INFORMAL TRADING IN ADDIS ABABA
A NEW PARADIGM THROUGH BIG DATA

1 Introduction

New technologies are reshaping our urban dynamics and lifestyles. They have a bigger impact in developing countries where the "Internet Era" is helping to raise inclusion bringing new opportunities. In some instances, the use of tools such as WhatsApp are more reliable than traditional services such as post. People have access to online education, markets and other services. Cities are modifying their policies towards projects of scale, mass infrastructure projects (LRT, BRT) and opening their doors to new game players such as Uber.

OpenStreetMap, through subsidiary Apps such as ODK Collect and OpenMapKit, is helping to geolocate the flood records and update risk maps through the collection of field surveys based on local community knowledge. Our economic transactions are also evolving. Tools such as M-Pesa in Tanzania allow mobile phone payments and worldwide transfers.

The new approach towards data is helping to increase resiliency and inclusion.

2 About Informality

Informal businesses in Ethiopia are defined based on three criteria: no book of accounts; no license; and fewer than 10 employees (World Bank, 2007)[1]. Ethiopia took an important step in formalising informal businesses, when small firms, with a capital below birr 5,000 no longer needed a license

However, today many informal traders don't have access to a formal legal status due to the complex bureaucratic processes and costs. According to De Soto[2] (1989) the forms of informality can be exclusionary informality, when businesses and households are driven into informality by poverty; and voluntary informality, when businesses and households opt to be informal, based on a cost-benefit analysis.

Informalisation denies the services that make capitalism work: access to credit, the use of business development services, professional associations and judicial courts. It also has an implication on the absence of adequate facilities, utilities, health standards, safety and risk of exclusion among other issues.

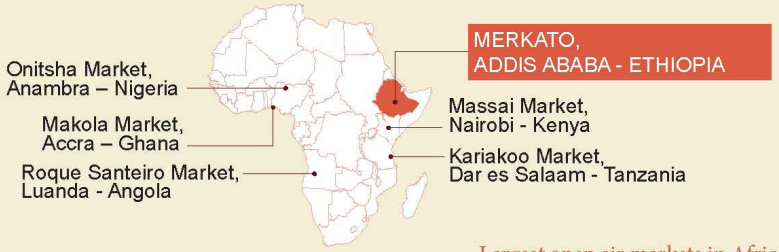
Main issues associated to Informal Trading

1. World Bank "Addis Ababa, Ethiopia. Enhancing urban resilience", 2015
2. De Soto, "The other path: the invisible revolution in the third world", 1989
3. Fransen & Van Dijk "Informality in Addis Ababa, Ethiopia", 2008

3 Case study: Merkato District, Addis Ababa - Ethiopia

The study area in Addis Ababa has been chosen among other markets across Africa for being one of the largest open-air markets with both formal and informal activities.

The typical informal trader in Addis Ababa[3] (Fransen & Van Dijk, 2008) works alone, earns US$ 11 per month, is funded with informal credit (56%) or savings/inherited funds (42%), keeps no book of account (99%), operates purely on a cash base (99%), works from home (54%) or in an open space (26%).



Largest open air markets in Africa

4 The proposed App.

"The project aims to propose to the city authorities, traders and citizens a tool that will help managing and regularise informal trading turning it into an asset for its economy."

The formalisation of business will allow vendors to the access to services. Freeing up these hidden reserves would boost the economy.

Have access to formal services and promote your business....

This will have virtual and spatial externalities:

- Physical infrastructure because it is a net of public - private places around the city.
- Virtual support by take the shape of an App - a very intuitive interactive and easy support using dynamic mapping, monitoring the current geography of informal trading in Addis Ababa, offering services to the informal traders.

We believe that innovation in the future will be strongly linked to simplification and clarification of processes. Little by little, the city could define the most appropriate model to deal with informal trading. It will be progressive and resilient process without committing to a single approach in order to maximise the funds and outcomes.

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MERKATO DISTRICT

- 100 Ha
- 200 000 Jobs
- 500 000 People/day
- 51% City Transactions

The area of Merkato, located at the geometric centre of the city in Ketema District, has an extension of mixed retail activities of 100 Ha. During the Italian colonial period in the 1030s, it was called "Mercato Indigeno" (market of the indigenous) as part of the segregationist colonial policies.

Today, it employs 200,000 people and has 500,000 visitors daily. It is one of the biggest economic assets in Addis Ababa (and Ethiopia) since more than 51% of the transactions happen here.

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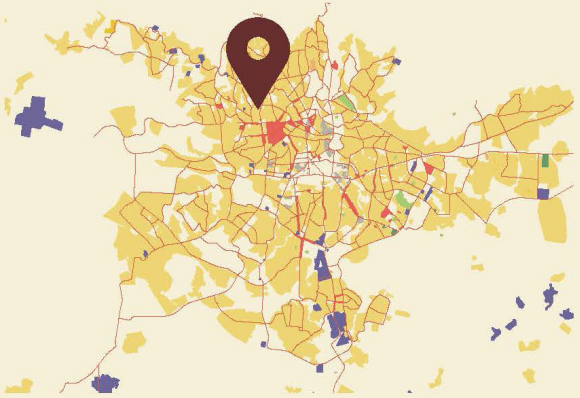
A URBAN CONTEXT

Merkato is located in the core of Addis Ababa. Its footprint can easily be identified from the surrounding residential context. It is framed by a good interconnectivity network which supports the development of multiple business. In terms of public transport, it is fringed by the railway line on the east/North. Regarding the bus systems there are 2 main bus stations being one of them located in the centre of the study area.



B FLOWS

Looking at the vehicular density, we can clearly identify through a Data heat Map the biggest concentration and the access points to the Market Area. As Mentioned earlier, one the arterial leads directly to the centre where the biggest concentration of activities take place.

C TRADE ACTIVITIES

The map, based on a desktop study, represents the location and concentration of street vendors versus "formal" shops. Big Data study could help us to understand how they operate, their concentration, peak hours flows among many other themes in order to be able to provide the enough services that could make Merkato area more inclusive.

- Vehicles
- Formal Shops
- Areas with street trading

Data Source: Self-Elaboration

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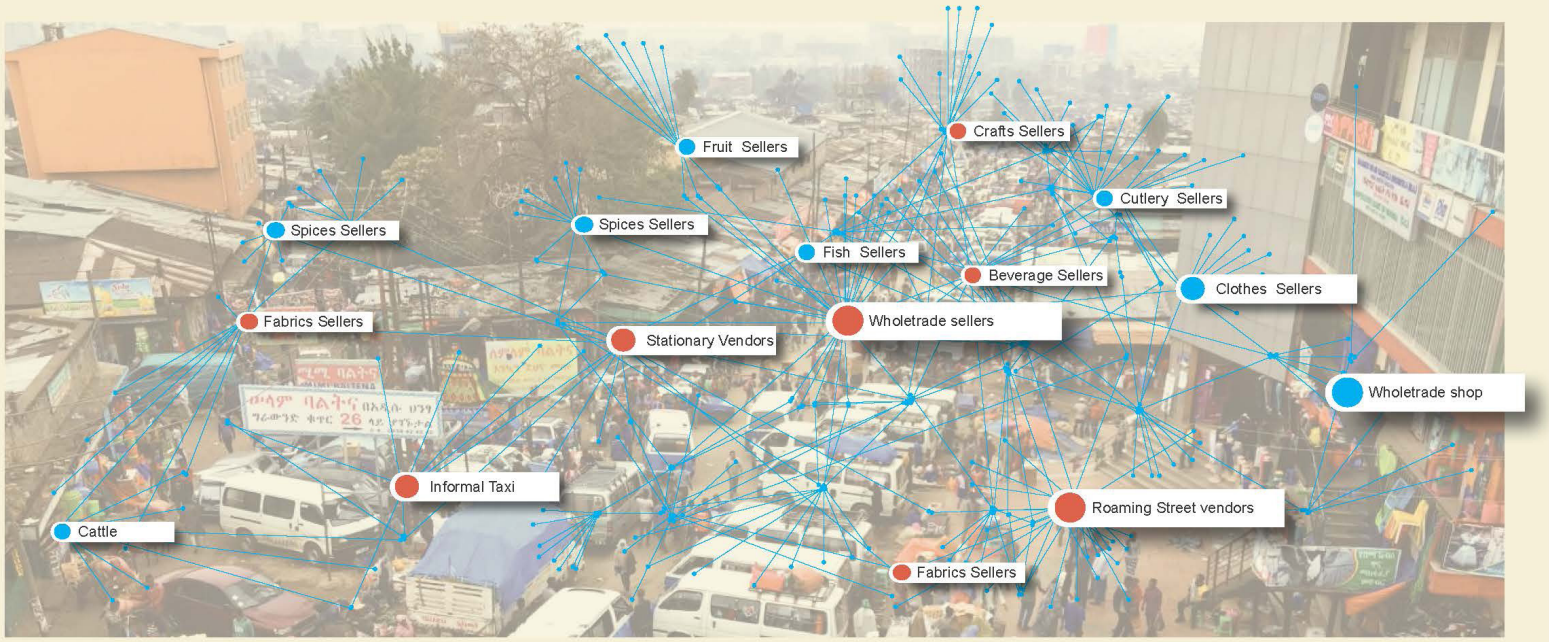
BIG DATA REVOLUTION

"Big Data" responds to the intense use of information. It is not only a technological revolution but also has social, political, cultural and economic dimensions which can influence, as we are experiencing, changes on the organisation processes.

It has a spatial dimension associated to the geolocation. The use of smartphones, through GPS networks, has allowed us to have a better understanding of our cities. The information is not just monothematic. Each nodal point can provide an unlimited amount of data and, what is more, it can be uploaded to the servers in real time.

Every day, the technological companies are developing new systems that make the use of data more accessible. We are getting over limitations such as data storage, processing and internet speed. The use of (cheap) smart phones in Africa is boosting.



Hypothetical representation of commercial activities in Merkato, Addis Ababa

DATA MANAGEMENT

Data analysis consists on a linear process with permanent revisions and data update. Data cleaning and treatment might mean the biggest expenditure element. Although the early stages are being simplified through AI and machine learning procedures, material experts and qualified personnel are still required.

REVISION / NEW SURVEY / DATA UPDATE

DATA COLLECTION → DATA TREATMENT → DATA INTEGRATION → DATA MODELLING → INTERPRETATION

NEW PARADIGM & OPPORTUNITIES

- More efficient use of resources
- Understanding of static and dynamic flows
- New dynamics - online purchase or booking
- More inclusive - reduced bureaucracy
- More resilient
- Better understanding of issues and needs
- Rationalization of the systems- ease of use and interaction

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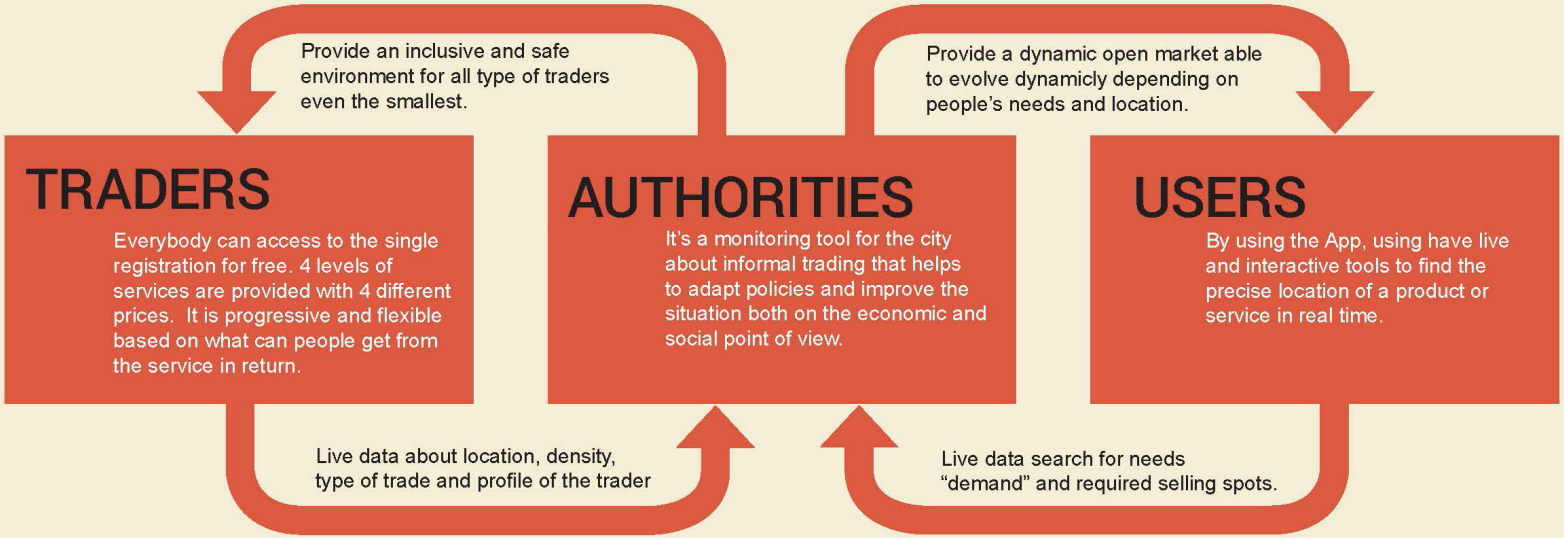
"OpenMarket App." - *A Smart Small Trading System !*



HOW IT WORKS?

- **One dynamic database** monitoring the geographic shape of informal trading (people could inform themselves about their position GPS tracking) handle by the city's services.
- **Different levels of trade locations,** from one spot along the street to a small local rented daily or monthly. It could include market places, coworking spaces, workshops...
- **Rights to the City - An inclusive App.** Helping young entrepreneurs or people in risk of exclusion to develop their businesses and have the same rights as "formal" traders It would also help the municipality to define issues and objectives.
- **A flexible system** able to be reorganized in real time.
- **People's input creates the network**. It can be tested progressively
- **The city can use the App** to send notifications and provide multiple serivices

KEY STEPS FOR A PROGRESSIVE IMPLEMENTATION OF NEW CITY POLICIES AND THE TRADERS OPPORTUNITIES:

0 – Initial survey. In absence of baseline data, market and survey studies are performed in order to define issues and objectives. A Bussines Plan is perfomed

1- Beta Launch – Traders (formal and informal) register for free, they can use the free spots and acquire "citizen" rights. Municipality also starts a plan for providing services and facilities to support the traders who enrol. The municipality, after analysis the data, can adapt its strategies about informal trading.

2 – Indicators Performance: municipality stablish a series of indicators and goals based on the initial results of the project. Regular revisions to be performed.

3 – Launch to Open Public: the App is free of use to everyone so Merkato visitors and Trades can be put together under the same platform. New features appear such as product search or only shopping.

4- Interaction between visitors and traders. Te success of the App halps users to create their own maps

5- Final Formalisation Status: Once the App has help stablishing a minimum "legal status" and incporating few services, municipality can asss the cost and benefits of the service and implement tax regimes based on multiple parameters to be discussed.

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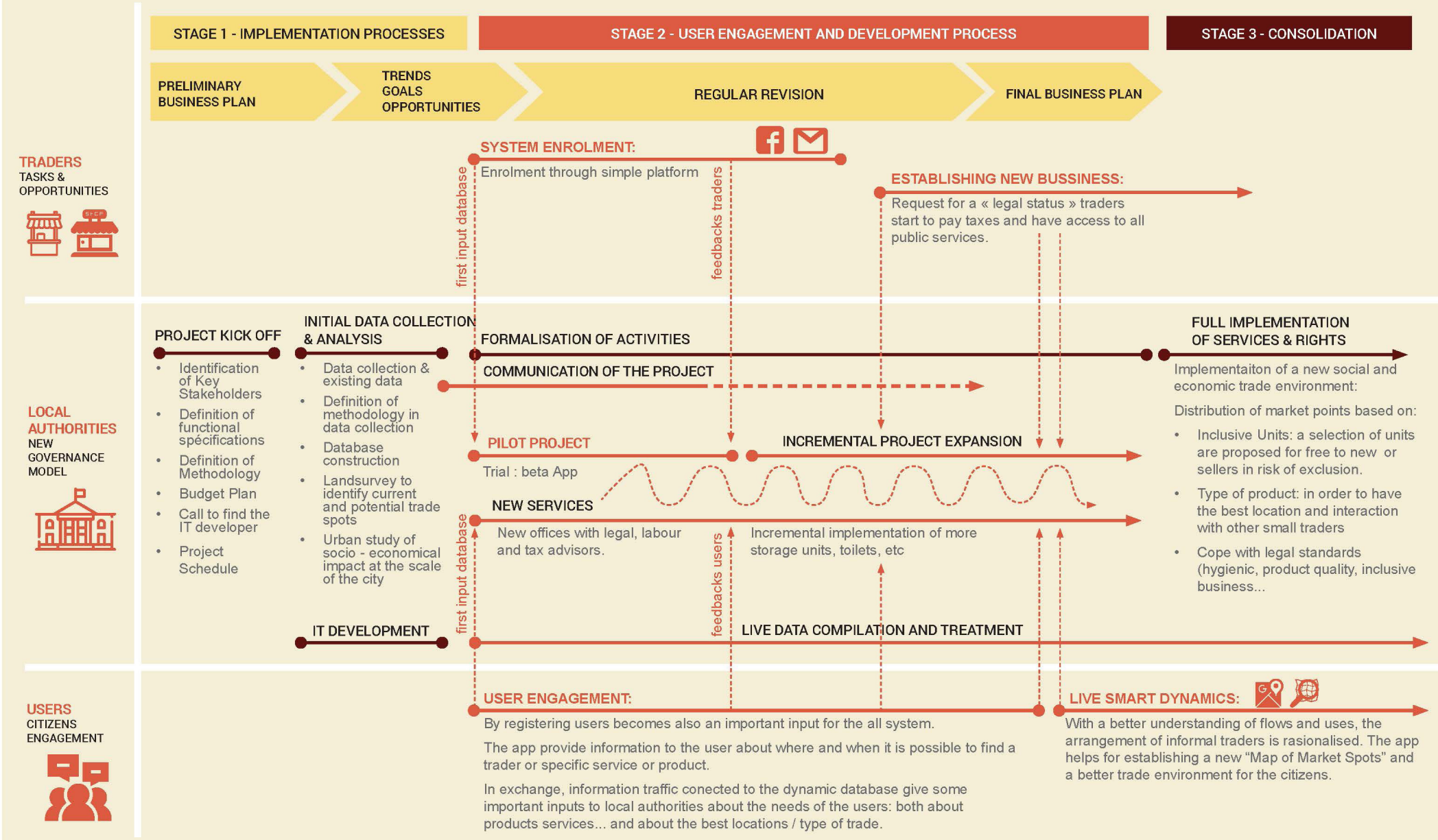
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