

- System management (climate, biodiversity, circular economy, planetary boundaries etc.)
- Empowerment
- Impact Investing

The *Next Generation EU* as well as the *European Green Deal* should be 'pilot' processes demonstrating, as the UN Task Force report '*People's Money: Harnessing Digitalization to Finance a Sustainable Future'* noted, that *digitalization can :*

- *be harnessed to support vulnerable people, reduce inequalities, sustain livelihoods and strengthen solidarity,*
- *support financing that meets the priorities of the people it is intended to serve, by empowering them as savers, lenders, borrowers, investors, and taxpayers.*

These priorities are collectively represented by the SDGs, the shared agenda adopted by all United Nations Member States.

Annex. Task force report summary and our initiative:

This initiative is inspired by the Task Force on Digital Financing of the Sustainable Development Goals (SDGs) report '*People's Money: Harnessing Digitalization to Finance a Sustainable Future'* and its invitation *to harness digitalization to advance citizen-centric finance and accelerate financing for the SDGs*.

This blockchain initiative is based on a European observation similar to observations of the Task Force report:

- *Public finance lags behind, as governments are slow to adapt and unlock the potential that digitalization provides in the mobilization and utilization of finance and the possible innovations for financing public infrastructure and good.*
- *there has been only modest progress made in creating such 'virtuous trust cycles', despite existing use cases, estimated benefits, and on-going efforts of operational programs by the World Bank, international civil society organizations, funders*[20]

This blockchain initiative is focused on one of the five catalytic opportunities developed in the report p51:

Digitalize public financing and make public budgets and contracts transparent to pursue SDG priorities.

Change in this field is a 'work-in-progress', with significant investments needed in infrastructure, institutional change and the development of new capabilities. Overcoming resistance to greater transparency is also part of the challenge. Citizens need to not fear retaliation, to have their voice to be represented (e.g. civil society) and aggregated (i.e. coalitions) effectively, and authorities require capacity to address claims while mitigating the risk of simply reconfiguring corruption. Those at the forefront of initiatives to 'open government' are increasingly shifting away from a 'data first' approach towards an approach which starts with particular problems or challenges and considers the prevailing power dynamic and how information can create coalitions for reform p55

In linking blockchain with the EU Recovery Plan and the Green Deal, Europe will apply digital disruption to the management of public funds, creating so an historic opportunity to "reshape finance "as a whole as it is linked with:

- the development of public-private finance method known as 'blended capital' which should result in implementing one of the pilot action recommended by the UN report

[20] European governments members of the *European Blockchain Partnership* preparing the launching of the "*European Blockchain Services Infrastructure*" include priorities such as ''*notarisation of audit documentation*" related to public funds but not the tracing of public funds itself.

develop a coalition of citizen representatives committed to ensuring citizen voice in decisions of financial intermediaries p64

- *enabling evolution from financial inclusion to citizen-centric finance* p 46

This initiative aims to contribute to the report recommendations that every country can and should advance digitally-enabled, citizen-centric financing of the SDGs. P75

As the task force report states *The nexus between digitalization, finance and the SDGs is largely a new frontier of investigation and action. Digitalization amplifies the potential for the financial system to better serve the interests of people, whose money it manages, and whose collective interest is expressed by the SDGs.*

This initiative is in line with the tasks force recommendation Create 'Virtuous Trust Cycles' in Public Financing (p55) convinced that *digitalization can*

- *be harnessed to support vulnerable people, reduce inequalities, sustain livelihoods and strengthen solidarity. If unchecked, however, it could deepen exclusion, increase inequality and further divide us.*
- support financing that meets the priorities of the people it is intended to serve, by empowering them as savers, lenders, borrowers, investors, and taxpayers. These priorities are collectively represented by the SDGs, the shared agenda adopted by all United Nations Member States.

The task force report provides inspiring examples for our initiative:

"Citizens and their representatives have used open data to hold governments to account for the use of public finance

Open government data standards and portals and information crowdsourced from citizens allows civil society organizations, media and parliamentarians to track public spending on social services or infrastructure projects. For example, in Mexico, citizen groups used the Budget Transparency Project to push for more sustainable transportation, in Argentina, women's rights groups insisted on adequate budget allocation for action on gender-based violence after identifying budget gaps, and in Colombia information on projects funded with mining royalties published on MapaRegalias platform improved project completion rates and increased the number of irregular cases brought to court. Registries of company ownership are being made public enabling citizens, regulators, law enforcement and potential business partners to more easily see who they do business with and identify any government connections. The Open Corporates database aggregates information from public registries and to date covers 160 million companies, with 1.2 million users a month." (pages 35-36)

The task force provides also a major warning which our initiative will take into account:

"*Failing to empower citizens could mean continued shortfalls in the effective use of, and accountability for public financing*.

Financial and capital markets, likewise, would likely continue to absorb an unreasonable share of the economic cake in delivering intermediation services that fail to take adequate account of citizens broader priorities and need.

Succeeding, on the other hand, in leveraging digitalization to empower citizens to recover effective control could make the critical difference in financing the SDGs. Citizens, individually and collectively, could more effectively ensure that public and private intermediaries who use their money deliver what counts. The SDGs are, after all, no more or less than an expression of citizens' collective interests and needs." (page 46)

The table of content of our report would be aligned with the task force three, interconnected sets of recommendations (page 47):

Section 1. Recovery Plan and Green deal, catalytic opportunities to deliver financing for specific sustainable development goals.

Section 2 Build foundations for sustainable digital financing ecosystems, including:
• infrastructure: accessible, affordable connectivity, digital ID and data markets.
• planning, institutions, and learning: developing national and in some cases regional ecosystems that steer the evolution of SDG-aligned digital financing.
• capabilities: building people's capacity to benefit from online connectivity and digital finance, ensuring rights and protections.

Section 3 Strengthen inclusive governance to develop policies, regulations, standards and corporate governance arrangements at the international level, suited to securing SDG-aligned global digital financing platforms and markets.