

**ITU Workshop on
“With Information and Communication
Technologies (ICTs) everywhere -
how safe is EMF in Latin America ?”**

(Lima, Peru, 10 December 2013)

**Exposure Limit Compliance and
National Policies for Antenna Siting**

Jack Rowley, PhD

Senior Director

Research & Sustainability, GSMA

jrowley@gsma.com

The GSMA in numbers

MEMBERSHIP



800

mobile operators in
over **220** countries



230 associate
members

PRESENCE



Offices in
9 countries
serving every region



Staff based in
26 countries
representing
36 nationalities

MOBILE REACH



6.6

billion
mobile
connections



3.2 billion
individual subscribers

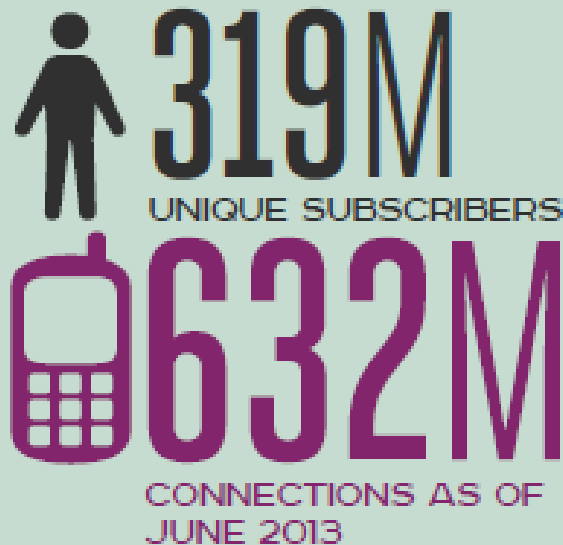
The mobile revolution



Lima, Peru, 10 December 2013

Subscriber growth in Latin America

Unique Subscribers and SIM Connections



SUBSCRIBERS



CONNECTIONS

The phenomenon of multiple-SIM ownership continues to distort penetration rates

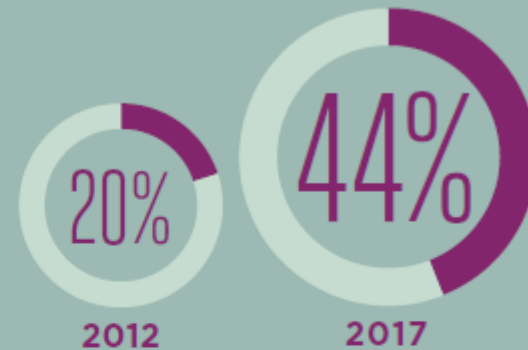


New phase of development

MBB Connections Latin America

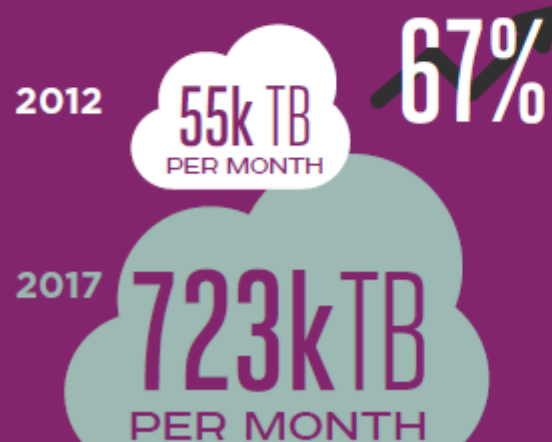


Smartphone Penetration

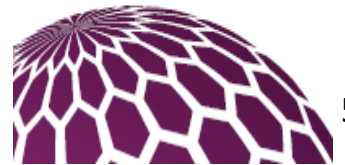
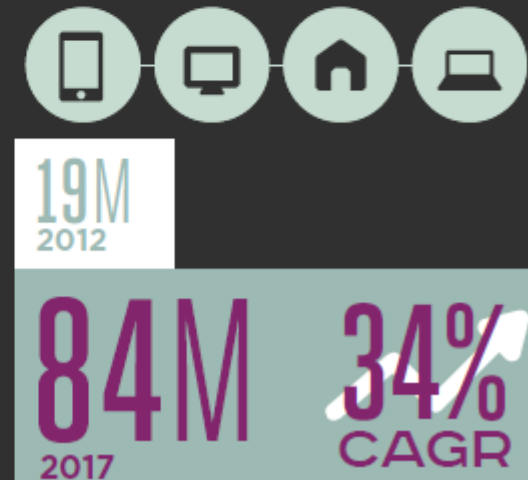


Mobile Data Volume

Substantial increase for Latin America

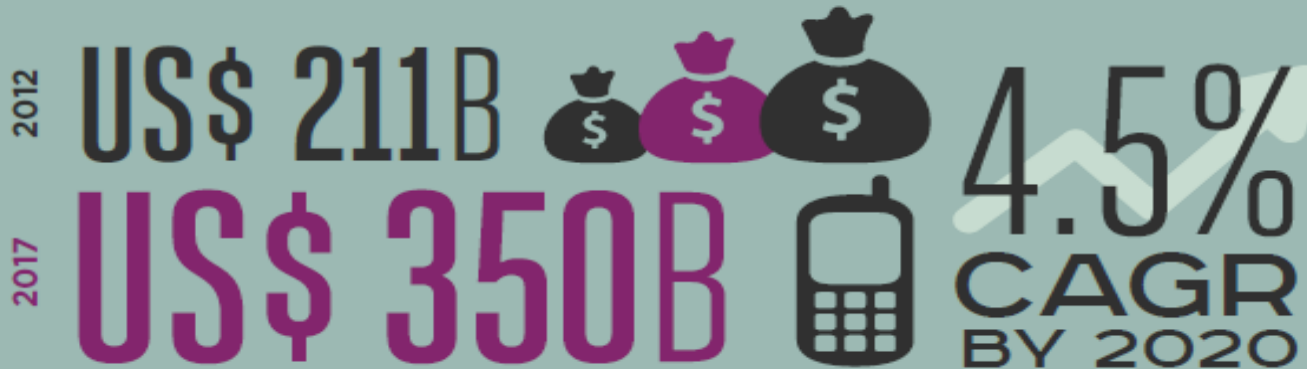


M2M Connections



Economic contribution of mobile

Mobile Ecosystem Contribution to GDP in LatAm



Ecosystem Contribution to Public Funding



Ecosystem Jobs Created



Mobile Economy
Latin America
2013



Broadband in Peru



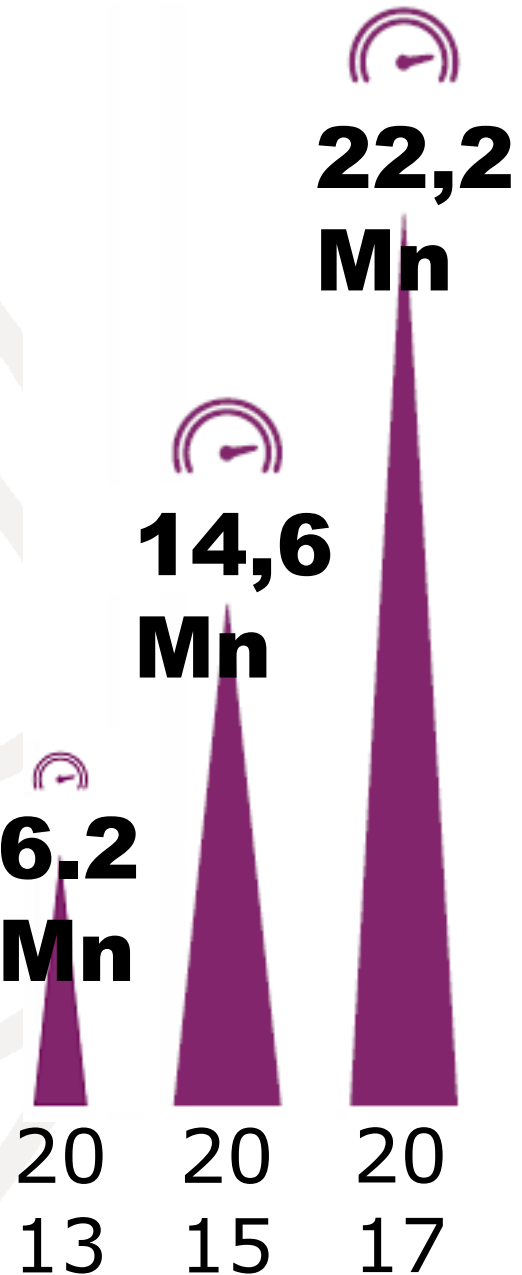
MOBILE BROADBAND

6.2Mn



FIXED BROADBAND

1.8Mn



Antenna siting

- Growing traffic.
- Need for back-haul, power, locations.
- Difficulties with local authority approvals.

‘Se necesita cuadruplicar número de antenas para ofrecer Internet 4G’

Lunes, 22 de Julio 2013 | 5:53 pm



'You need to quadruple the number of antennas to deliver 4G Internet'

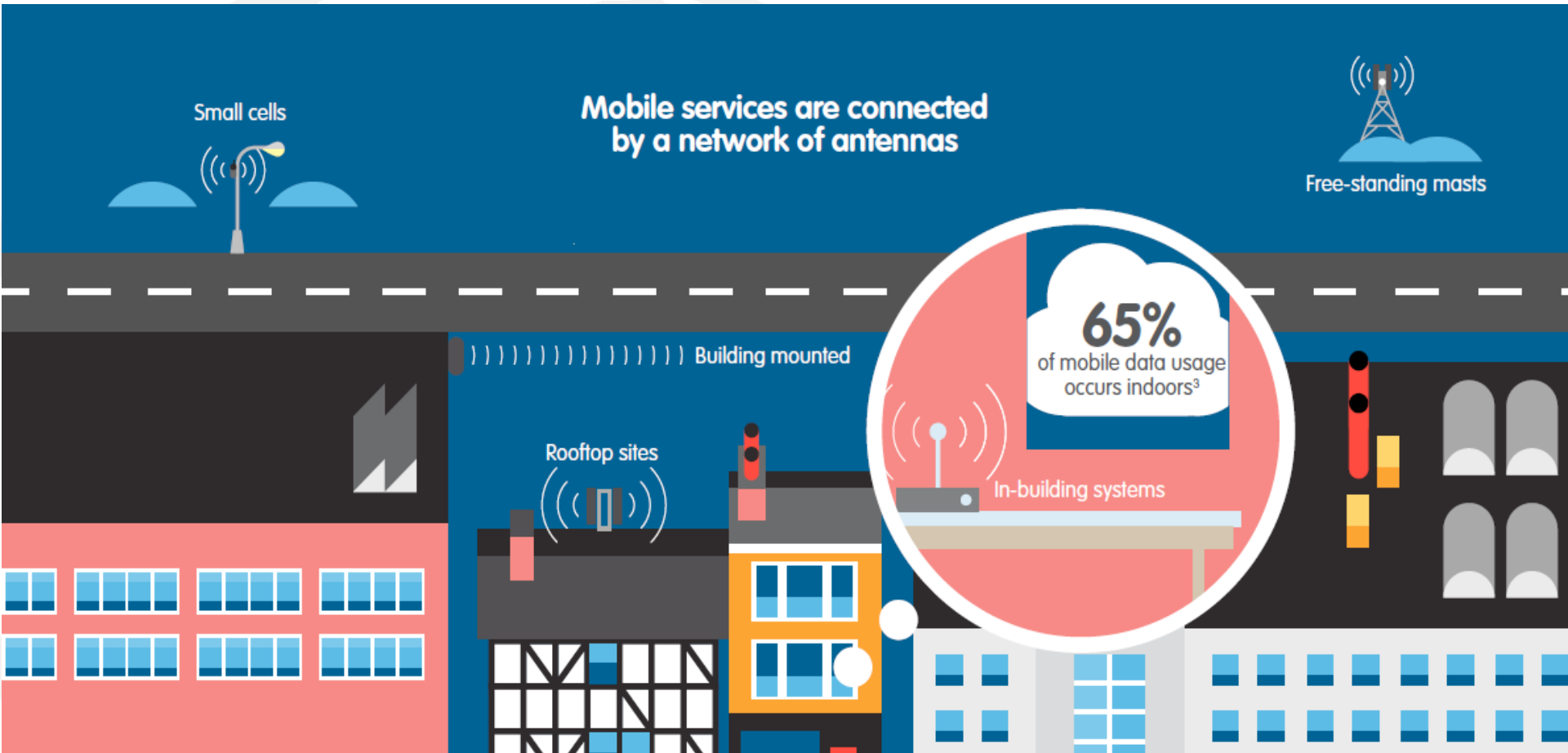
- Peru, Deputy Minister of Communications, July 2013.

Mobile phones need nearby antenna sites

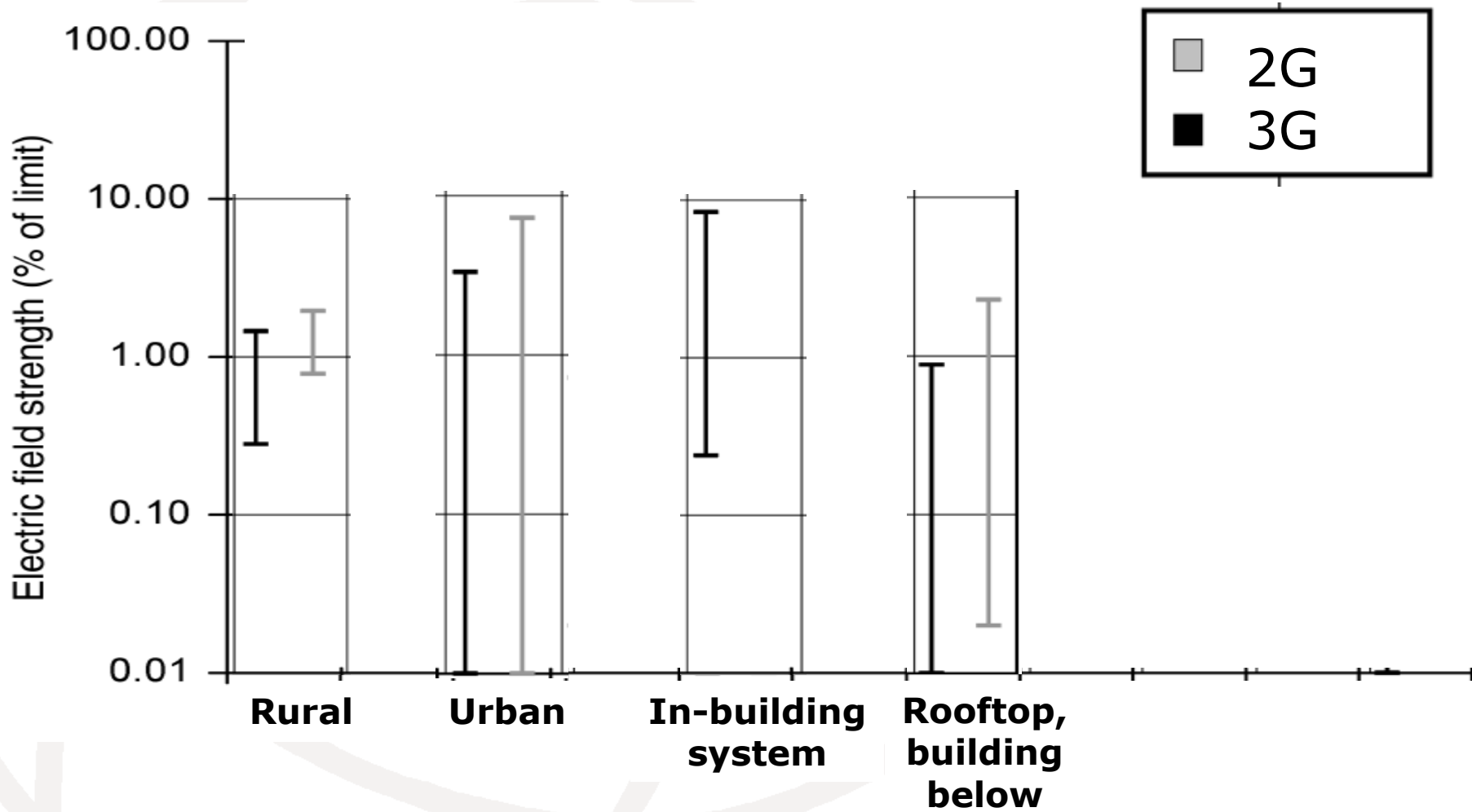
- Adaptive power control:
 - ➔ Phones are low power devices.
 - ➔ Lower power reduces interference.
 - ➔ Extends talk-time.



Many types of antenna sites

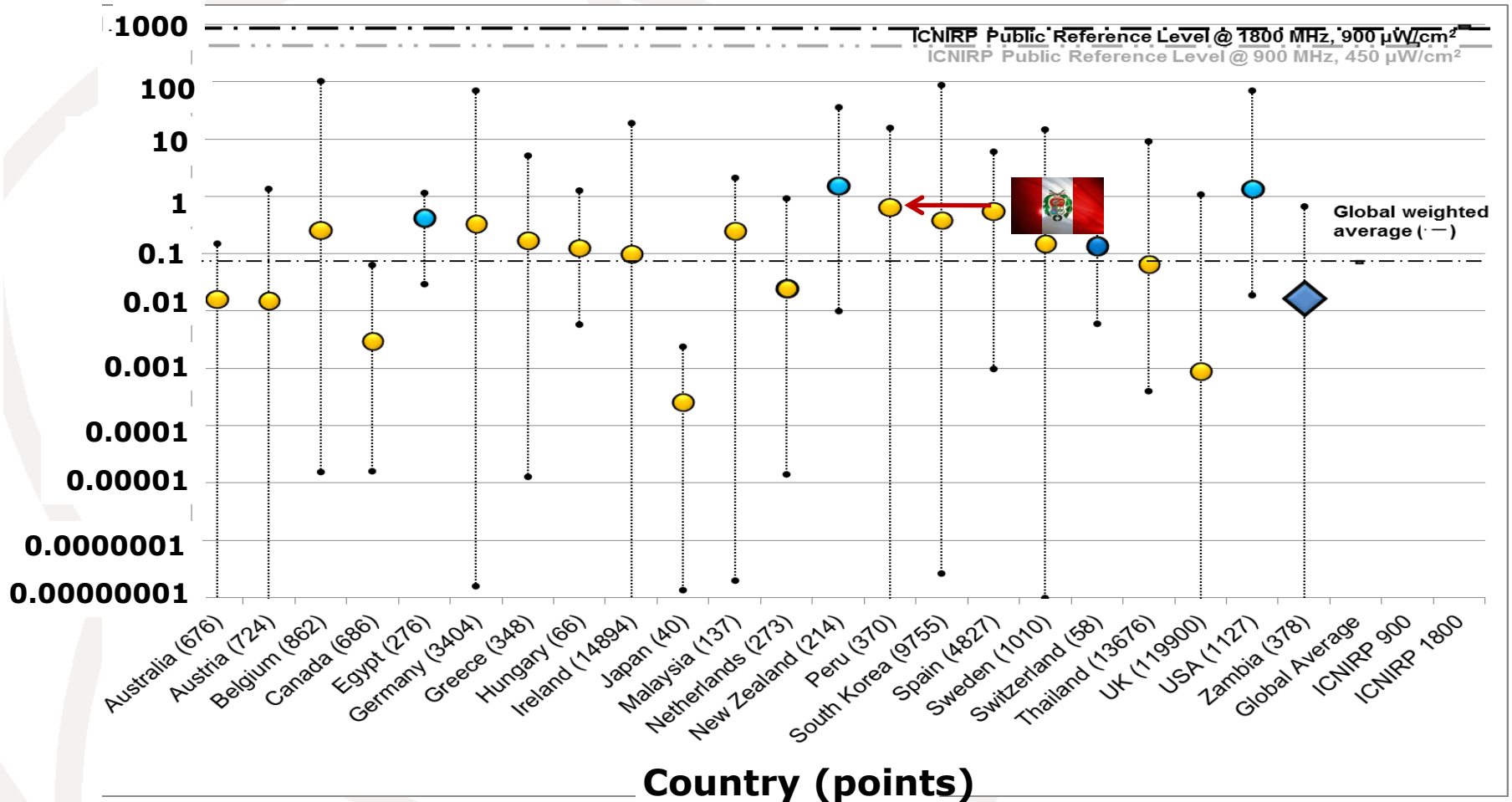


Exposures similar from all site types



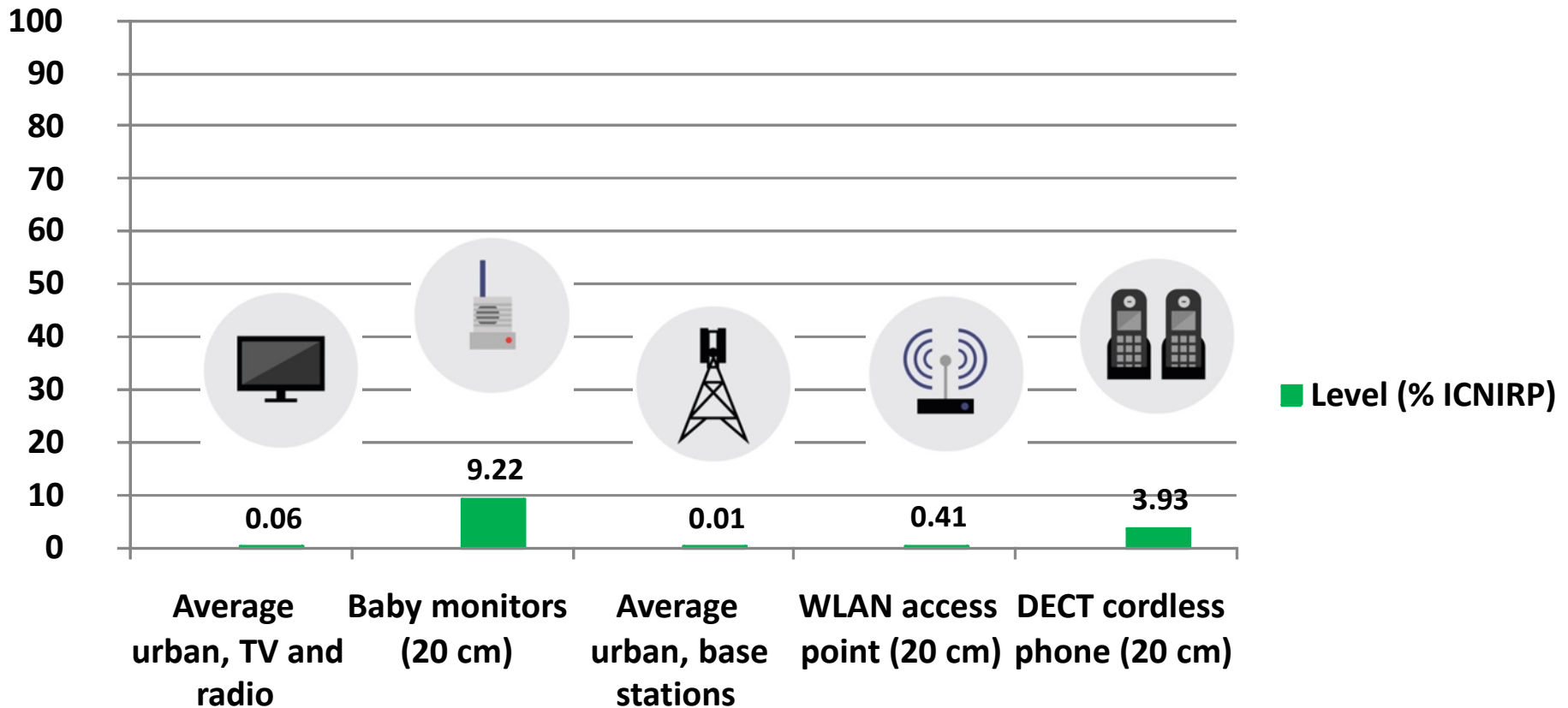
Exposure similar for all countries

Microwatts per square centimetre



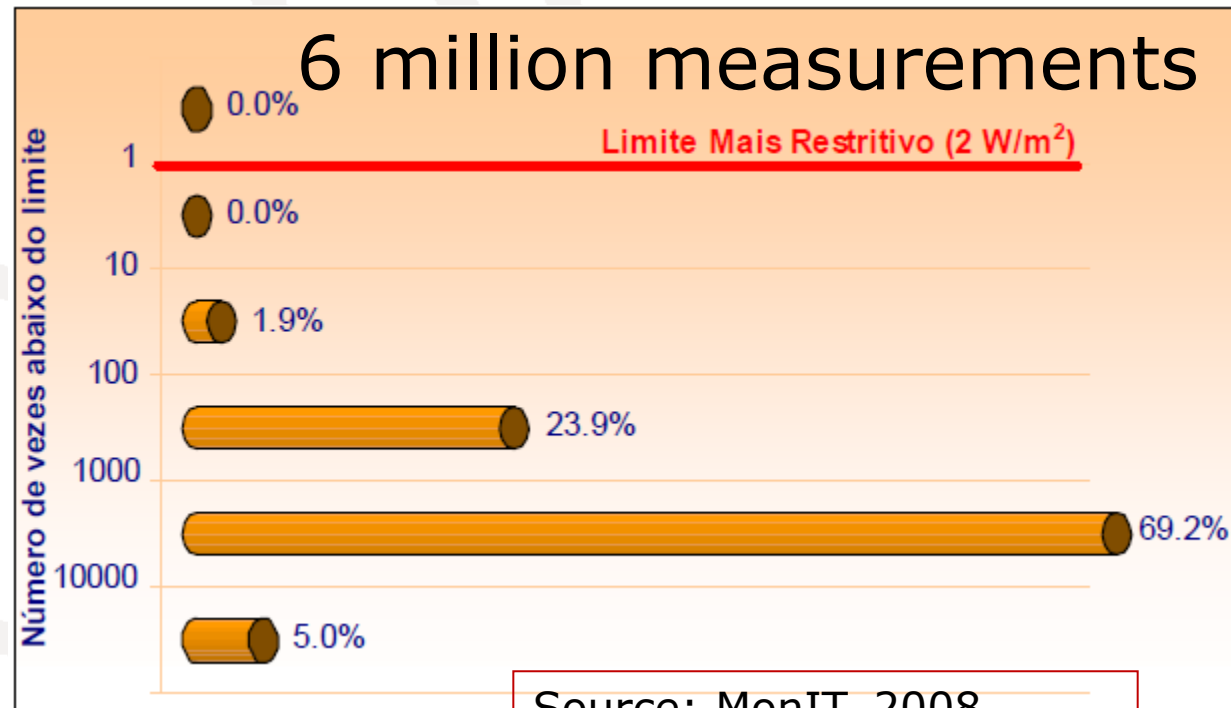
Global average more than 5,500 times below limit values.

Mobile network levels similar to other radio sources



Assessing compliance

- Operator declarations.
- Post-installation measurements.
- Sample audits.
- Monitoring.



Visual integration with environment



Lima, Peru, 10 December 2013

National policy for mobile networks

- Protects public and supports rollout.
 - Clear criteria for site assessment with national limits based on WHO recommendations.
 - Support municipalities with policy that specifies:
 - Information, consultation and design guidelines.
 - Mandatory decision period.
 - Simplified procedures for small cells and modifications.
 - Non-political decision making.
- Allow site sharing.
- Grant access to government facilities for antennas.

Some US initiatives on antenna siting

- FCC 'shot-clock' ruling (2009).
 - ➔ *90 days - co-location, 150 days - other.*
- Federal working group addressing access to government facilities.
- "Colocation by right".
 - ➔ *'...local government may not deny, and shall approve...modification...'*

Conclusions and Recommendations

Infrastructure rollout to support coverage and capacity hindered by non-evidence based concerns.



National governments can support through:

- Clear guidelines on visual integration requirements
- Mandatory decision period for site applications, harmonisation of municipal requirements
- Simplify procedures for small antenna, low power sites and modifications
- Helping operators to communicate WHO definitions to local communities



Muchas Gracias

- **Contact: Dr Jack Rowley**
- **Job title: Senior Director
Research & Sustainability**
- **email address:**
jrowley@gsma.com
- **Global:**
www.gsma.com/health
- Latin America**
www.gsma.com/latinamerica/gsma-latin-america-es/salud-y-moviles

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Health &
Environment

August 2013

Base station predictions overestimate exposure, Mobile makers warn of dangers with counterfeit devices, Israel to restrict Wi-Fi in schools, Media misinterpret saliva study linking mobiles and cancer, mobiles to receive environmental rating, Brussels to get 4G with safety standards and GSMA stress standards consistency in South America.



Government agree to new exposure standards to allow 4G in Brussels

Europe's strictest radiofrequency exposure

English | Español | Português

Quick Links

[Beware of sub-standard mobile phone batteries and chargers](#)



Latin America



Salud y Móviles en América Latina

La GSMA reconoce que hay preocupación pública acerca de la instalación de antenas y el uso de dispositivos móviles. Se trata de servicios de radio de baja frecuencia y la opinión de la GSMA, basada en revisiones científicas de expertos, es que no hay riesgos establecidos a la salud por la exposición a señales de radiofrecuencia de comunicaciones inalámbricas en los niveles recomendados por la Organización Mundial de la Salud (OMS).

Las ondas de radio son un tipo de energía electromagnética (o radiación electromagnética – EMR); formada por campos eléctricos y magnéticos desplazándose juntos a través del espacio. Las ondas de radio son no-ionizantes, lo que significa que no pueden transferir energía suficiente a una molécula para romperla o cambiar sus enlaces químicos. Por lo tanto, existe una clara diferencia respecto de la radiación ionizante, como los rayos X, que pueden separar los electrones de los átomos y las moléculas, produciendo cambios que pueden llevar a daños en los tejidos y posible aparición de cáncer.

Recursos Relacionados

[Las Redes Móviles Son Necesarias para Crear un Mundo Conectado - Video - GSMA](#)

[Seminario "Salud y despliegue de infraestructura en América Latina" del GSMA LA Plenary Meeting #39 – Presentaciones - GSMA](#)

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[Impacto de las políticas](#)