The business formerly known as Wholesale
The reality of the business formerly known as wholesale.
Carrier selfie

Target market
- Fixed operators
- Mobile operators
- OTTs
- Quad-players
- MVNO
- Content providers

Business model
- Per minute
- Per MB
- Per port
- Port utilization

Technology
- TDM moving to IP
- LTE
- NFV
- Cloud

Services
- Voice
- Messaging
- Signalling
- Capacity
- IP transit
- Value added services

Connectivity
- Low margin
- Basic services
- Unsecure
- Declining

Interworking
- Low differentiation
- Consolidating
- High competitive
VOICE
KEEP CALM
I'M NOT DEAD YET
International voice traffic types

Wholesale cloud

MNO

FNO

Wholesale input traffic

International traffic

Wholesale reported traffic
International voice traffic growth trends

- World Int’l: 4.2% in 2014e, 2.1% in 2015F, -2.7% in 2019F
- World input wholesale: 4.2% in 2014e, 2.1% in 2015F, -2.7% in 2019F
- World reported wholesale: -2.7% in 2014e, 2.1% in 2015F, -2.7% in 2019F

Source: HOT TELECOM's report on the Future of Int'l Carriers
International voice traffic trends

Source: HOT TELECOM's report on the Future of Int'l Carriers
The perfect storms
End-user needs

Security

Competitors

Coverage & speed

Services

Everything free

Security

Control

Technologies

Everything free
Carriers’ roadmap up the value chain

<table>
<thead>
<tr>
<th>Role</th>
<th>Connectivity</th>
<th>Interworking</th>
<th>Information</th>
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<td>Mantra</td>
<td>Reach Price</td>
<td>Reach Capacity Price Interoperability</td>
<td>Innovation Monetization Simplification Quality/Security</td>
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<td>Why</td>
<td>Communicate</td>
<td>Communicate + Entertain</td>
<td>Communicate + Entertain + Control</td>
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<td>How</td>
<td>TDM</td>
<td>TDM + IP</td>
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<td>Voice</td>
<td>Voice + data</td>
<td>Data + analytics + security</td>
</tr>
<tr>
<td>Past</td>
<td></td>
<td>Present</td>
<td>Future</td>
</tr>
</tbody>
</table>

Past: Voice
Present: Voice + data
Future: Data + analytics + security
THE BIG BANG

Of the business formerly known as wholesale
Service evolution
Where is the growth and the value?

Usage growth

Time

NOW

Communication era
Entertainment era
Digital lifestyle era

Voice
SMS
Internet / data
Content
Digital/IoT
Creation of a new wholesale reality

**Control**
- Traditional business
  - Incremental change
  - Minimize risk
  - Optimize revenue
  - Stable
  - Structured

**Agile**
- New reality
  - Innovation on a grand scale

**Freedom**
- Start-ups
  - Trial & error
  - Risk taking
  - Optimizing subscribers
  - Growth
  - Nimble
Organisation evolution

✓ People
✓ Culture
✓ Structure
✓ Leadership
THE FUTURE
Of the business formerly known as wholesale
Wholesale evolution status

- **None**: Certain death
- **Starting**: Chance of success 30-50%
- **In progress**: Chance of success 60-80%
- **Advanced**: Chance of success 80-100%
I have seen the future and it will be…

Amazonized customer service

Uberized products

Twitterized culture

Googleized network

Virginized leadership

Princized evolution

Netflixized business model

Appleized marketing
‘The visionary starts with a clean sheet of paper, and re-imagines the world.’

Malcolm Gladwell
# Information of interest

<table>
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<tr>
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<tbody>
<tr>
<td>WP – VoWiFi and the carrier world</td>
<td><a href="http://www.hottelecom.com/white-papers/VoWiFi-roaming.html">www.hottelecom.com/white-papers/VoWiFi-roaming.html</a></td>
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