Step Change to Blockchain & AI...
UNFC and UNRMS into the digital age

Julian Hilton, Chair SDG Delivery Working Group (EGRM)
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Straws in the wind
Be not afeard. This isle is full of noises

- AI and Blockchain Applications
- Disruptive Technologies Driving the Circular Economy
- Resource Servitisation and its Role in Sustainability
Delivering a public good that can both drive the transition to and support the maintenance of the circular economy.

Integrated 3 service models

i. **Resource as a Service**: for meeting essential resource demands (critical needs) as a Service and a Public Good.

ii. **Resource Supply System**: for securing resource supply, especially of materials critical either economically or socially or both, within an integrated resource nexus.

iii. **Blockchain and machine learning/artificial intelligence model for resource management**
The flows of monies and molecules converge in blockchain, in the process offering a systemic, “Resource as a Service” solution to resolving many of the more egregious weaknesses and unwanted negative externalities of the linear socio-economic model of resource management

- making the value of resources more apparent and transparent
- facilitating a new system of pricing and trading natural resources
- preserving and enhancing value through the resource life cycles
- incentivizing people to adopt circular behaviours
- integrates human and systems capabilities
Some 90% of global corporations now report using a form of ESG (Environmental, Social and Governance) metrics.

But these are not normalised or standardised. They are also controversial and contested.

Bringing:
- Use of Open Source Code into the system for accessibility, transparency and interoperability
- The Independence of the UN and its Expert Groups, eg the Expert Group on Resource Management
- The power of blockchain to deploy Resource Passports (proof of provenance) to track, trace, and share transparently (interoperability)
- The power of AI to identify patterns of illicit or unethical resource and money flows

Systems capabilities assign to a UNRMS blockchain, “smart contract” system the task of tagging and tracking the resource flows, which people are typically not very good at

Human capabilities of the people can be reassigned to the higher value parts of the managing resources in the circular economy, such as the pursuit of benefits to the environment, to society, and good governance, including audit and validation
Transparency at Scale
UNECE recommendation 49
UN Transparency Protocol (UNTP)

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#1 – UNTP is an interoperability protocol, not a platform

Leave data where it is but link it together when needed using decentralised events. **Use any software you like** – so long as it conforms to UNTP.

Thousands of platforms, millions of value-chains, billions of transactions
#2 – The UNTP passport is a bundle of differentiated value

ESG performance can only improve with informed and differentiated supply decisions. DPP claims are categorised for easy IFRS mapping.

There’s a passport for every goods shipment
#3 – UNTP includes verifiable conformity evidence

Digital product conformity credential - developed in conjunction with national accreditation authorities and conformity assessment bodies.

Linked to passport and supports 2nd party, 3rd party, formal, & informal verification

ILAC MRA aligned
#4 – UNTP includes a privacy & security toolkit

Six tools that allow UNTP implementers to choose their own balance between confidentiality and transparency.

1. Don’t share what doesn’t provide value
2. Easily share genuinely public data
3. If you’ve got the goods, you can see the data
4. Anyone that’s been given a secret key can see it
5. You need to ask me if you want to see the data
6. Selective redaction – black out what you don’t want to share

Different data needs different levels of protection.
#5 – UNTP allows implementation without dependency

There’s no need for system-to-system connections between actors. Data is discoverable from products and is BOTH human and machine readable.

- **Human / manual scanning process**
  - Low volume/maturity customer
  - Shipped product ID

- **Machine / automated scanning process**
  - High volume/maturity customer

**UNTP Traceability Events**
- UNTP Product Passports
- UNTP Conformity Credentials

**UNTP Implementer**
- Does not do anything different for low/high maturity consumers.

**Producer or manufacturer**
- Human-rendered digital data

**UNTP**
Logical model UNTP being transported And rapt in secret studies

Blockchain and AI enabled

Open AI source code compliant

Enables rapid application development

Now in active development with Resource passports

Credentials conformity, eg COO labelling

Trackability & traceability

In-built integration with GIS

Discoverability/ Interoperability

SIC code and similar classification code compliant eg UNFC
Integrated Blockchain/ Artificial Intelligence

We’ll deliver all and promise you calm seas
My revels are now ended
Thank you!

Julian Hilton
Chairman, Aleff Group; Chair, EGRM SDG Delivery WG

UNECE
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