

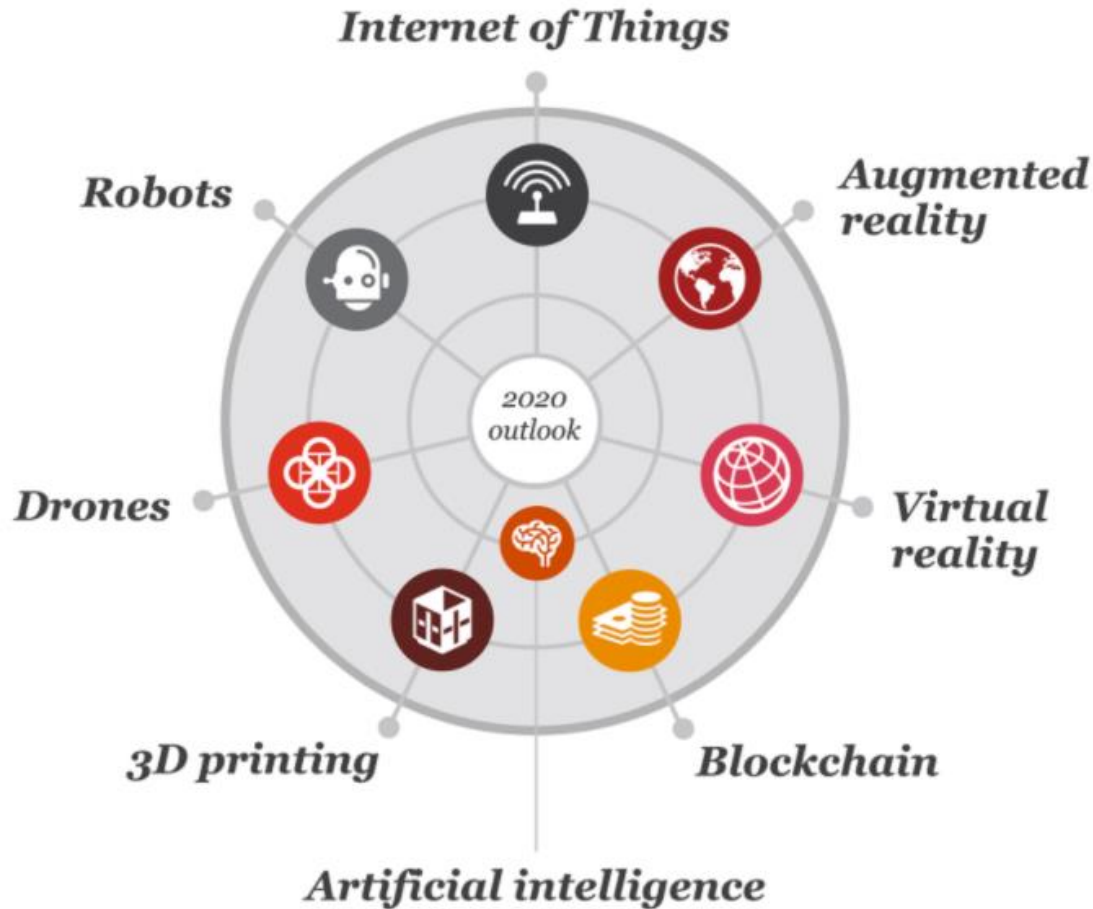
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# *Blockchain (DLT) for climate-smart solutions*

**May 29, 2018**



# ***Digital, data and analytics – Digitization is disrupting how we engage and transact value***



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## ***Paris, Sendai and SDGs – Mobilizing finance to achieve climate goals and 2030 Agenda for SD***

- The Paris Agreement established the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate climate response in the context of the temperature goal.

**(Article 2)** – Strengthening the global response to the threat of climate change through:

- Strengthening the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development
- Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development

**(Article 6.8)** – Framework for non-market approaches to assist in the implementation of NDCs

- May include mitigation, adaptation, finance, technology transfer, capacity building

# *Climate-smart infrastructure investment needs to be rapidly deployed and scaled*



- Achieving goals means infrastructure must be sustainable, low-carbon and climate resilient
- Current infrastructure allocations and volumes of investments fall well short of the \$6 trillion per year required to meet global requirements by 2030 (New Climate Economy, 2014)
- Right decisions need to be made now due to capital lock-in and shrinking carbon budget

*Emerging blockchain technology is still in its infancy but rapid innovation and piloting of Use Cases is advancing understanding of its potential for application to climate and sustainability challenges*

## ***ClimateChainCoalition.org***

***Launched 12.12.17 | 100+ members and growing***



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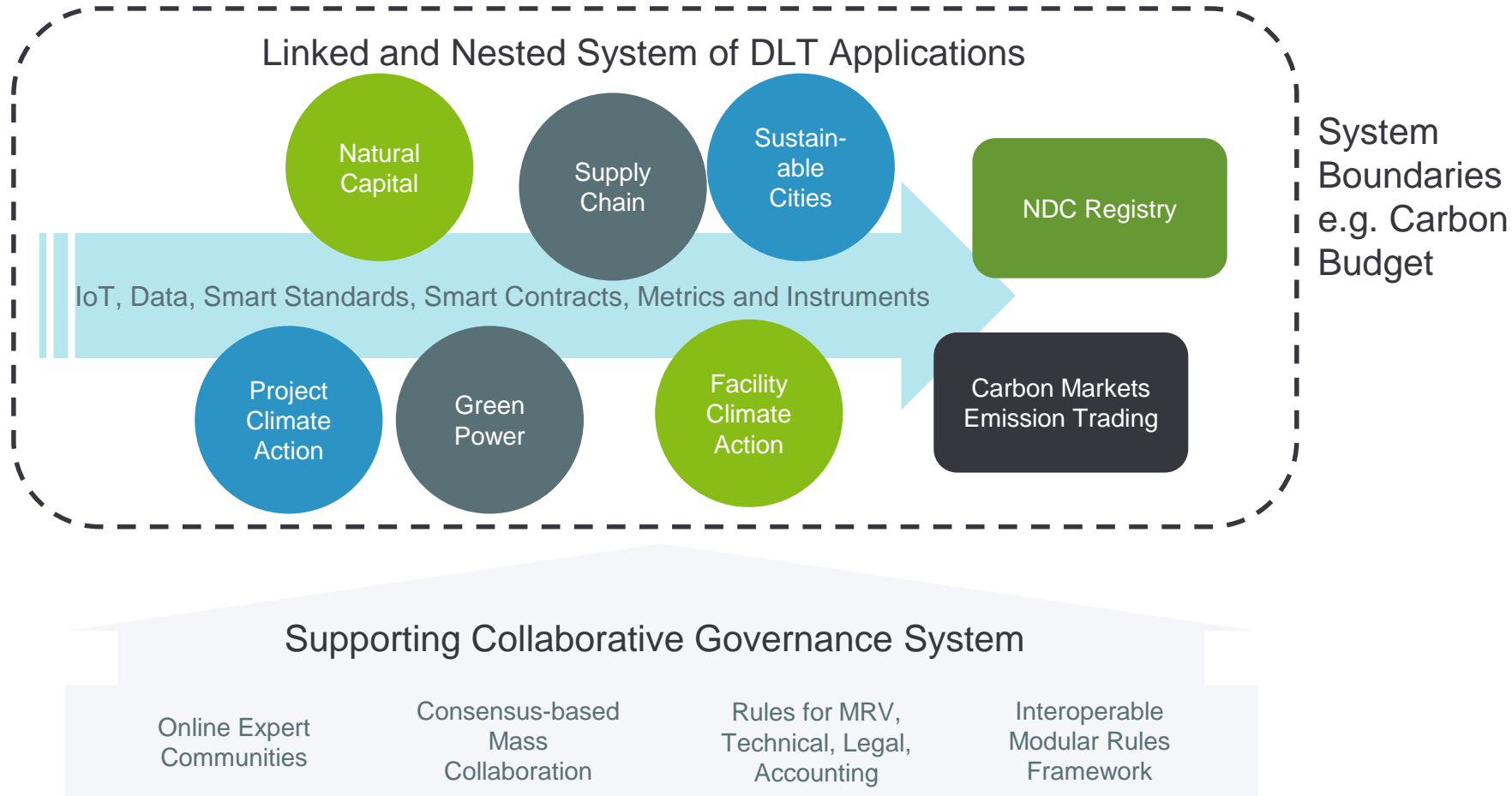
# ***Blockchain enables solutions not previously possible....***

Source: Credit to ClimateCHECK, 2018



***....but whether a decentralized governance model is worth the added cost of complexity depends entirely on the attributes of the use case***

# *Excitement leading to unrealistic expectations? Users will need reasons to trust new decentralized frameworks*



# ***Use Case #1: Scaling private sector infrastructure finance while delivering measurable and verifiable adaptation benefits***

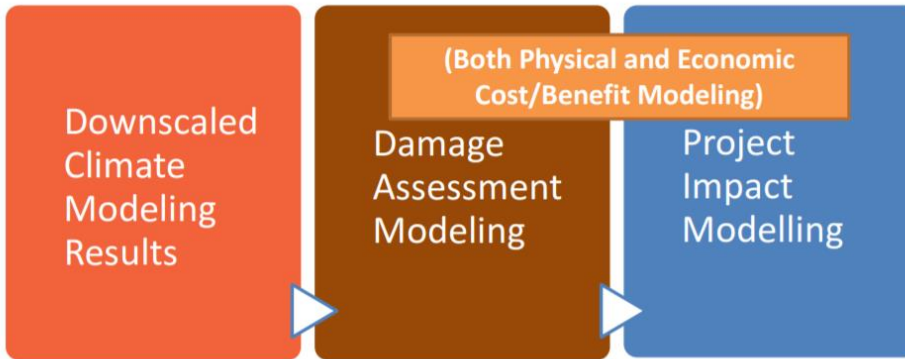
## ***Vulnerability reduction credits***

- Efforts to build the investment pipeline of projects that deliver adaptation benefits is constrained by the fact that the benefits of climate resilient investment accrue over lengthy time-frames, are considered too uncertain, and do not have comparable metrics
- *There is a need to disrupt the financing model for adaptation and resilience projects (e.g. adaptation-adjusted DCF)*
- Key is assigning a price/currency to the measurement and evaluation of a project's contribution to climate vulnerability reduction and resilience outcomes
- Significant direct benefits to governments, impact investors, etc. through improved comparison and prioritization of projects to be funded, tracking of and reporting on financial flows

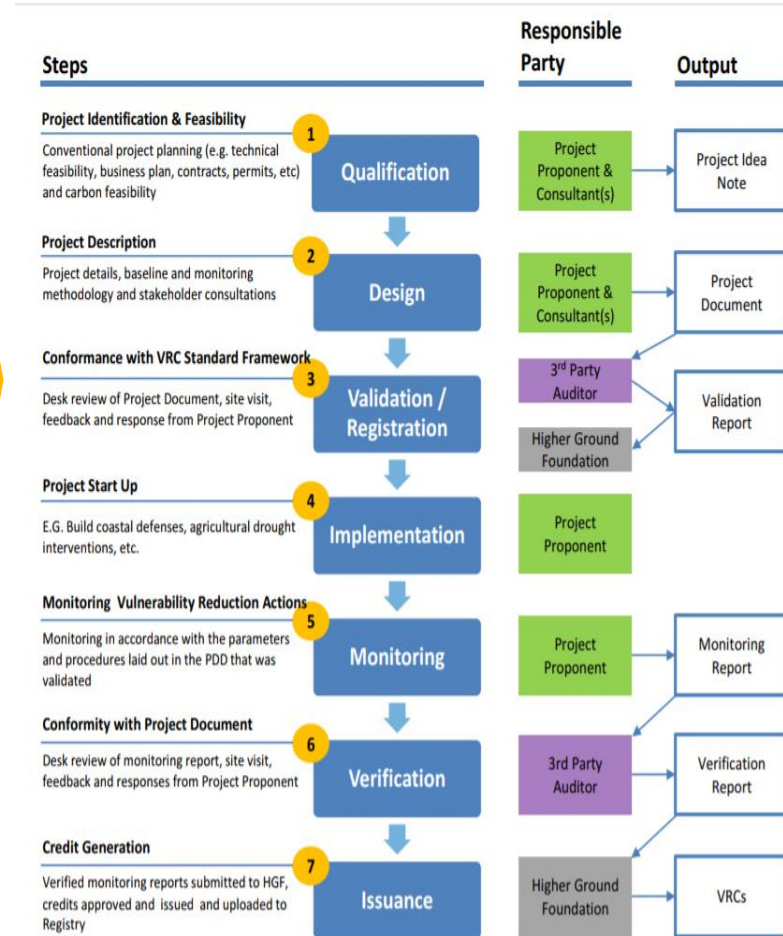


<https://www.adaptationledger.com/>



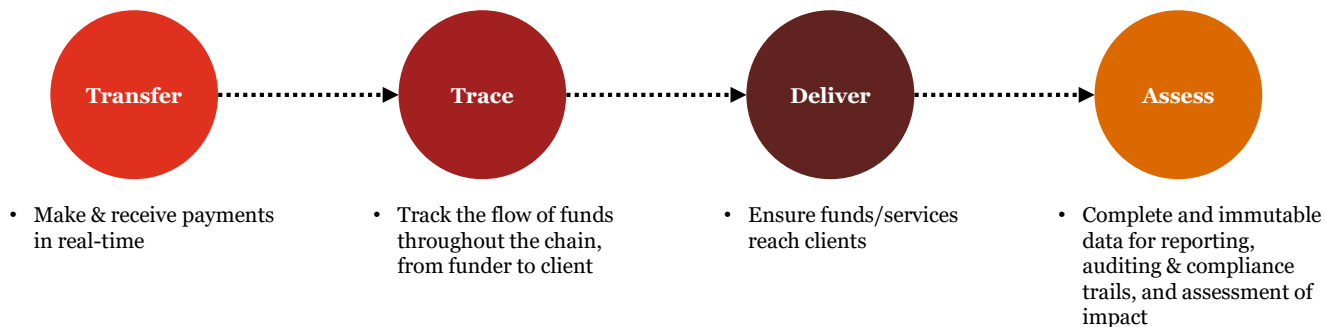


- Combination of ‘verified’ resilience dividend + DLT/Smart Contract + Intelligent Instrumentation (e.g. IoT + EOD)
- Translate climate outcomes into single, commonly agreed ‘adaptation unit’ that can be tracked and exchanged, with smart contract payment execution and reporting



# *Use Case #2: Blockchain + Smart Contracts for climate fund management, tracking and impact verification*

- Blockchain brings transparency and traceability, making it easier for funders to make smart decisions, and easier for recipients to receive and manage funds
- Automation of steps of MRV process (data collection, benefit calculation/verification)



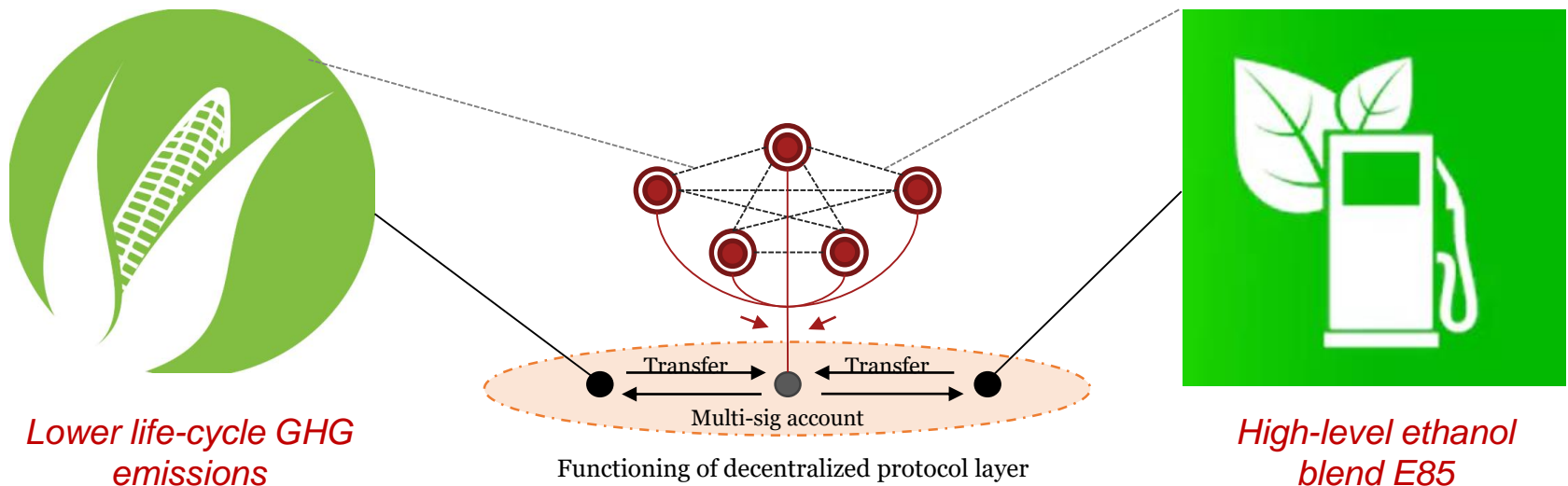
**Green Bond  
proceeds**

**Climate Fund  
project  
tracking**

**Traceability of  
financial  
transfers  
between  
jurisdictions**

# Use Case #3: Value exchange of tokenized green attributes of low carbon bio-fuels

*Low-carbon/renewable fuel standard creates differentiation opportunity*



**Digitization can unlock and enable monetization of distinct environmental value attributes**

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