Control Illegal Devices

April 23, 2018

## Who We Are



✓ Invigo is an active GSMA Associate Member since 2007

✓ We are part of United Nations' Global Compact, supporting universal principles on Human Rights, Labor, Environment, and anti-corruption

✓ Certified ISO 27001 – Information Security

✓ We are a member of the Open Mobile Alliance

✓ We have a worldwide presence
- • Beirut – Lebanon
- • Dubai – UAE
- • Amsterdam – The Netherlands

# INVIGO

100+ customers in 70 countries

> Agenda

CASE STUDIES

LESSONS LEARNED

USE CASES

CONCLUSION

> Case Studies

> Lebanon Case

> Objectives:

> > Limit the device importation through illegal channels

> > Increase TAX revenue

> Project main drivers: MoT and MNOs (Alfa and touch)

> Implementation:

> > Full device to SIM locking

> > Amnesty Program for subscribers with invalid IMEI

> Decree issued and signed by MoT (during design phase)

> Full CID solution was launched in June 2013 under the name of Device Illegally Imported (DII)

> Implementation was completed in record time (3 months)

**Mobile phones**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| | | | | | | |
| **Imports (Qty)** | 95,567 | 210,507 | 393,323 | 197,818 | 148,070 | 1,377,220 |
| *Monthly Avg (Qty)* | 7,964 | 17,542 | 32,777 | 16,485 | 12,339 | 114,768 |
| *YoY progression (monthly)* | 59% | 120% | 87% | -50% | -25% | 830% |

> **Learning mode**:

> > Database was built based on Invigo's ADM detection history.

> > Learning mode for 1 month

> **Awareness Campaigns**:

> > For Subscribers: broadcast SMS, Advertisements on TV / Radio, talk shows , news

> > For Importers and shops: Conferences, news

> **Results** achieved:

> > Fake, cloned and unregistered devices blocked

> > Increase in customs revenue

> > No more illegally imported devices in the market

> Objectives:
  > Block fake and cloned devices
  > Fight against SIM BOX and device theft
  > Encourage the local production of devices
> Project main driver: Ethio telecom
> Implementation :
  > Solution requested by Ethio telecom
    > Dynamic and predefined device to SIM locking
    > No handset change allowed for devices with IMEI detected with more than 10 subscribers
  > Implementation was delayed waiting for decree issuance
> Learning mode:
  > Invigo's CID Learning mode run for 1 year.
  > Then, since September 2017, mandatory IMEI registration is enforced
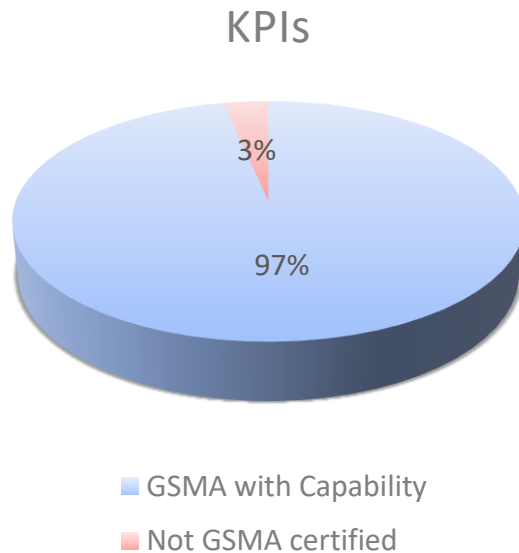
# CASE STUDIES

> Ethiopia Case

## KPIs



3%

97%

- GSMA with Capability
- Not GSMA certified

> **Awareness Campaigns**:

- > For Subscribers: broadcast SMS, Advertisements on TV / Radio, talk shows , news

- > For Importers and shops: Conferences, news

- > Local manufacturers : Conferences

> **Results** achieved:

- > No impact on subscribers

- > Fake, cloned and unregistered devices blocked

- > Increase in customs revenue

- > Decrease in already detected fake and clone devices

- > Increase in selling devices locally assembled

> Lessons Learned

**> Potential Obstacles and Recommendations**





## Potential Obstacles

> Misunderstanding of solution objectives for consumers

> Uninformed Mobile Subscribers

> MNOs' resistance

> Delay in the legal framework

## Recommendations

> Identification of all stakeholders

> Managing relation with all concerned parties to collect concerns

> Ensure stakeholders/MNO involvement from initial phases

> Assure MNOs that their revenue won't be affected

> Involve MNOs in design discussions

> Provide importers with an easy registration process

> Extensive awareness campaigns for subscribers

> Secure the legal framework

> Automatic IMEI Check scenarios

IMEI is detected automatically. No need for user to enter his IMEI

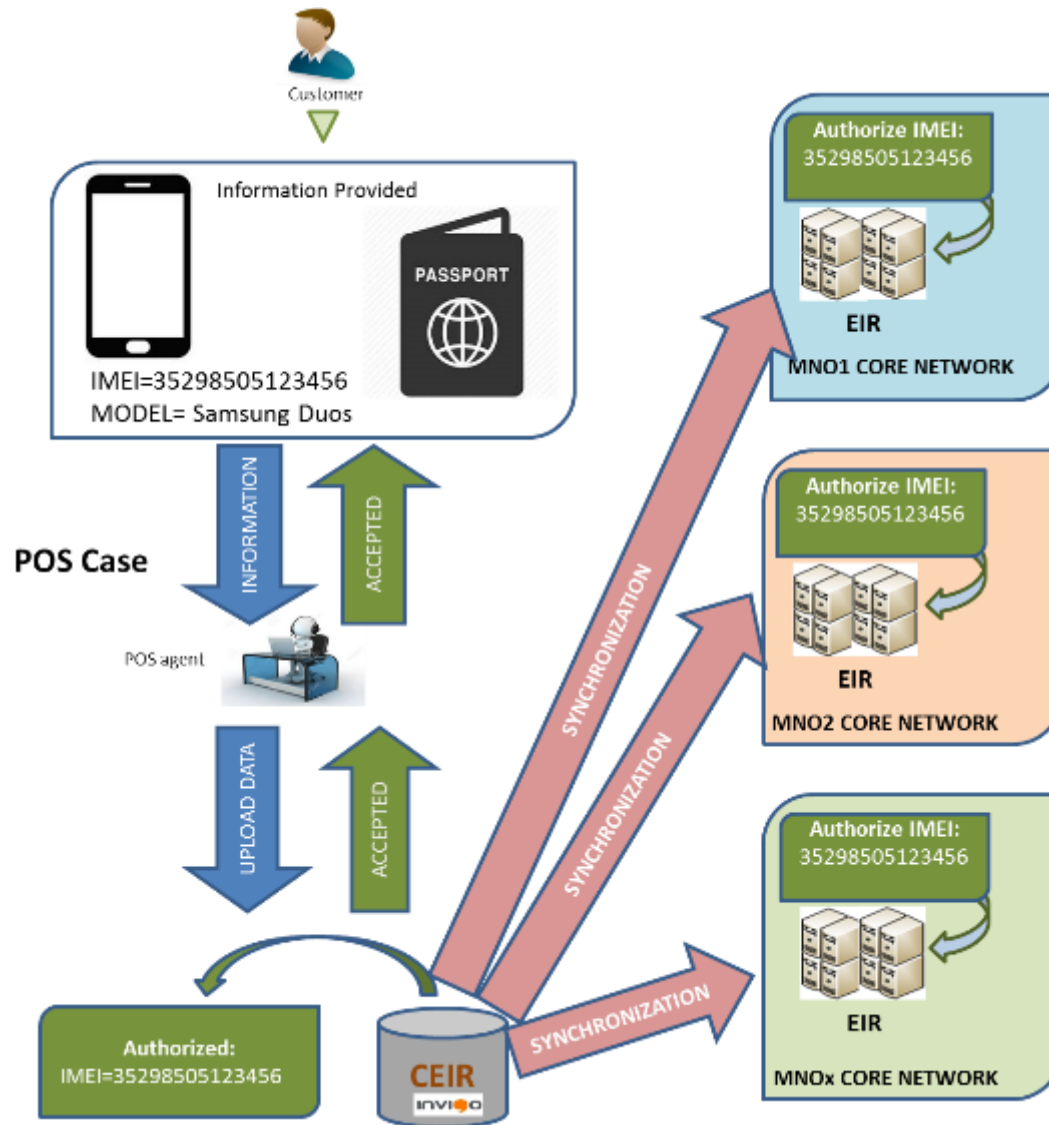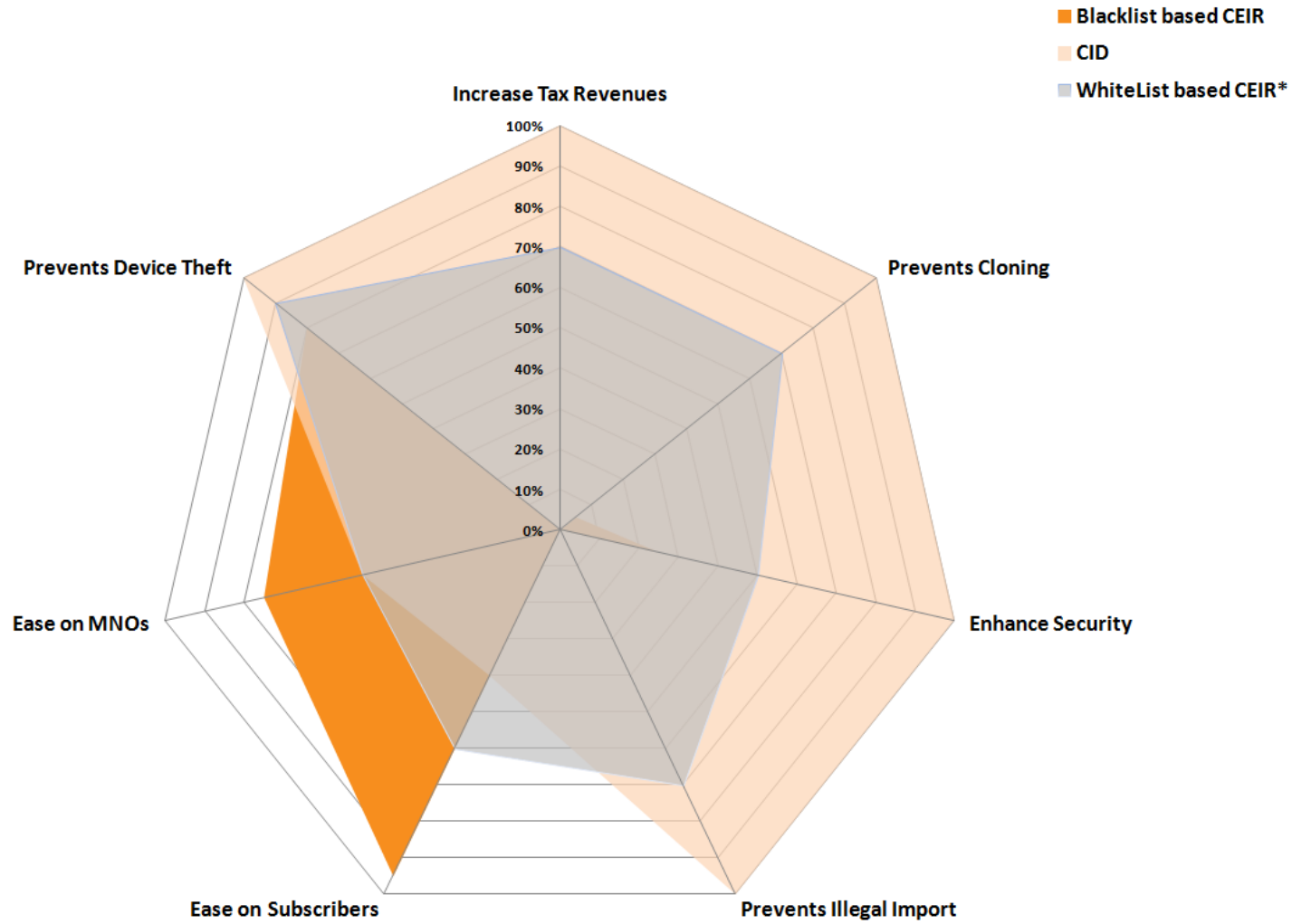| A subscriber got a new counterfeit device | A subscriber got a new illegal device | A subscriber got a new homologated/legal device |
|---|---|---|
| 1- Subscriber turns on the device<br><br>2- ADD will detect the device in Real-Time<br><br>3- An SMS will be sent to the subscriber specifying the device details according to the IMEI detected<br><br>4- The customer will compare the details with his device: no match so he has to decide to keep the unsupported device or not | 1- Subscriber turns on the device<br><br>2- ADD will detect the device in Real-Time<br><br>3- An SMS will be sent to the subscriber specifying the device he has is illegal and will not be supported<br><br>4- The customer will have to decide to keep the unsupported device or not | 1- Subscriber turns on the device<br><br>2- ADD will detect the device in Real-Time<br><br>3- An SMS will be sent to the subscriber specifying the device details according to the IMEI detected<br><br>4- The customer will compare the details with his device. Since it is a match, he can disregard the SMS |

No need for Blacklisting

> Easy Registration Process

# THE SOLUTION

> Hitting the right balance



Legend:
- Blacklist based CEIR
- CID
- WhiteList based CEIR*

Axes: Increase Tax Revenues, Prevents Cloning, Enhance Security, Prevents Illegal Import, Ease on Subscribers, Ease on MNOs, Prevents Device Theft

# CONCLUSION

> SUMMARY

> There increased awareness in several countries about Device Management System to control fraudulent IMEIs and register them

> There is necessity to involve MNOs in the process since the start

> There is necessity to inform and educate mobile subscribers and consumers

> There are options of achieving the results without aggressive blacklisting policies, but with targeted and engaging consumer and distributor awareness processes

and of course

> The is a need for secured, healthy, and protected mobile environment, especially in light of IOT, M2M and 5G.

Thank you !

# THANK YOU

## YOU CAN REACH US AT

Beirut, Lebanon
Berytech Technology Center
Tel: +961 (0) 4 530213

Dubai – UAE
Dubai Silicon Oasis
T +971 (0) 56 420 1001

Amsterdam - The Netherlands
WTC Schiphol Airport
T +31 (0)88 560 9950

Joseph EID
Vice President Sales, AMEA
Email: joseph.eid@invigo.com
Mobile: +961 76 64 14 26
www.invigo.com