Global Telecom Challenges, Opportunities

for PTC Academy
Bangkok, Thailand

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Threats Sometimes are Hard to See

source: Insight Research
Need for Change Not Obvious, in Most of Asia
Mobile Data Will Help

In 2022, there will be 9 billion mobile subscriptions, 8.3 billion mobile broadband subscriptions and 6.2 billion unique mobile subscribers.

source: Ericsson
“Billions Who Never Made a Phone Call”

Figure 1 – A quarter century of talking. Global international telephone calls (billions of minutes)

Note: Traffic over public switched telephone network. The year 1999 is an estimate and 2000 is a forecast.
Soon, Basic Communications Will be Ubiquitous


source: ITU
We Now Connect the World

North America, 266 billion EUR
- Mobile revenues: 53%
- Data transmission/internet: 24%
- Fixed voice revenues: 23%

Europe, 298 billion EUR
- Mobile revenues: 53%
- Data transmission/internet: 25%
- Fixed voice revenues: 21%

Asia-Pacific, 346 billion EUR
- Mobile revenues: 64%
- Data transmission/internet: 28%
- Fixed voice revenues: 13%

Middle-East Africa, 84 billion EUR
- Mobile revenues: 76%
- Data transmission/internet: 10%
- Fixed voice revenues: 14%

World = 1,115 billion EUR

source: IDATE
Mobile Solved Voice Problem

Global ICT developments, 1998-2009

- Fixed telephone lines
- Mobile cellular telephone subscriptions
- Internet users
- Fixed broadband subscribers
- Mobile broadband subscriptions

Source: ITU
Next Challenge: Internet

Declining Cost of Global Communication and Growing Number of Internet Users

(source: Marilyn Hicks)
Mobile Mostly is the Answer for Internet

source: Ericsson
…Because Mobile Will be the Way Most People Connect to Internet

How the world talks—subscriptions per 100 people

- Mobile-cellular
- Fixed-telephone
- Mobile-broadband

Data: ITU

source: ITU
Revenue Increasingly Internet Access Driven

source: Informa

Source: Informa Telecoms & Media

source: Informa
“We used to be Facebook”

Now telecom is becoming something else, and that is the problem to be solved.
Mission Statement

bring the world closer together
disruption
All Legacy Products Mature
So Do Networks

4G and 4.5G are bringing the next uplift of growth

Today, Telecommunication industry is in data-centric world ...
MNOs to reinvent business model and build new engine for growth ...

SON: Self-Organizing Networks

source: Ali Saghaeian
So Business Model is Biggest Challenge
The More People We Connect

the more industry disruption there will be
Revenue Growth is Slowing, or Gone

source: GSMA Intelligence
ARPU is Falling

source: techneconomyblog
Broadband Price Compression

![Graph showing examples of declining broadband prices]

Sources: US Telecom analysis of Wells Fargo and Bank of America/Merrill Lynch reports (2010 data) and company websites (2015 data) for AT&T, Verizon, Comcast, Time Warner Cable, Sprint, and T-Mobile.

source: US Telecom
Voice Price Compression

source: Telegeography
Messaging Price Compression

Source: Analysys Mason
Telecom is Part of the Internet Ecosystem

source: Detecon
So Value/Power/Influence has Shifted

source: Creative Connectivity

PACIFIC TELECOMMUNICATIONS COUNCIL
Wi-Fi as the Access Layer?

- Products/services become features
- Telcos become “dumb pipes”
- Value migrates elsewhere
Consumers Often Expect “Near Zero” Pricing

source: Cisco
Without New Revenue Sources…

#TheFutureOfTelecom

source: Canonical
ARPU Falling

Average revenue per user in the telecom industry is falling in virtually every region

Source: Strategy& research and analysis

source: strategy &
No Growth

Telecommunication revenues, world and by level of development

Global telecommunication revenues declined by 4% between 2014 and 2015, falling back to USD 1.9 trillion.

Developing countries saw a compound annual growth rate in telecommunication revenue of 6.6% in the period 2007-2015, whereas developed countries experienced a contraction of -0.8% during the same period.

Developing countries are home to 83% of the global population but generate only 39% of the world's telecommunication revenues.

Source: ITU.
But How Much? (Except India, China)?

source: Point Topic
Look at the Top Line

Service Revenue by Generation

Source: Wireless Operator Strategies (WOS)

source: Strategy Analytics
Subs Up, ARPU Down

Figure 1: Base Line Analysis of Global Mobile Subscriber Growth, ARPU & Operator-Billed Service Revenues 2015-2022

Source: Juniper Research
Profit is an Issue

ARPU by Generation & Device Type

Source: Wireless Operator Strategies (WOS)

Source: Strategy Analytics
Value of “Access” Drops 50% in 5 Years

Internet value chain size and growth by segment

<table>
<thead>
<tr>
<th>Year</th>
<th>Content rights</th>
<th>Online services</th>
<th>Enabling technology and services</th>
<th>Connectivity (Internet related)</th>
<th>User interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>35 (3%)</td>
<td>509 (41%)</td>
<td>159 (13%)</td>
<td>226 (18%)</td>
<td>309 (25%)</td>
</tr>
<tr>
<td>2015</td>
<td>1,637 (47%)</td>
<td>373 (11%)</td>
<td>377 (11%)</td>
<td>813 (23%)</td>
<td>1,289 (22%)</td>
</tr>
<tr>
<td>2020f</td>
<td>3,063 (52%)</td>
<td>577 (10%)</td>
<td>816 (14%)</td>
<td>577 (10%)</td>
<td>104 (2%)</td>
</tr>
</tbody>
</table>

CAGR 2008–2015: 16%

CAGR 2015–2020f: 11%

Note: Includes restatements of 2008 data to 2015 structure to enable comparability.
Source: A.T. Kearney analysis
All Products Have Life Cycles

We can categorize Operator existing products into four phases

- **Introduction**
  - Product entry to the market
  - Customers start to attempt the product

- **Growth**
  - Product confirm by the market
  - Number of subscribers accelerating growth

- **Maturity**
  - Product accepted by the market
  - Growth rate slowing down

- **Decline**
  - Targeted market saturated
  - Start to replace by substitute

Bubble size denotes revenue

Source: Product Life Cycle Theory

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Avoid This!

source: Dr. Joko Suryana
THANK YOU