



## **IAME's port and maritime mini-hackathon 2018 Mombasa: Wednesday September 12<sup>th</sup>, 2018, 8.30 AM – 6 PM**

### **What is IAME?**

The International Association of Maritime Economists (IAME) is since 1992 the world's largest organisation of scholars active in the field of shipping, ports and maritime logistics. During September 11<sup>th</sup> – 14<sup>th</sup>, 2018, their annual conference will be held for the first time in Africa (Mombasa, Kenya). See [www.iame2018.com](http://www.iame2018.com). On September 12<sup>th</sup>, 2018, two technology firms, Close the Gap International and Soulco Kenya, together with the Kenya Ports Authority, have committed to **sponsor and support the first port/maritime hackathon in Kenya.**

**CLOSE  
THE  
GAP**  
BRIDGING  
THE DIGITAL  
DIVIDE

**SOULCO**  
KENYA

### **What is a hackathon? (from <https://hackathon.guide>)**

The broad definition of a "hackathon" is:

- Hacking is creative problem solving (It does not necessarily have to involve technology)
- A hackathon is any event of any duration where people come together to solve problems. Most hackathons have a parallel track for workshops.

Participants typically form groups of about 2-5 individuals, take out their laptops (if the event is technology themed), and dive into problems.

Typically, teams are composed of various profiles: coders/programmers, graphic designers, business developers, domain experts, ...

### **The mini-hackathon on September 12<sup>th</sup>, 2018**

The set-up was born out of a need to accelerate and innovate technology startups ideas in the field of sustainability and logistics technology, using and utilizing the momentum of the IAME international conference hosted by Kenya Ports Authority in Mombasa with key maritime and port experts from around the globe gathered together in Mombasa for a week.

**Criteria**

Potential candidates applying for participation should meet the criteria below:

- Participants should have an interest in the broader field of maritime logistics including port economics and management, more in particular how ports can be used to improve the ecosystem of people, environment and business;
- The team should consist of driven and committed entrepreneurial people;
- The ideas should be technologically driven i.e. the use of ICT;
- The idea/prototype/product should demonstrate a clear social, ecological or economic impact or improve existing processes.

**Which challenge will be worked upon?**

The challenge is to work on innovation around stakeholders within a port environment. A limited amount of environmental and location information about all movable stakeholders like employees, on-site service suppliers (fuel suppliers, logistics services suppliers, etc.), port movable assets (cranes, forklifts) and port goods in transit (containers, liquids, bulk goods...) will be monitored. The use of tags and networks to gather this information will be at low costs so it becomes economically viable to store all this information.

The basic information that will be captured from each asset are the following:

Tag ID	Time	Longitude	Latitude	Temperature	Pressure	Humidity	Accelerometer

Other, additional information can be added for fuel and energy-consuming consuming assets:

- Energy and fuel consumption data
- Emissions from the vehicles, cranes and forklifts

This information can then be used to extract in real-time as well as historical time series about all the movable assets in the port.

The challenge at hand in the mini-hackathon is now to use the minimum of this already basic information and link it to existing data information of the port’s information systems to provide all kind of process improvements, actual awareness, impact on environment, or any other great idea to improve the economic value of this available data. The lesser information is needed, the more economically viable it will become to capture and store the data. Existing data from a standard port management system are for example the HR database, incoming and outgoing ship information (e.g. AIS data), freight content information, security database information, etc.

A few practical examples are (some of which might be in use today):

- A ship is about to enter the port to discharge cargo. Where are the manpower, forklifts, trucks or any other assets and resources to service the ship at this stage (actual information)? From where do they come and how many times have they been moved from one side of the port to another side (historical data).
- A ship is being loaded/unloaded and all containers are stored at the container terminal. How long are they waiting to be moved? When the tag ID is linked with the actual content information of the container, you can speed up the process of moving perishable goods faster than long lasting goods.
- A port has many people and assets working with the premises of the port. By tagging each person and asset to its department or supplier, a port managing body or authority can track and view historically the movement of people within its premises. This will improve free movements of goods at all time and also improve waiting time for upcoming events.
- The temperature at a storage of bulk goods has increased over the last 5 hours continuously. Maybe a fire or chemical chain reaction has started and needs visual verification before involving the emergency services.

So the main challenge is to use the minimal location and environmental information that is given through technology, to come up with great innovative ideas beyond current practice on how to improve the ports value and efficiencies and to be better prepared for future events. Out of these ideas, applications can be later developed to assist the different stakeholders to improve their services.

### **Who are we looking for?**

We are looking for motivated, tech-savvy brilliant minds from universities (both graduate and undergraduate), entrepreneurs, domain experts from KPA, KMA, and other maritime or port companies / service providers.

### **How to participate?**

Please send your individual or team application to both [HACKATHON.IAME2018@gmail.com](mailto:HACKATHON.IAME2018@gmail.com) and [iame2018@vub.be](mailto:iame2018@vub.be); **before Saturday September 1<sup>st</sup>, 2018 noon EAT**. In the case of a team application, make sure it is a diversified team comprising at least a coder/programmer or software developer, business developer, and maritime/port domain expert.

**IMPORTANT:** Applications have to comprise of

Reduced CV of participants (max. 1 A4 page)

Motivational text explaining why you want to participate as an individual or team (300 words)

Motivation why maritime and port logistics are within your field of interest (300 words).

Decisions/invitations will be communicated **by September 5<sup>th</sup> at noon EAT**, with formal confirmations needed within 24 hours.

We will allow a maximum of 8 teams composed of minimum 4 and maximum 5 persons.

Fully composed teams of 4 to 5 persons will be given priority.

Participants will get full access to the IAME conference during 12 – 14<sup>th</sup> September (including the welcome cocktail on Tuesday evening), but will need to cater for accommodation and transport to and from the hackathon/conference. The Venue is Pride Inn Paradise Resort in Shanzu. The hotel applies special rates during the conference, and there are many accommodation options in the area.

**Programme on Wednesday September 12<sup>th</sup>:**

8.00 AM: Registration and Welcome

8.30 AM: Team composition, further challenge explanation and briefing

9.00 AM – 5.00 PM: Hackathon, facilitated by Soulco /Close the GAP

5.00 PM – 6.00 PM: Each team pitches its solution for max. 5 minutes; jury deliberation

6.00 PM – 6.30 PM: Prize Giving and Closure

**Prizes**

Winner: 50.000 KSh

Runner-Up: 25.000 KSh

## Background to the initiative

### ICT market Outlook in East Africa

Kenya, Uganda and Tanzania collectively have a population of 142 million people, 70 million of whom are connected to the internet which has led to raise of technology based companies and products. These three markets annually register a 25% growth of Internet users due to the increased mobile phone penetration, reduced data costs and infrastructure growth in the countries. With 86% of smart phones sold in East Africa running on the android OS, most products developed have tapped in this market, USSD applications are developed to cater for the feature phone market. The IOS platform is also growing in the region growing the app market.

### Startup Landscape in East Africa

According to Angel list, there are 879 startups in East Africa who vary from early stage to growth stage companies. This has attracted the growth of venture capital firms in East Africa, which currently stands at 72 in number according to the Private Equity sector survey of East Africa by KPMG and EAVCA. In 2016, startups in Kenya, Tanzania and Uganda raised a total of US\$ 106.30million, according to the Partech analysis of 2017. This was an increase from the previous years despite the decline in cash flow being felt in Africa.

### The Need

Although the startups in East Africa raised over US \$103 million in 2016, they achieved this by fundraising more rounds of fewer tickets. This indicates a need to invest in startups at an earlier stage. The 72 private equity and venture capitalists in East Africa, and those entering the market invest in growth startups with investment ticket sizes starting off from US \$50,000. This leaves a gap for startups that launch their startups from incubators and accelerators to access funding needed to launch their businesses.

.....

[www.iame2018.com](http://www.iame2018.com)

<http://close-the-gap.org>

<https://www.soulco.net>