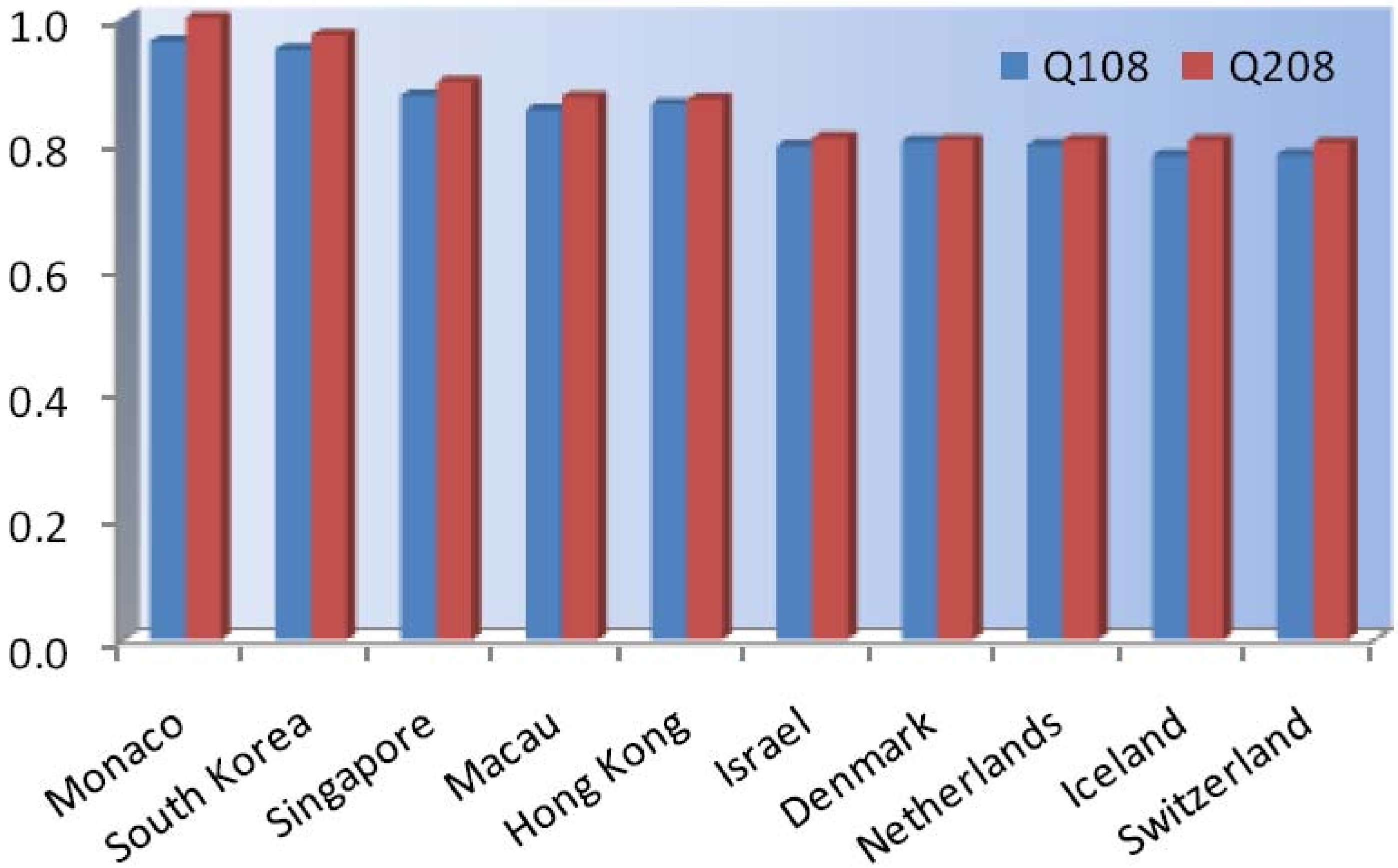
Asia broadband development
- a vision for Europe’s future?

Klaus Landefeld
eco Verband der deutschen Internetwirtschaft e.V.

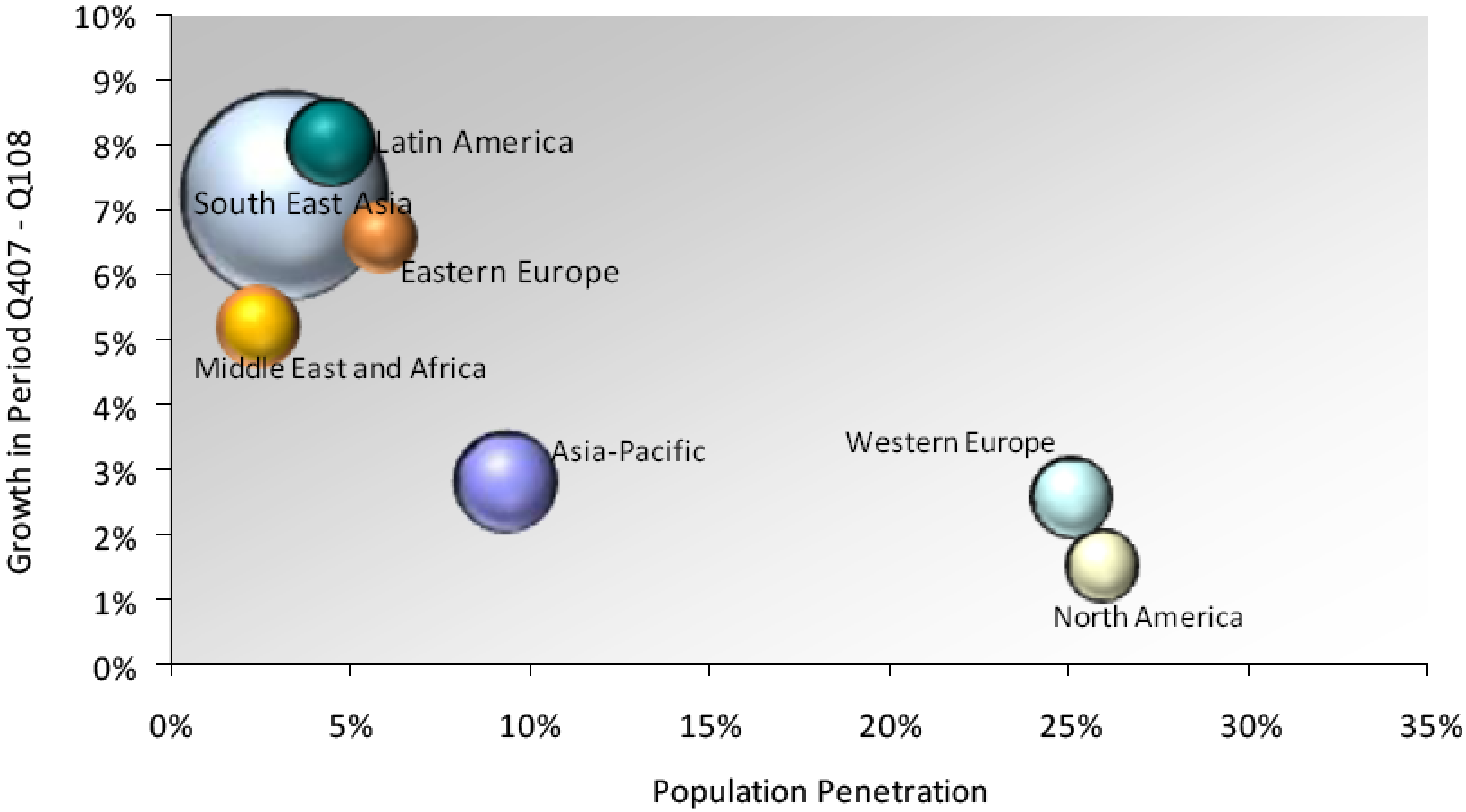
Motivation – Myth or Fact?

- **Asia - in particular, South Korea, Japan and Hong-Kong – seem to be leaping ahead in broadband useage**
- **FTTx - the development of mass market fiber networks – is lagging behind in Europe**
- **Asian Markets embrace "Broadband Culture" more rapidly**

Mind the gap – Top 10 countries by penetration Q2/2008



Are we falling behind? – Growth by region Q1/2008



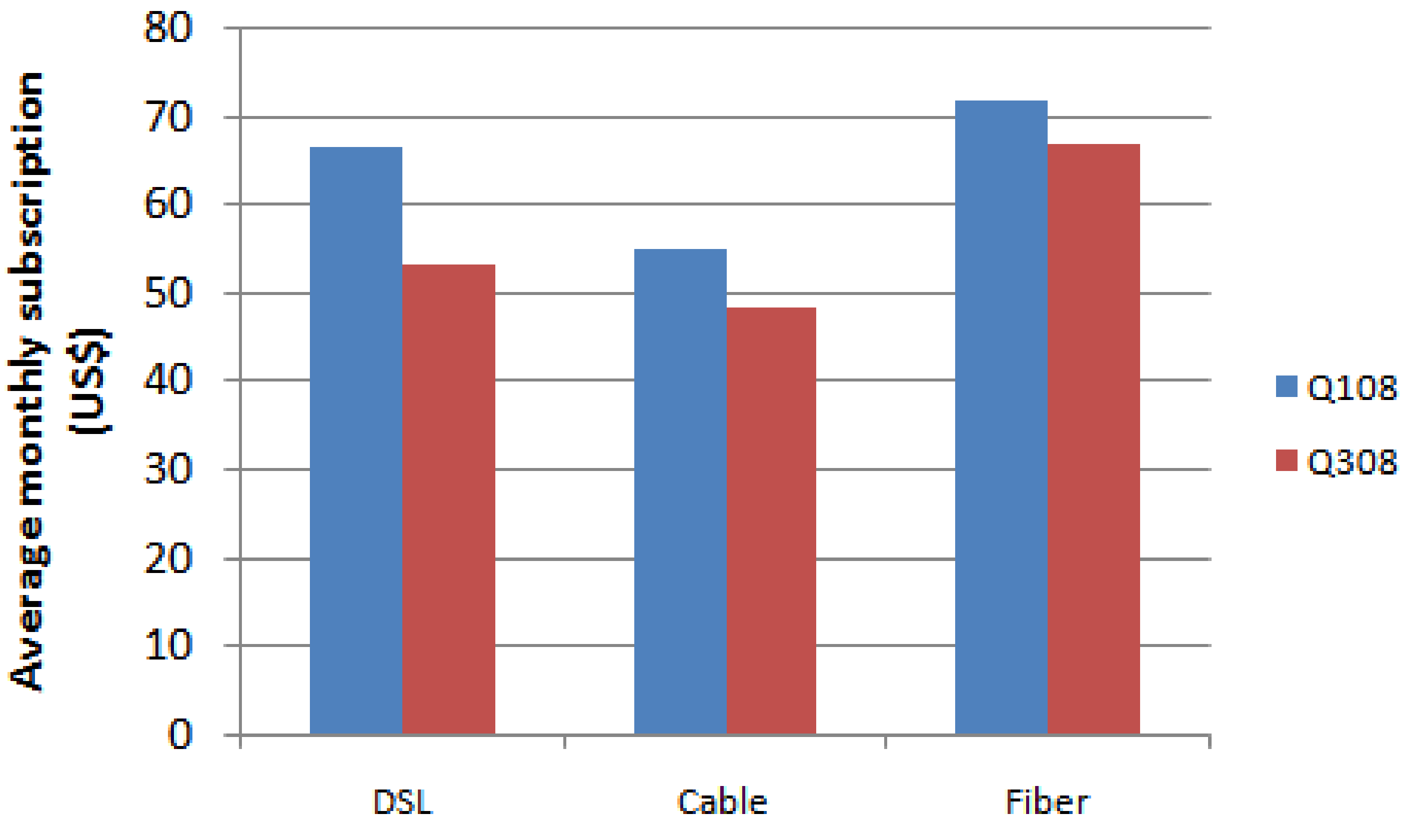
Are we falling behind? - A broadband scorecard

Ranking	Nation	Household Penetration	Average Speed/Mbps	Price per Mbps	Composite Score
1	South Korea	93%	49,5	0,37	15,92
2	Japan	55%	63,6	0,13	15,05
3	Finland	61%	21,7	0,42	12,20
4	Netherlands	77%	8,8	1,90	11,77
5	France	54%	17,6	0,33	11,59
6	Sweden	54%	16,8	0,35	11,53
7	Denmark	76%	4,6	1,65	11,44
8	Iceland	83%	6,1	4,93	11,20
9	Norway	68%	7,7	2,74	11,05
10	Switzerland	74%	2,3	3,40	10,78
11	Canada	65%	7,6	3,81	10,61
12	Australia	59%	1,7	0,94	10,53
13	UnitedKingdom	55%	2,6	1,24	10,30
14	Luxembourg	56%	3,1	1,85	10,25
15	United States	57%	4,9	2,83	10,25
16	Germany	47%	6,0	1,10	10,17
17	Belgium	57%	6,3	3,58	10,17
18	Portugal	44%	8,1	1,24	10,15

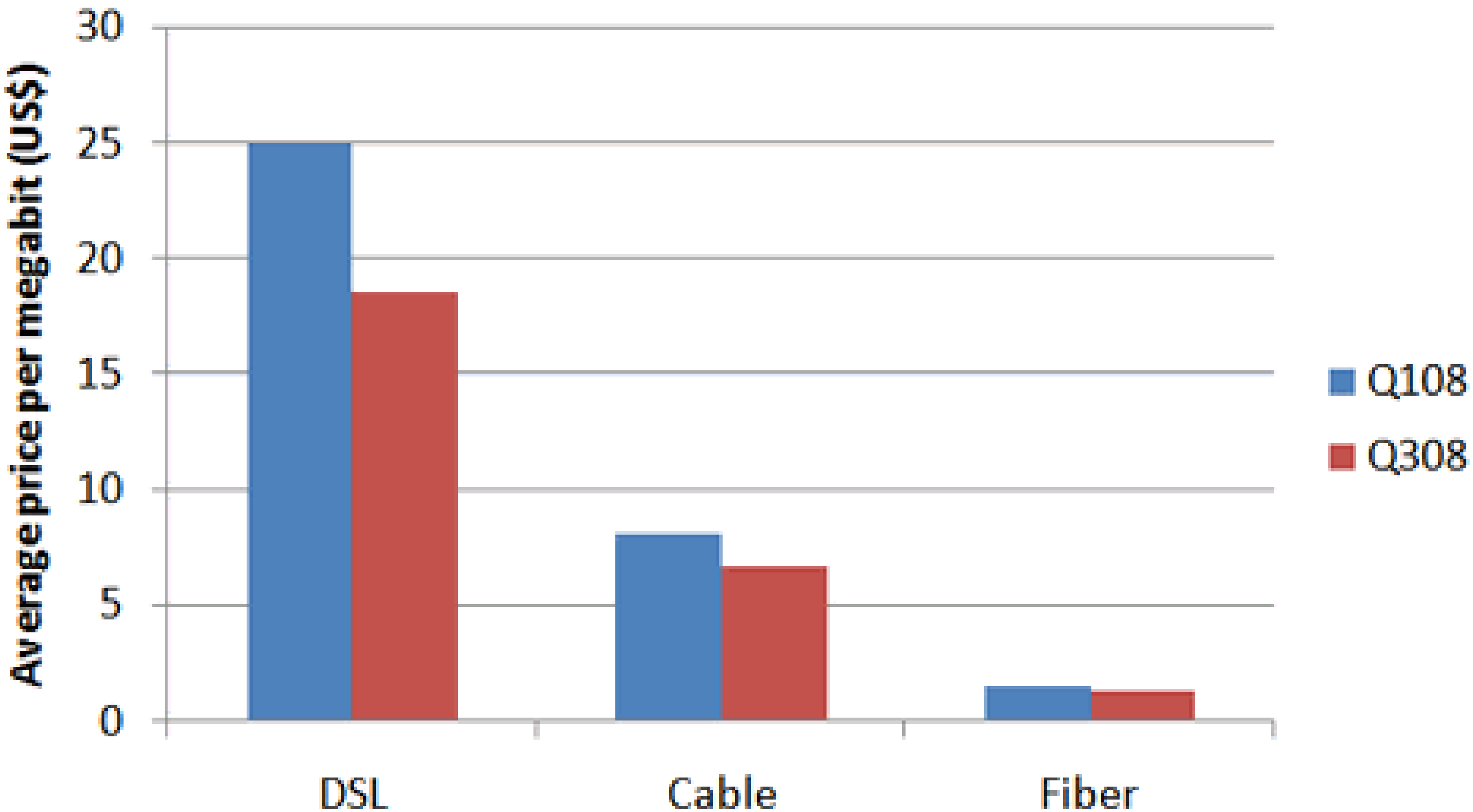
The Infrastructure Driver

- Availability of Broadband is a natural key to adoption
- There are significant differences depending on region
- While Regions vary significantly, it’s really in the country

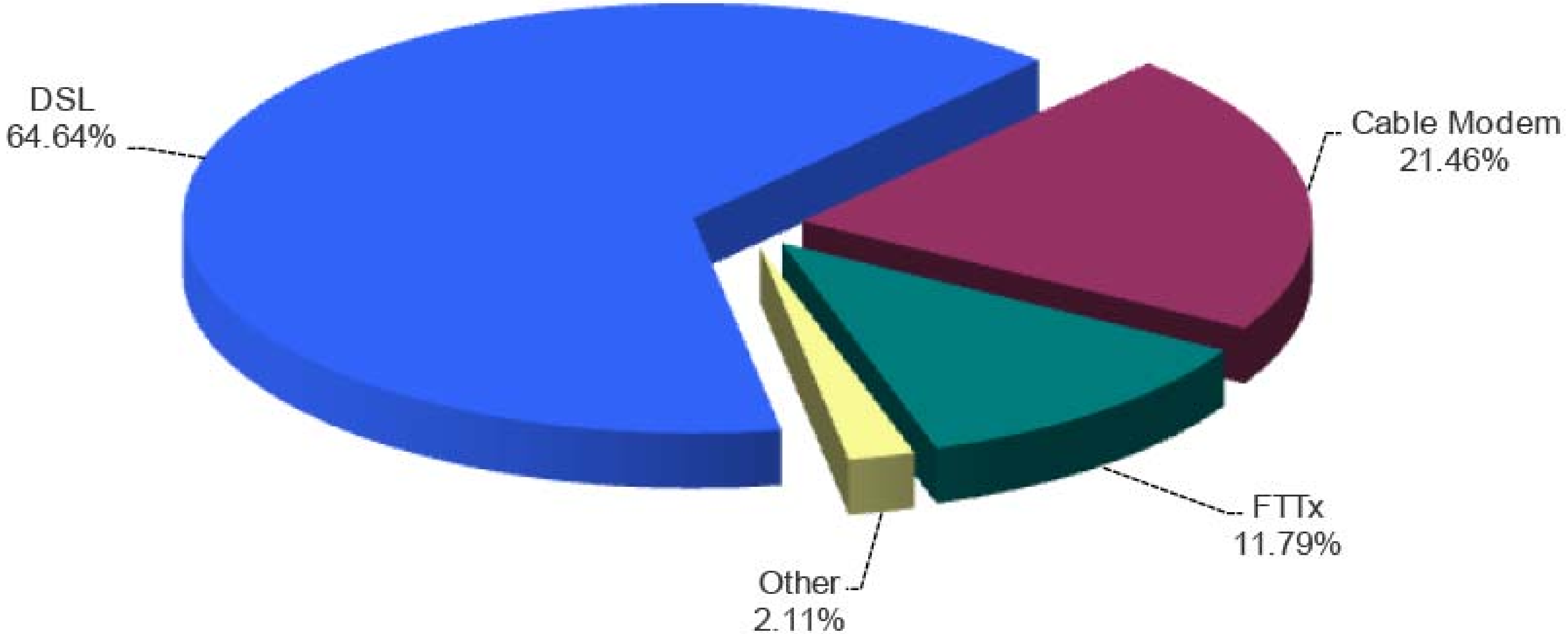
Infrastructure – Subscriber Cost by Technology



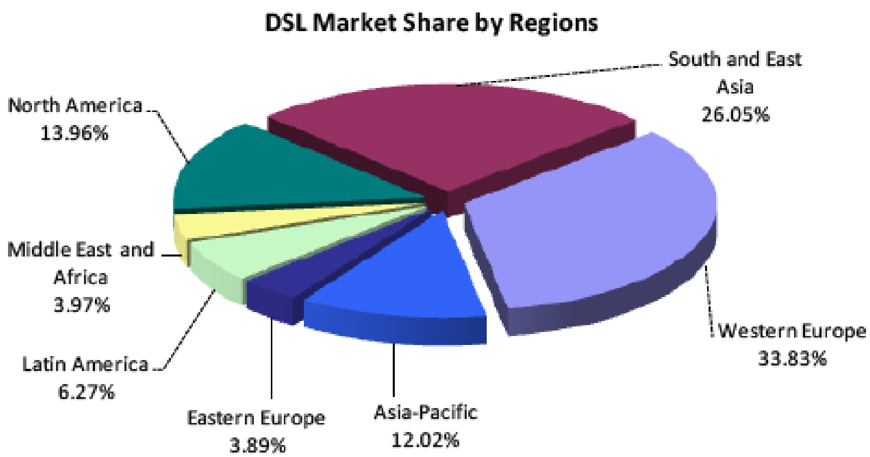
Infrastructure – Price/Technology Comparison

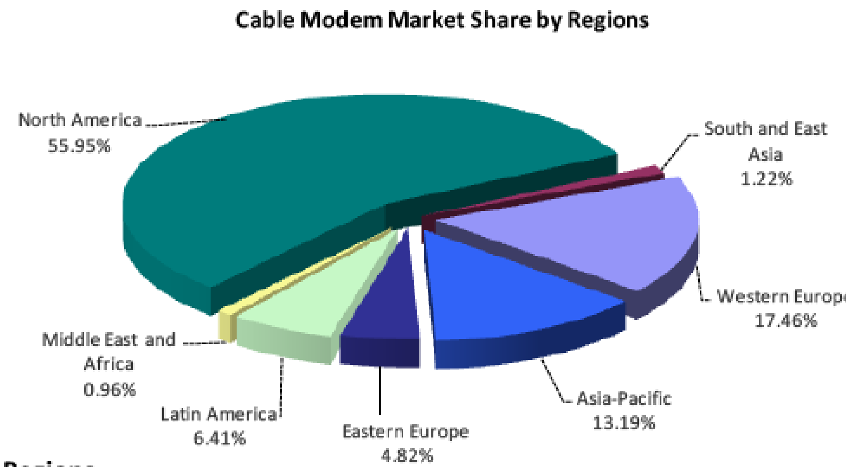


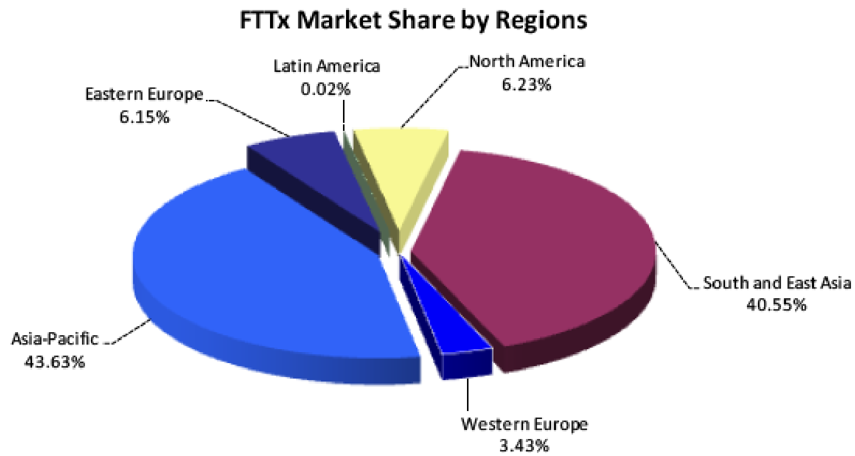
Infrastructure – Worldwide Share of Technologies



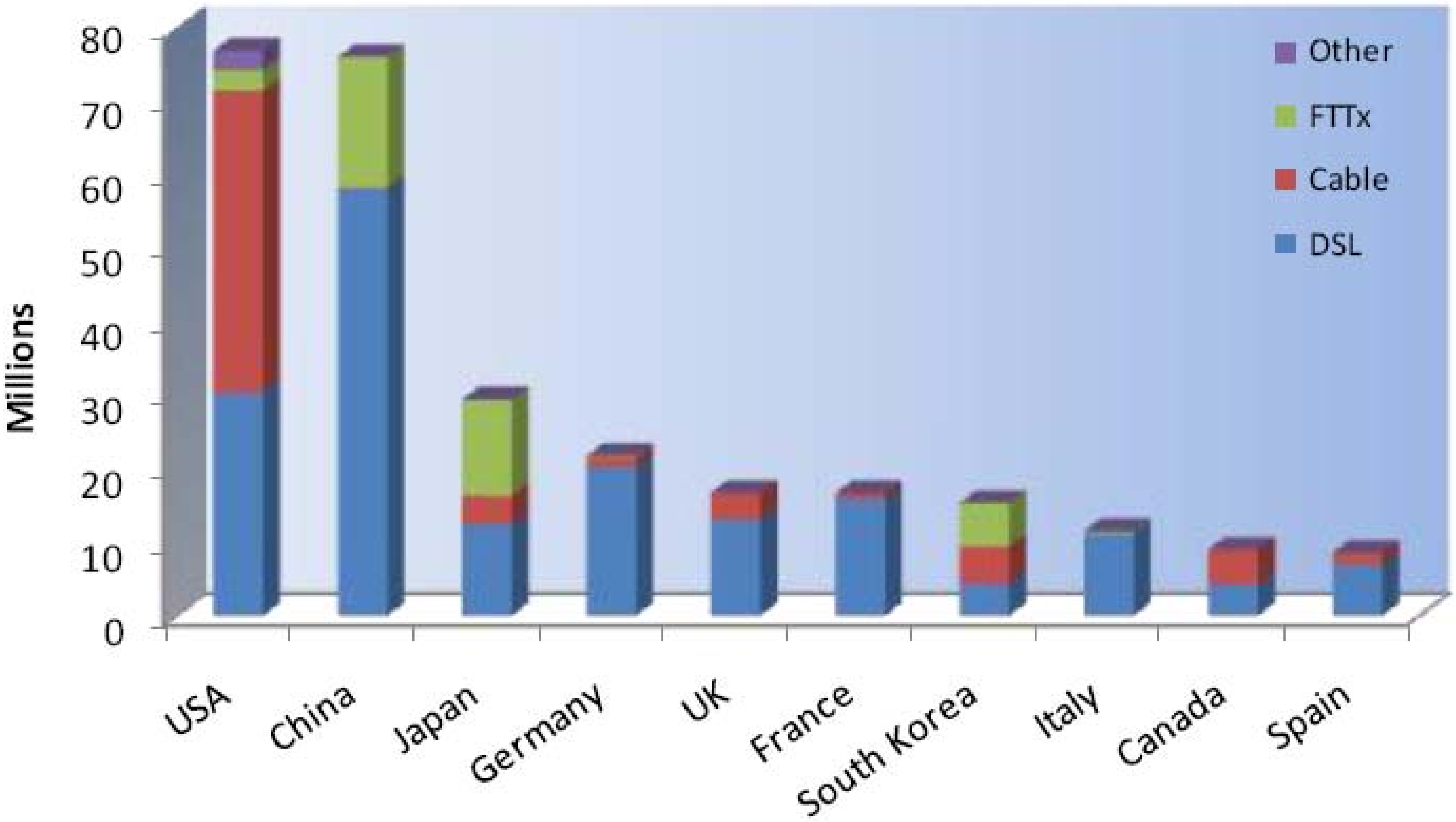
Infrastructure – Share by Region







Infrastructure – Technology Adoption by Country



Market approach differences

- In Japan and South Korea, most Lines are “bandwidth only”
  - Services are sold separately, often by third parties
- In Hong Kong, the driver is ubiquitous access
  - services are sold separately, not bundled
  - applications drive broadband adoption
- In Europe and North America, bundled services are the rule
  - Access and Services as a package are sold at high discounts
  - One-Stop shopping with closed networks

Killer Applications?

- **Why do we search for a “Killer Application” to promote broadband adoption?**

"The killer application of the Internet is speed“
"The money is in the pipes"

Lee Yong Kyung, CEO Korea Telecom

Real usage patterns

- **South Korea – Games, Chat, Digital Live**
- **Japan – Games, VoD, IPTV**
- **Hong Kong – Sports, Gambling, Games**

- **Europe – is it really VoIP ?**

But is it really Asia?

- **Stringent, long-term policy required (10 Years)**
- **All countries “on top of the curve” have adopted a policy already in the last millenia**
- **Significant investment put forward, but deemed to be profitable – i.e. NTT has invested over USD 200.0 Mrd. in fibre deployment in the last 8 years, KT has invested USD 58.3 Mrd. in the last 5 years for the Broadband Convergence Network.**
- **Expectations differ:**

  “A major reason why Japan leads the world in high speed fiber-optic deployment is that its companies…face significantly less pressure from capital markets for short-term profits”

  R.D. Atkinson, ITIF
- **Sweden, France and Switzerland are good case studies for successful adoption within Europe**

How to drive further broadband adoption

- NIDA – “National Internet Develoment Agency” if fighting “digital illiteracy” in South Korea, with programs to bring housewives and elderly people on-line
- Almost universal adoption in age groups 40 and below drives further growth, both in age as well as ubiquitous usage – this is a pattern observed worldwide

- In Sweden, 200 fibre networks in 100 cities are state-owned, lines are rented as unbundled “naked fibre” to network operators, spurring competition
- In Japan, fiber unbundling is enforced since 2003. Government subsidies for development in rural areas is only granted to companies offering unbundled services to competitors

The way ahead

- **Developing a “Broadband Culture” is required to form an information society, and requires a clear policy**
- **Infrastructure investments are difficult to calculate in a 5 Year term, a typical problem in Europe & North America – the state might help through carrier-neutral infrastructure**

- **Learn to adopt “the power of the internet” as key to a digital culture:**
  - a digital society should rely less on delivery of centrally generated, existing media content
  - it is defined by “live” content from blogs, videos, games, etc. – in essence, a “Web 2.0” world
  - above all other, open and non-discriminatory networks are required to utilize this factor

Thank you for your attention

Klaus Landefeld
eco Verband der deutschen Internetwirtschaft e.V.
Lichtstrasse 43h
50825 Köln