

Juerg Fuessler

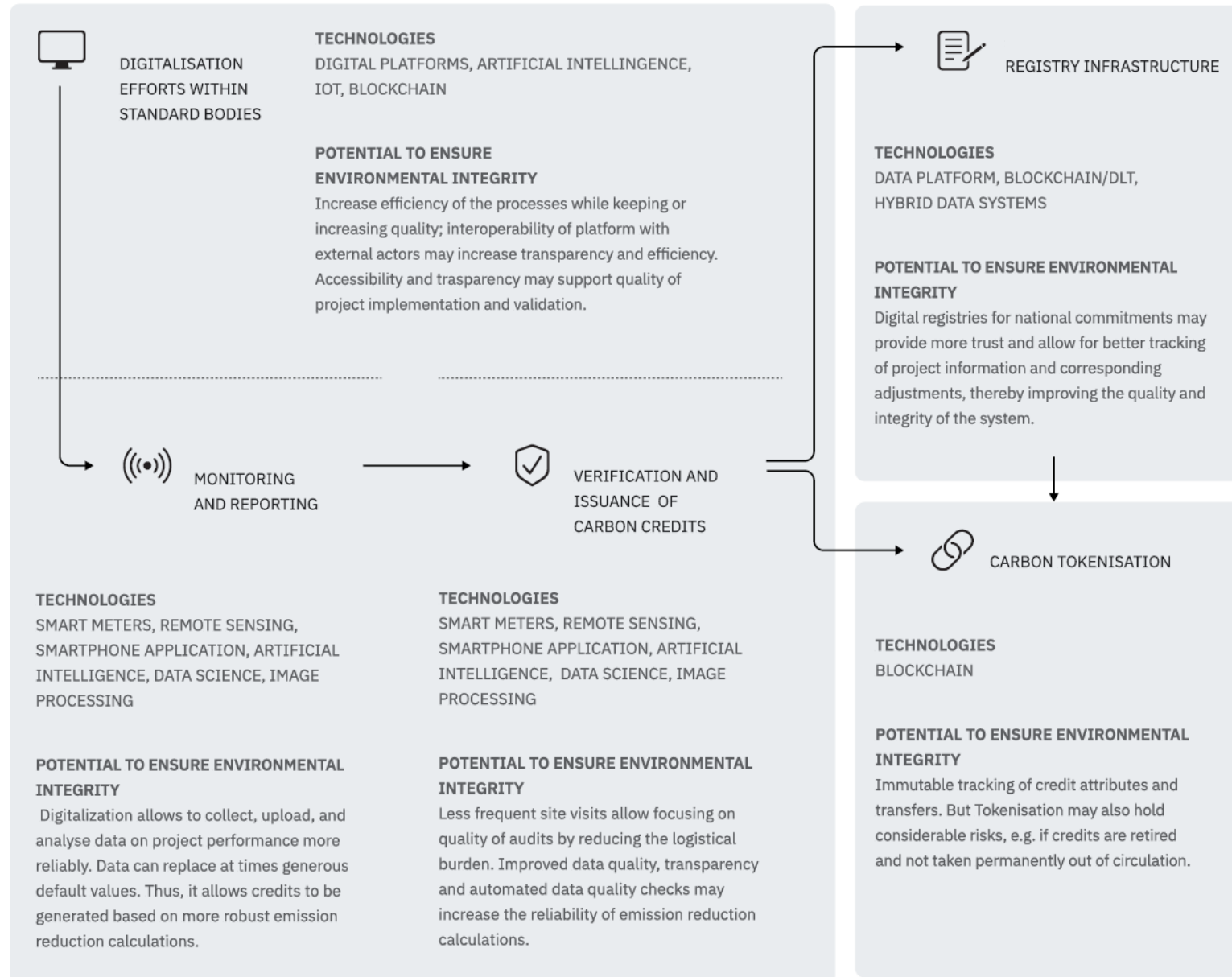
# Digitalization of Carbon Markets: Introductory Overview

Joint Zurich-CMA and CLI event, zoom, 27 October 2022



## Digitalization of Carbon Markets - Elements

# Digitalization of Carbon Markets



Source:  
Forthcoming  
[CLI Navigating Report 2022](#)  
Due in November  
© CLI

**M**RV

**Use cases digitalisation of monitoring/ data capturing**

# Clean cooking – biogas meter for remote monitoring



Source: Inclusive Energy Ltd

- Continuous and comprehensive remote recording of usage levels of project stoves through temperature sensors, LPG flow measurement, or electricity monitoring
- The measurement hardware is operated by project developers.
- Feeds data automatically into a data platform. These platforms often perform also the complete emission reduction quantification calculations.
- Household surveys are still necessary to determine e.g. baseline stove and fuel type

See also: [D-MRV White Paper](#)



# Ecosystem modeling for forestry biomass and soil organic carbon



Source: ESA/ATG medialab

- Comprehensive process-based and/or empirical modeling and machine learning approaches.
- Models are supported by empirical data for calibration, validation, and as an input.
- Both open/peer-reviewed and proprietary models are employed
- Comprehensive data platforms aggregate a broad range of data from various sources, including field measurements, satellite imagery, LiDAR, and weather data.

See also: [D-MRV White Paper](#)

# Contactless in-situ measurement of soil carbon



Source: Carbon Asset Solutions

- In-situ soil carbon measurement device using inelastic neutron scattering and gamma spectroscopy.
- The device measures total soil carbon levels.
- Concerning measurement accuracy, the solution is advertised as a viable alternative to laboratory-based analyses.
- Commercial rollout is scheduled for the near future.
- The resulting data is stored on a distributed ledger data-base.

See also: [D-MRV White Paper](#)



# Assessment of Digital Measurement, Reporting, and Verification

## A Snapshot of D-MRV in Decentralized Energy, Forestry, and Agriculture

White Paper  
Zurich, 12 July 2022  
Martin Soini, Anik Kohli, and Juerg Fuessler (INFRAS)

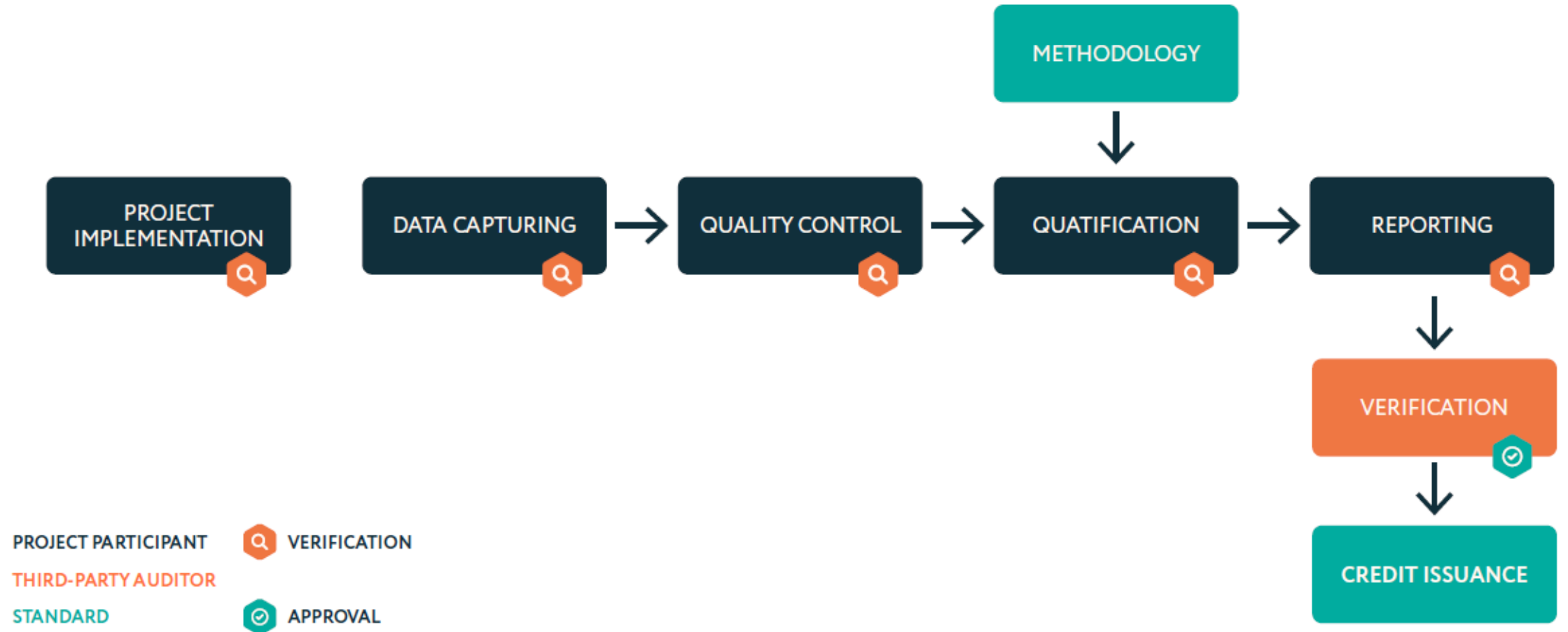




**mRV**

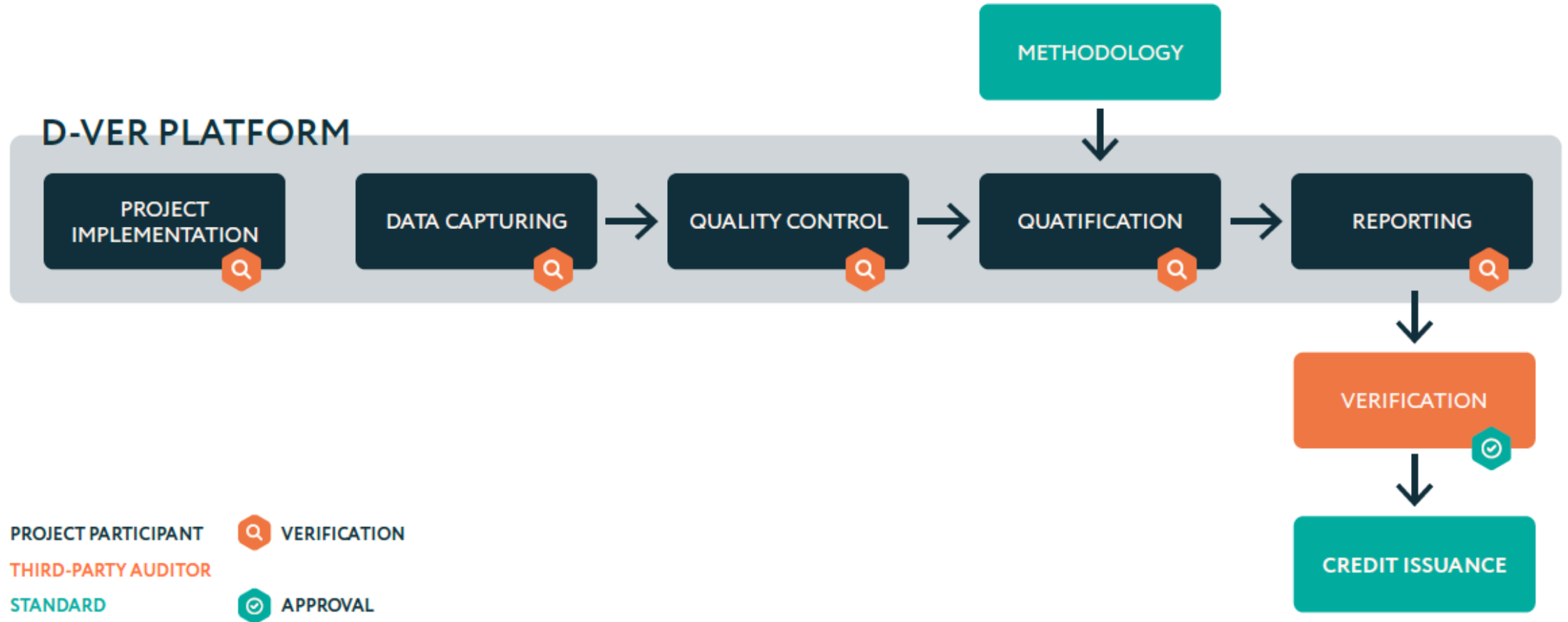
**Use cases digitalisation of reporting and verification**

# Verification of a Carbon Project



Source: [White Paper «Principles for Best-Practice Digital Verification»](#)

# D-VER Platform



Source: [White Paper «Principles for Best-Practice Digital Verification»](#)

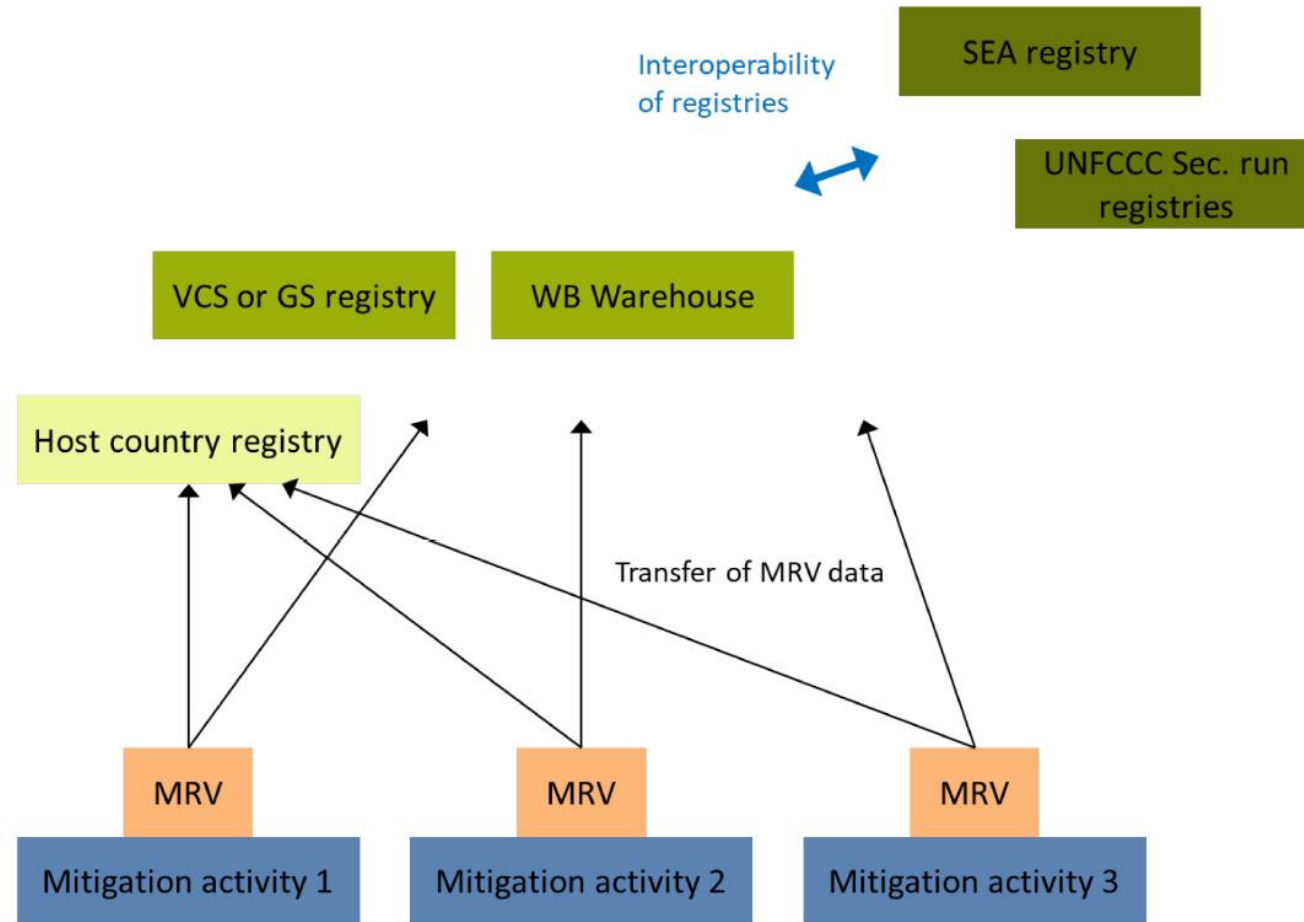


# PRINCIPLES FOR BEST-PRACTICE DIGITAL VERIFICATION

A contribution to the discussion  
on digital verification

# Digitalisation of Article 6 registry infrastructure

# Registry Systems in new world of Article 6 market mechanisms



Source: [SEA Report on Blockchain-based Article 6 Registries](#)



CARBON LIMITS

INFRAS

THINKING  
FOR  
TOMORROW



Öko-Institut e.V.

## Infrastructure for Article 6 MRV and transfers – the potential of blockchain-based technologies

Final Report  
24 November 2021

In cooperation with



C O S M O S

CLIMATE | **LEDGER**  
INITIATIVE

Source: [SEA Report on Blockchain-based Article 6 Registries](#)

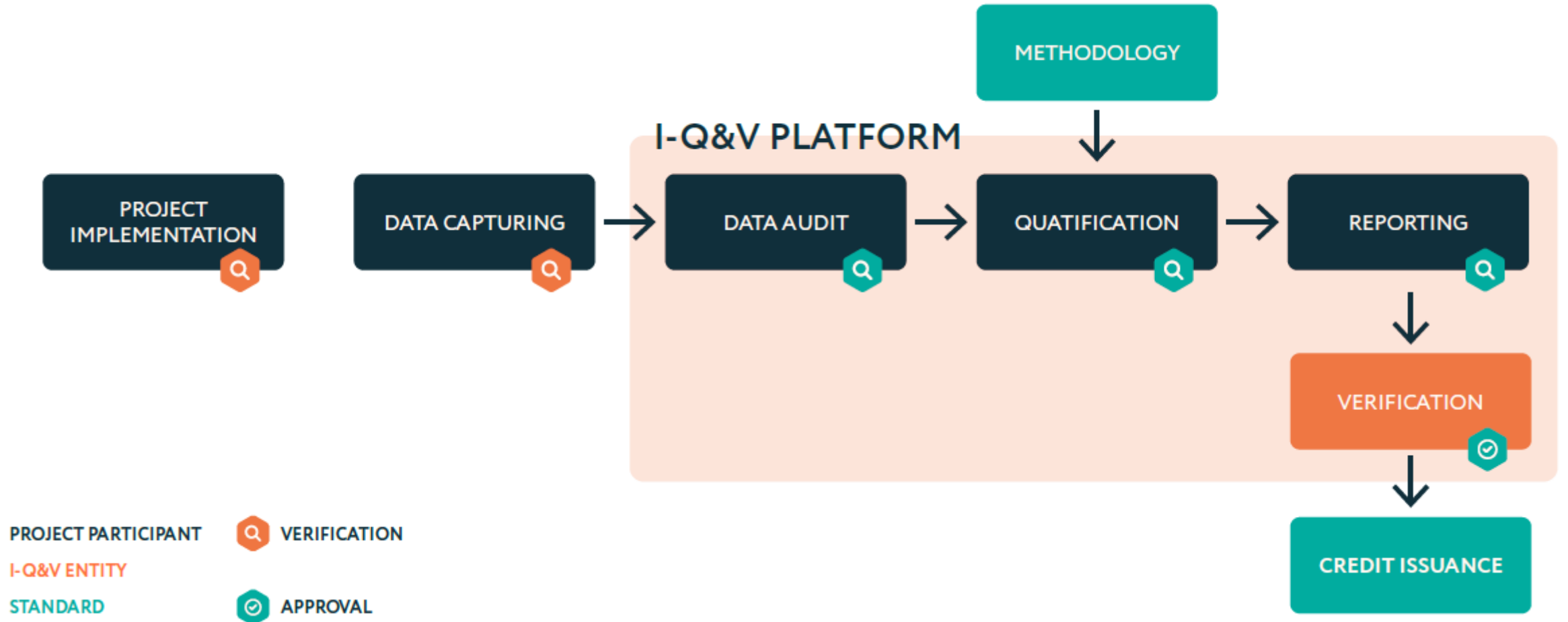
# Thank you

**Juerg Fuessler**

Managing Partner

[Juerg.fuessler@infras.ch](mailto:Juerg.fuessler@infras.ch)

# Integrated Quantification and Verification



Source: [White Paper «Principles for Best-Practice Digital Verification»](#)