From #farm to #cup

















Cultivation/Processing Roasting/Packaging Consumption Green Coffee, Electricity, Natural Roasted Ground Coffee, Coffee Fertilizer, Pesticides, Fuel Oil, Water Gas, Packing Materials Filter, Electricity, Water Input < Input Input **Consuming Country Producing Country Consuming Country Coffee Shop or Home** Factory or Coffee House Cultivation Transport to Processing Transport Robusta or Export **Final Point** Dry/Wet Roasting Purchase of Roasted Arabica of Sale (Factory) Ground Coffee by cherries End User (Coffee Cooling Farm) Packaging Blending Coffee Brewing Grinding Disposal Output Output Output Emissions: Nitrogen, Roast Coffee in Packaging Waste: Coffee Grinds, Coffee Phosphorous, and Pesticide (aluminum cans, paper filters); Filter, Packaging Materials Waste: Outer hull, dust, scraps Emissions: Carbon Monoxide from cleaning coffee bean, and Carbon dioxide; Waste: Coffee Chaff from roasting wastewater Marketing

FIGURE 1: THE COFFEE VALUE CHAIN

Horizontal coffee value chain

Farming →Pulping factory→Milling/marketing →Auction/green coffee sales

Small scale Kenyan farmer :

Produces between 20 - 60 kilos per season

Sells for less than \$1 per kilo of cherry









Horizontal coffee value chain

7 kilos of cherry needed to produce 1Kg of final product

Espresso requires 7 grams:

1 kilo of coffee --> 142 espressos @ $2 \rightarrow 284$

US <u>Coffee startups</u> are expected to raise by end of 2018 more than **\$1 billion**



Innovation for Sustainable Development

4A Coffee Roasters: Made in Kenya

Capacity coffee Roasters, coffee cherry dehusking machines>Pulpers,hurrers, milling









Founder: Alfred Guitau

4A Coffee Roasters has been:

- Buying coffee directly from farmers for \$4 a kilo
- Selling the roasted coffee at \$9 per kilo to 60 coffee houses in Kenya
- Getting in yearly sales \$5000 \$9000.





Sustainable Value Based Ecosystem - Actors





Resource Oriented Development Initiatives





Farmers

Cooperatives



Foreign Purchasers

Restaurant/hotel industry

Digital platform connecting From #farm to #cup







iKAHAWA

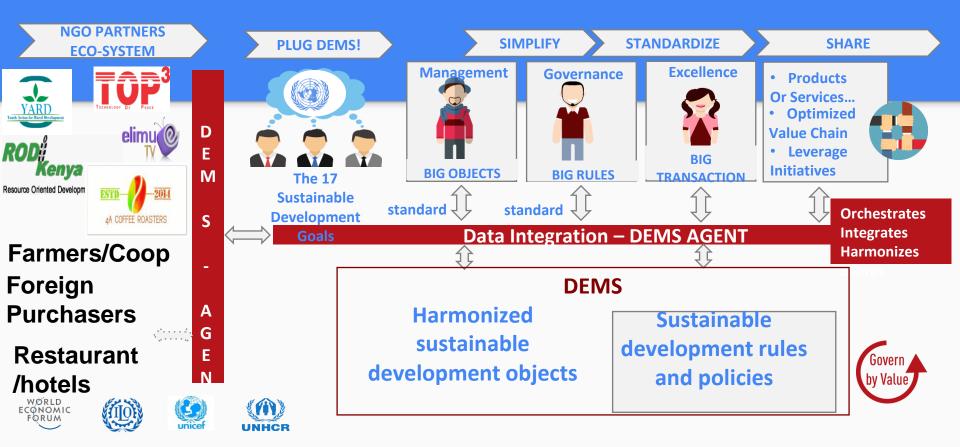
- Coffee farmers using innovative vertical value chain to sell their coffee produce directly to vendors and consumers. #from farm to cup. -Coffee farmers using innovative vertical value chain to sell their coffee produce directly to vendors and consumers. from #farm to #cup.

Welcome to **4icoffee**, in this platform we adopt an innovative technique similar to that of blockchain technology to link coffee farmers, coffee Vendors and consumers together, in order to facilitate the most direct, sustainable and fair e coffee trade.^{rs together, inorder to facilitate the most direct, sustainable and fair e}



The platform will show purchasers where their coffee batch has been grown, how it has been processed and handled, and how their purchase has helped go towards sustainable development goals on a local level. For example reducing poverty (SDG goal 1), zero hunger (SDG goal 2), decent work and economic growth (SDG goal 8), gender equality (goal 5).

Partnership - TOP & Global Data Excellence



Thank you

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