How can blockchain and triple-entry accounting systems transform charity and sustainable development?

Charities and NGOs

Australian charities and not-for-profits (NFPs) generate more than $174bn AUD yearly in revenue. However, they are under increasing scrutiny over their accountability, transparency and responsiveness e.g. Red Cross during the Black Summer Bushfires. Blockchain technology − which cryptocurrencies use - has the potential to improve efficiency, effectiveness and empower vulnerable communities.

Blockchain technology can do this by reducing overheads and returning more funds to the communities they serve.

This project could directly benefit Australian organisations/community in three key ways:

1. Disseminate information widely, providing 'real life' case studies from overseas illustrating how NFPs, organisations and government uses blockchain technology to better engage with vulnerable communities.
2. Develop in-depth knowledge on how blockchain technology empowers vulnerable stakeholders to take ownership of the processes for gaining resources and support e.g. anonymous voting rights/decentralised autonomous organisations, and apply it to organisations/communities, firstly in my networks, to co-design new blockchain solutions that empower people.
3. Develop educational materials for the wider Australian community on using the technology to generate social impact via a dedicated website and university courses. This will improve the innovation and resilience of Australian communities/organisations.

Sustainable development

We outline the business opportunity for the provision of measurement technology, linked to the internet, i.e. the internet-of-things (IoT), which feeds information into blockchains, providing reliable and trusted data and an incentive for others to contribute towards progress on the United Nations' Sustainable Development Goals (SDGs).
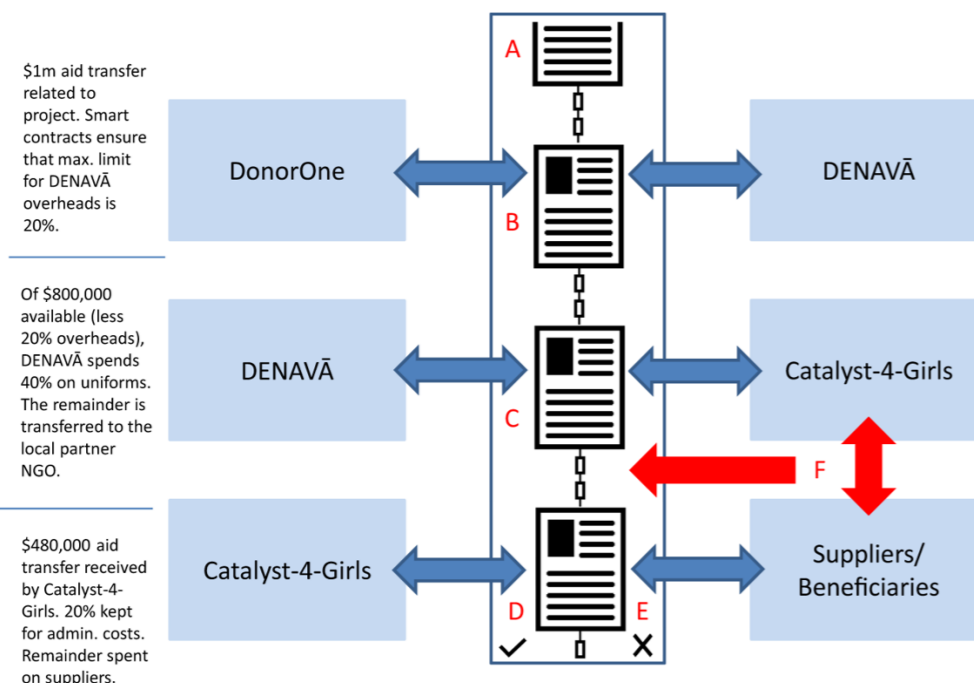
Both existing businesses and start-ups could exploit these new opportunities, which could inspire the participation of employees, volunteers, donors, and other participants. Our study provides a conceptual framework for the different ways business can play a role in facilitating measurement of SDGs, and trust in these measurements, by harnessing technology.

Accountability and governance in less-developed countries

Current literature is predominantly theoretical, talking about possible impacts of blockchain, and mostly focused on developed country contexts. Fundamentally missing is a deeper understanding of how blockchain, is (or is not) altering accountability and accounting systems within developing countries.

This is of special importance, because some advocates of blockchain have argued that the technology can improve transparency and sustainability key issues that many organisations in developing countries like Sri Lanka are grappling with. For instance, garment manufacturers are struggling to achieve GSP+ sustainability certification which gains them access to foreign markets. This research project will address a significant gap in academic and practitioner understandings of blockchain systems.

Sri Lanka is the developing country, gaining momentum in adopting blockchain technology. The study will investigate why and how blockchain technology affects the development of Sri Lanka and how it impacts the Sri Lankan corporate governance policies as well as the institutional accountability in the future.
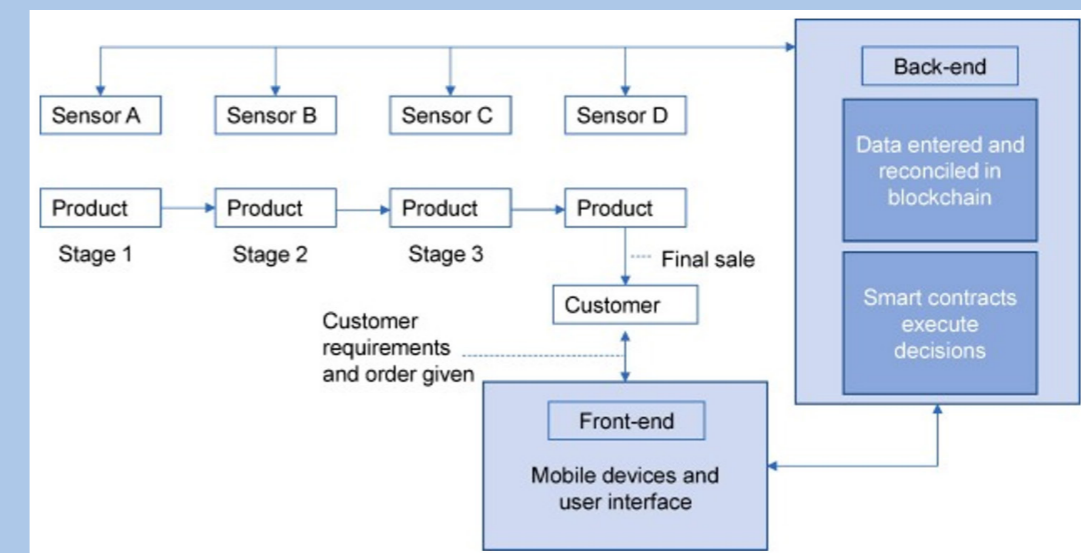

$1m aid transfer related to project. Smart contracts ensure that max. limit for DENAVĀ overheads is 20%.

DonorOne — DENAVĀ

Of $800,000 available (less 20% overheads), DENAVĀ spends 40% on uniforms. The remainder is transferred to the local partner NGO.

DENAVĀ — Catalyst-4-Girls

$480,000 aid transfer received by Catalyst-4-Girls. 20% kept for admin. costs. Remainder spent on suppliers.

Catalyst-4-Girls — Suppliers/Beneficiaries

A B C D E F

Sensor A   Sensor B   Sensor C   Sensor D

Product Stage 1 → Product Stage 2 → Product Stage 3 → Product — Final sale

Customer requirements and order given

Customer

Front-end
Mobile devices and user interface

Back-end
Data entered and reconciled in blockchain

Smart contracts execute decisions

Research Team

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The Future

1. How are cashless payments via the blockchain impacting on aid delivery and accountability in Pacific nations. Potential partner: Oxfam Australia
2. How are blockchains impacting accountability and governance processes across supply chains in less-developed countries? Potential partners: International clothing brands/manufacturers

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Building a sustainable and inclusive future