Background of Harry Sasongko

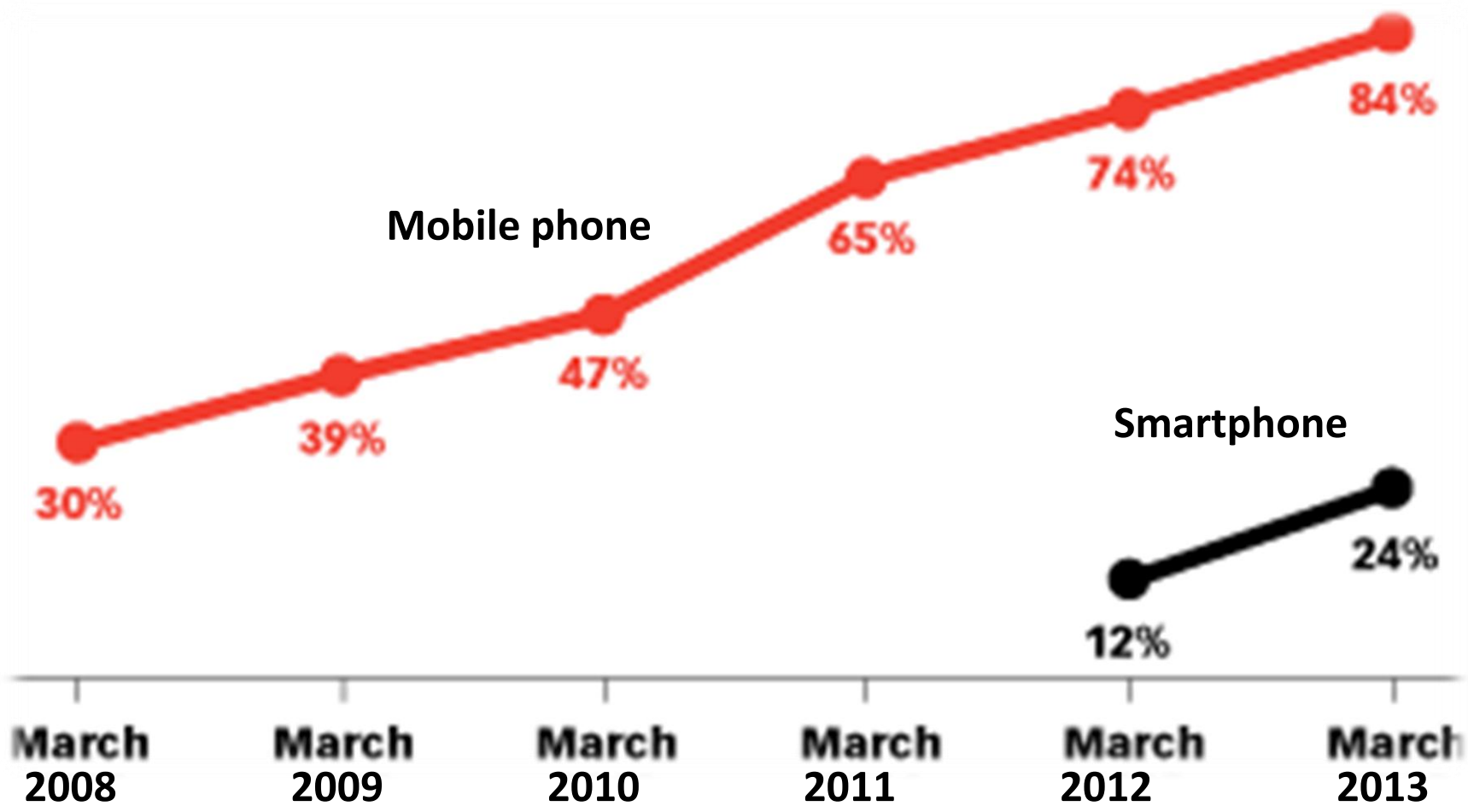
- **Board of Advisors member of POWERSTORM CAPITAL CORPORATION**, Palos Verdes, CA, USA. [2014-current]
- **Consultant in Telecoms for GERSON LEHRMAN GROUP, USA & Private IT Business/PT. BVitek** {2013-current]
- **President & CEO of PT. INDOSAT Tbk**, a subsidiary of Qatar Telecom (now Ooredoo) [2009-2012]
- **President & CEO of GE CAPITAL Indonesia** [2005-2009] & **Board Member of J.V. company PT Astra Sedaya Finance/ASF** [2005-2009]
- **Various banking experience as Director at Citibank, Lippo Bank** [1988-2005]

Background of Powerstorm Capital

- **Powerstorm Capital Corp. provides hybrid energy solutions to the telecommunication industry throughout the emerging world by**
- **developing a modular, plug-and-play energy storage and delivery solution that can be remotely monitored and**
- **provides environmentally and fiscally sound alternative to revolutionize how power is delivered, stored and managed for**
- **this fast-growing, highly segmented sector of the telecommunication industry.**
- **Powerstorm intents to show that mobile telecoms can result in tangible socio-economic benefits to the Emerging region in areas such as: more employment opportunities, efficient economies & access to education & health.**

MOBILE PHONE & SMARTPHONE PENETRATION IN INDONESIA 2013

Source: Roy Morgan Research, July 2013 @ Jakarta Post



F a m i l i a r (1) ?



Familiar(2)?



Getting Familiar?



The Mobile Impact (1)

- **More mobile than fixed line**
- **First internet experience**
- **Ubiquitous, everywhere, everyone**
- **Both positive & negative**
- **Conclusion : U N S T O P P A B L E !!!**

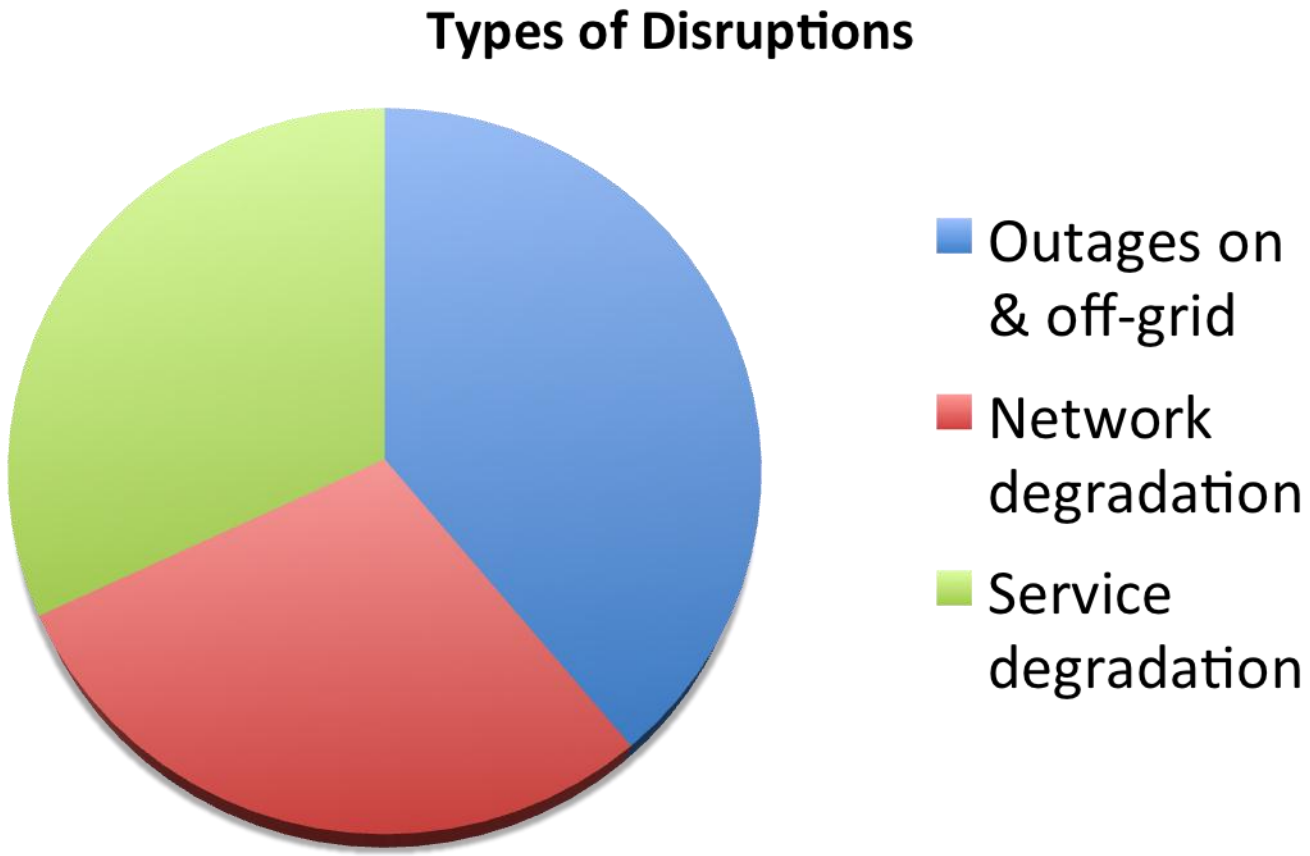
The Mobile Impact (2)

Source: GSMA report Nov 2012

- **10% increase in mobile penetration > total productivity factor by 4.2%**
- **data usage doubling, increase GDP per capita by 0.5%**
- **Conclusion : “POSITIVE IMPACT”**

The Mobile Challenges (Global)

Source: Heavy Reading, Mobile Network Outages & Service Degradations Oct 2013



The Energy Challenge





- Remote BTS's have no or unreliable grid
- Many powered 24x7 using diesel

- Solar/biomass can be used to supply large proportion of power
- Cleaner, easier to manage and cheaper in long run



Mission: Serving the Underserved

- Reach, remote, powerless….
- Dependency on traditional/diesel
- Economic impact vs. return ?
- Social responsibility (CSR) angle
- Alternative power
- Partners/believers : Assoc, NGO, non-profit, development org., early adopters/ start-ups

GREEN POWER

Green Power in Indonesia

- Largest network in SE Asia > 90,000 towers; only 4,600 are green
- Cost of greening an average $35,000 per site
- The Energy Service Company (ESCO) model is just beginning to take shape
  - ESCO owns equipment
  - Also takes responsibility for full provision of power to tower

Extending to Community Power (1)

- pay-back period needs requires stable regions
- choice of power source vs.parameters (2nd next slide)
- Intellectual Property protection on innovations?
- equipment power consumption
- equipment reliability/maintainability

Extending to Community Power (2)

- Communities around mobile towers suffer same difficulties in accessing energy
- Towers can be anchor loads
  - Predictable off-takers of energy
  - Contracts with tower companies/MNOs are bankable
- Energy can be sold to communities in various forms
  - Micro-grids
  - Charged devices

OMC Power and Bharti Infratel

24/7 power to tower with hybrid solar/diesel generation



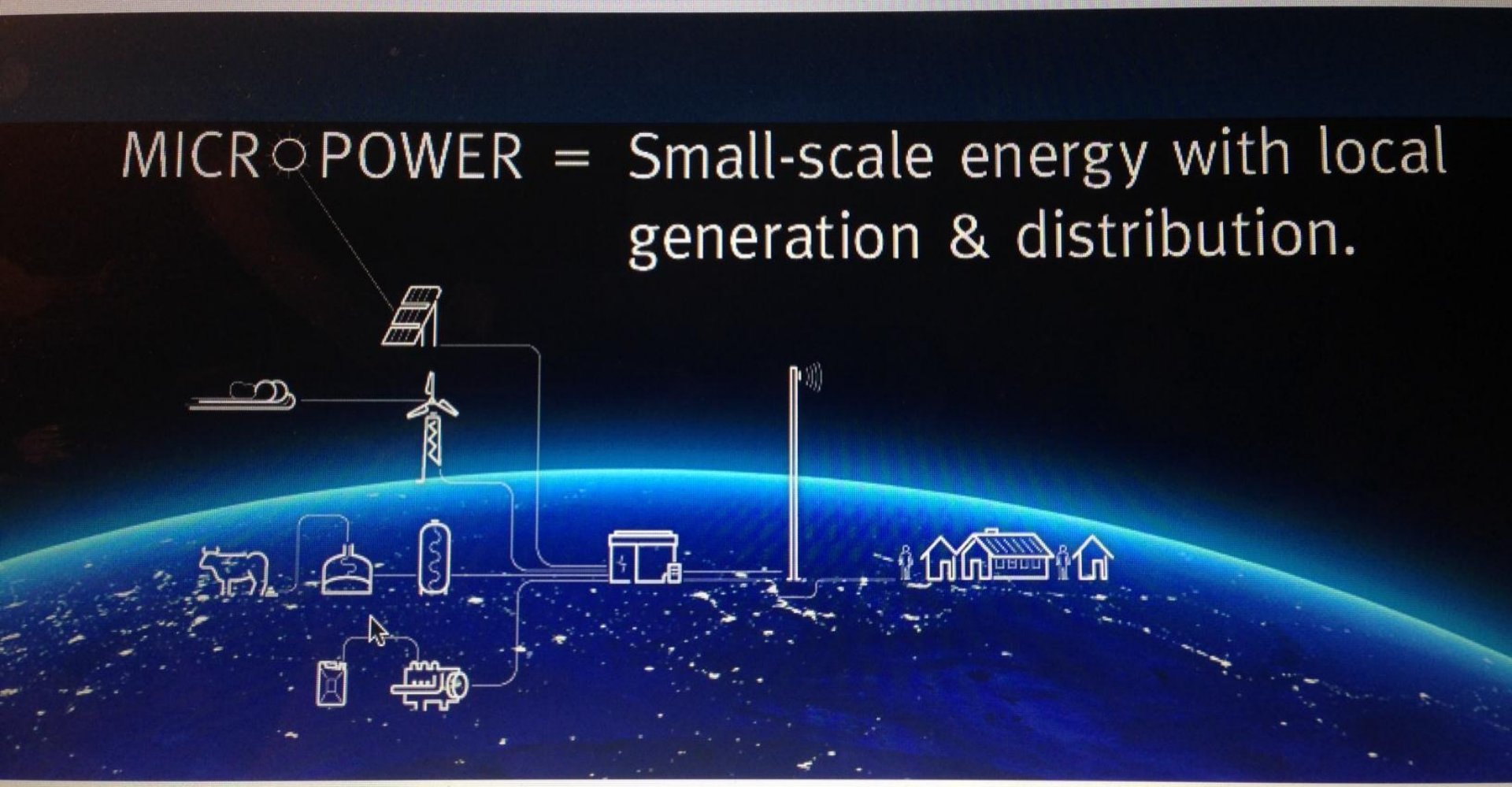
Leases product to customers



Home delivery



OMC Power has about 20 power plants each supplying at least 1 tower and serving the needs of thousands of customers



Solving a very large problem.

"If we had power, I could teach in the evenings, and

Green Power Choices in Pakistan

Source: Greening Telecoms: Pakistan and Afghanistan Market Analysis, GSMA Oct 2013

	Solar	Biogas	Wind	Fuel Cell	Pico Hydro
Availability	V.Good	Good	Good	Good	Good
Reliability	Good	Good	Good	Good	Good
Mkt Accept	Good	Poor	Poor	Good	Poor
Supply Chain	Good	Poor	Poor	Poor	Poor
Adoption Stg	Comm.	N/A	N/A	Trial	N/A
Resource Pot	Modrte.	Good	Low	Good	Low

Where to Start ?



- At the finger tips of a mobile biz, i.e.: the BTS
- Using the tower as anchor load
- Leverage on the power source, reach/distri. and connectivity
- Possible results: community power, mobile economy, mobile services, clean water

Key Challenges of Community Power

- **Regulation: does it permit direct sale of power through micro-grids to communities?**
- **Finance:**
  - **Raising finance based on community power model can be very challenging due to high upfront cost & perceived risk**
  - **Bankable contracts with mobile industry are very valuable**
- **Operations: managing widespread workforce & system maintenance is not easy**
- **Community relations: doing B to C with is very different than doing B to B**

Last but Not Least (1)

I invite you all to join me in learning about the many ways the mobile industry can participate in the delivery of some of the most basic services – with very powerful impact !

Let's watch a video

Last but not Least (2)

- Let’s carry this mission possible together
- Serving the Underserved
- See how the early believers are doing it
- Let’s discuss it
- We will get there !!!

HAVE A FRUITFUL WORKSHOP !