

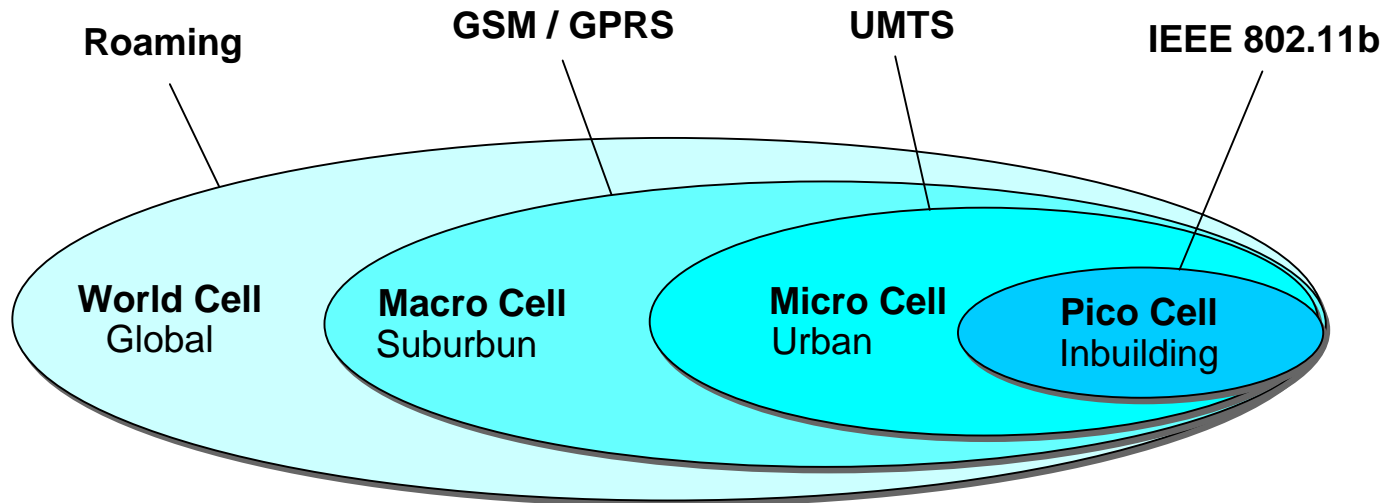
Case Study:
**Rollout of a nationwide
Public Wireless LAN Service**

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Agenda

- **Positioning and Differentiation of 802.11**
- **Market Solution Approach of a Mobile Operator**
- **Project, Roll Out and First Experience**
- **The current planning of a possible Roadmap**

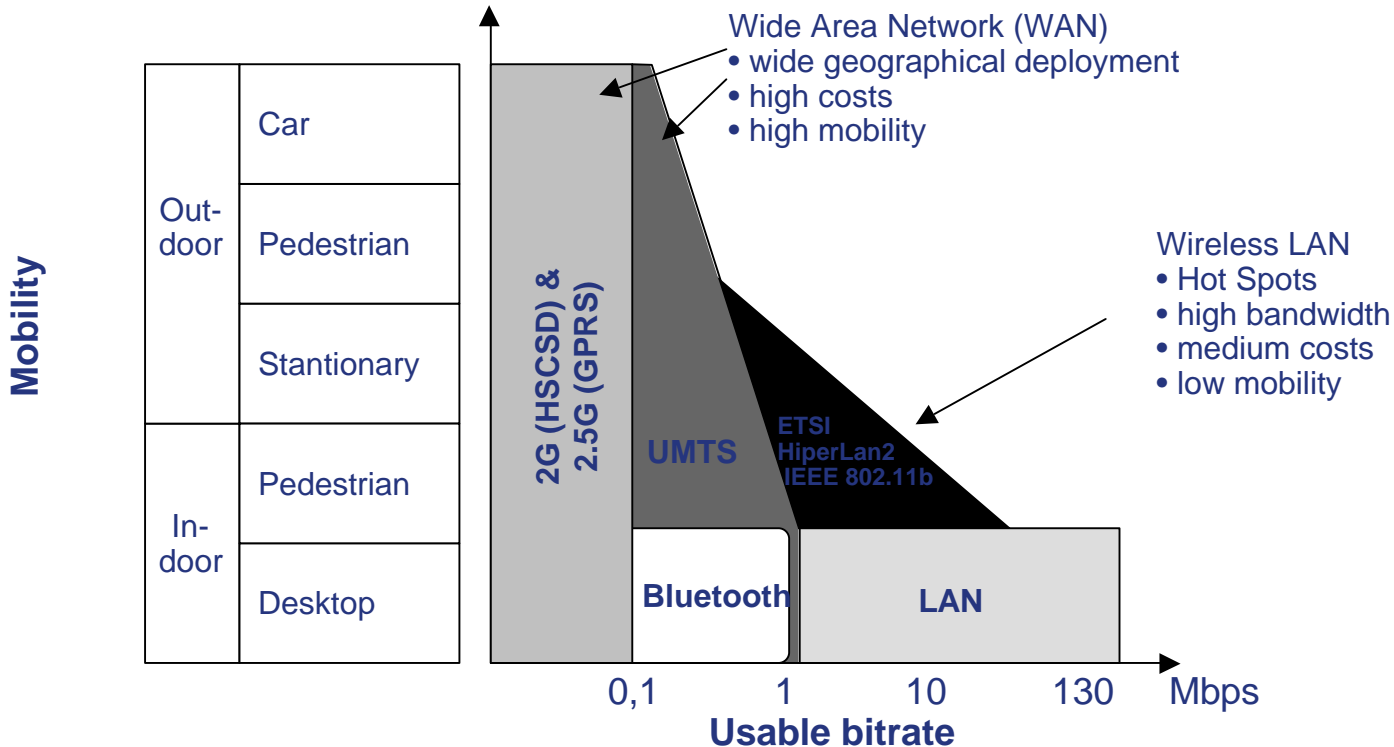
Positioning



- **802.11 is seen as a convergent technology to UMTS**
- **There is a market for technologies to continue to co-exist**
- **End user should not have to deal with access technology**
- **Seamless and unified mobile broadband access to services**
- **Wherever a customer moves**

Integration of a set from the Mix of Technologies ...

Development of wireless Broadband Technologies



Differentiation

WLAN-Application (% Market Size ¹⁾)	Description	Party with highest customer intimacy
Residential WLAN (19%)	Wireless extension of existing broadband access	Broadband ISP
Corporate WLAN (69%) -Own employees -Visitors / partners	WLAN as replacement for corporate LAN Cabling by corp IT dept.	Solution providers / System Integrator / MNO
Public WLAN (12%) -Publicly operated -Privately operated	WLAN operated for visitors of hotspot PMN or site owner ops.	Mobile Operator / System Integrator Resp. Site owner

- **Different types of WLAN: Private, Corporate and Public**
- **Primary Focus on PWLAN (for coverage reasons)**
- **Targeted Customer Segment – those who use CWLAN**
- **Best Value Proposition through unified, secure global single login across the three types of WLANs**

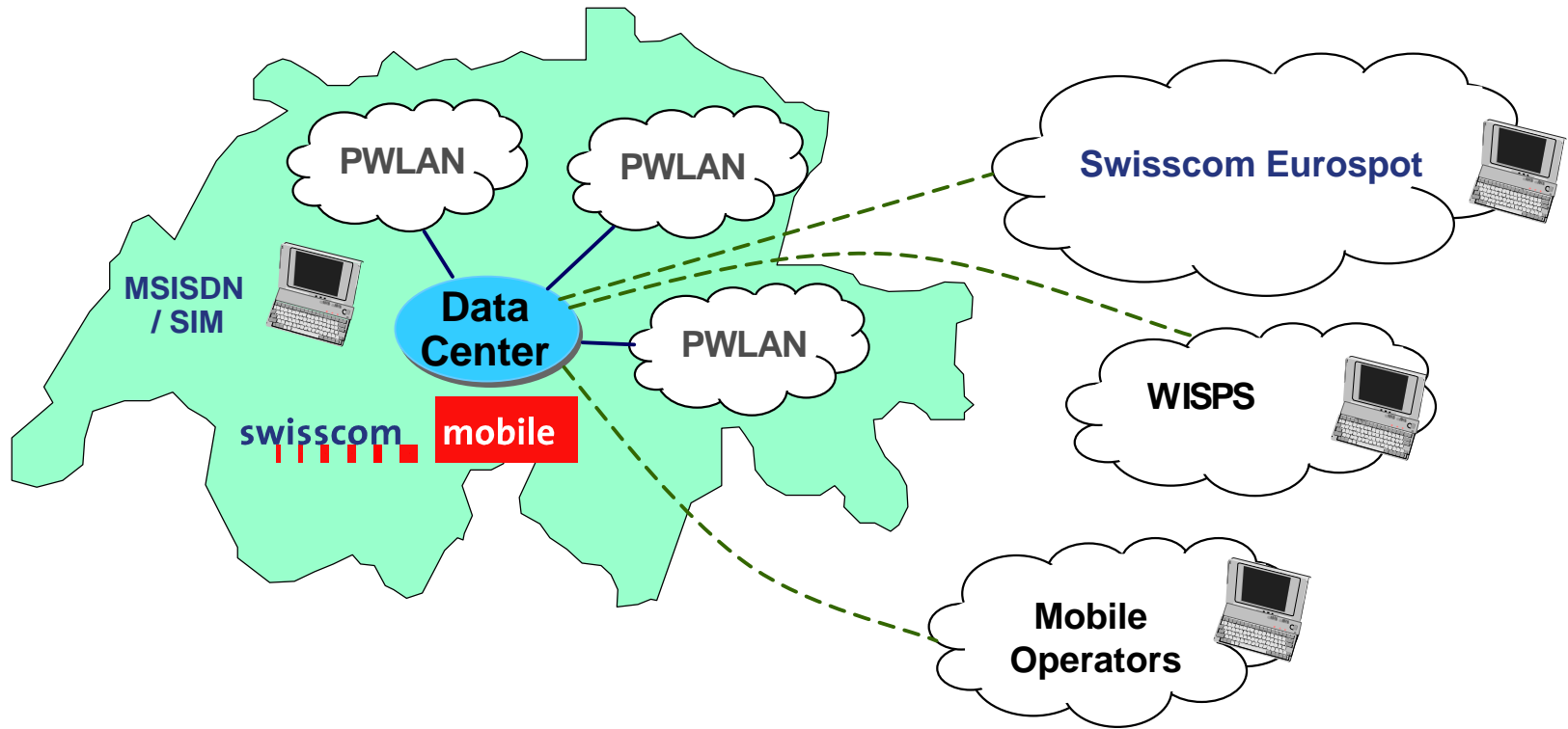
1) DC May 2002: Western Europe WLAN Market Forecast

Why should a MNO provide WLAN services

- **Technology:** Use as much radio technologies as valuable
- **Service:** Extension to existing Mobile Data Portfolio
- **Marketing:** Brand recognition, trust and customer ownership
- **Assets:** Leverage of large customer-base
- **Operations:**
 - Site acquisition expertise, teams and contacts
 - Existing GSM customer management and billing interfaces (for pre- and postpaid users), central authentication system
 - Field forces to build-up and operate a mobile data access network
- **Coverage:** Wide area coverage 'fall-back' supporting broader mobility needs and experience in roaming

Market Solution Approach of a Mobile Operator

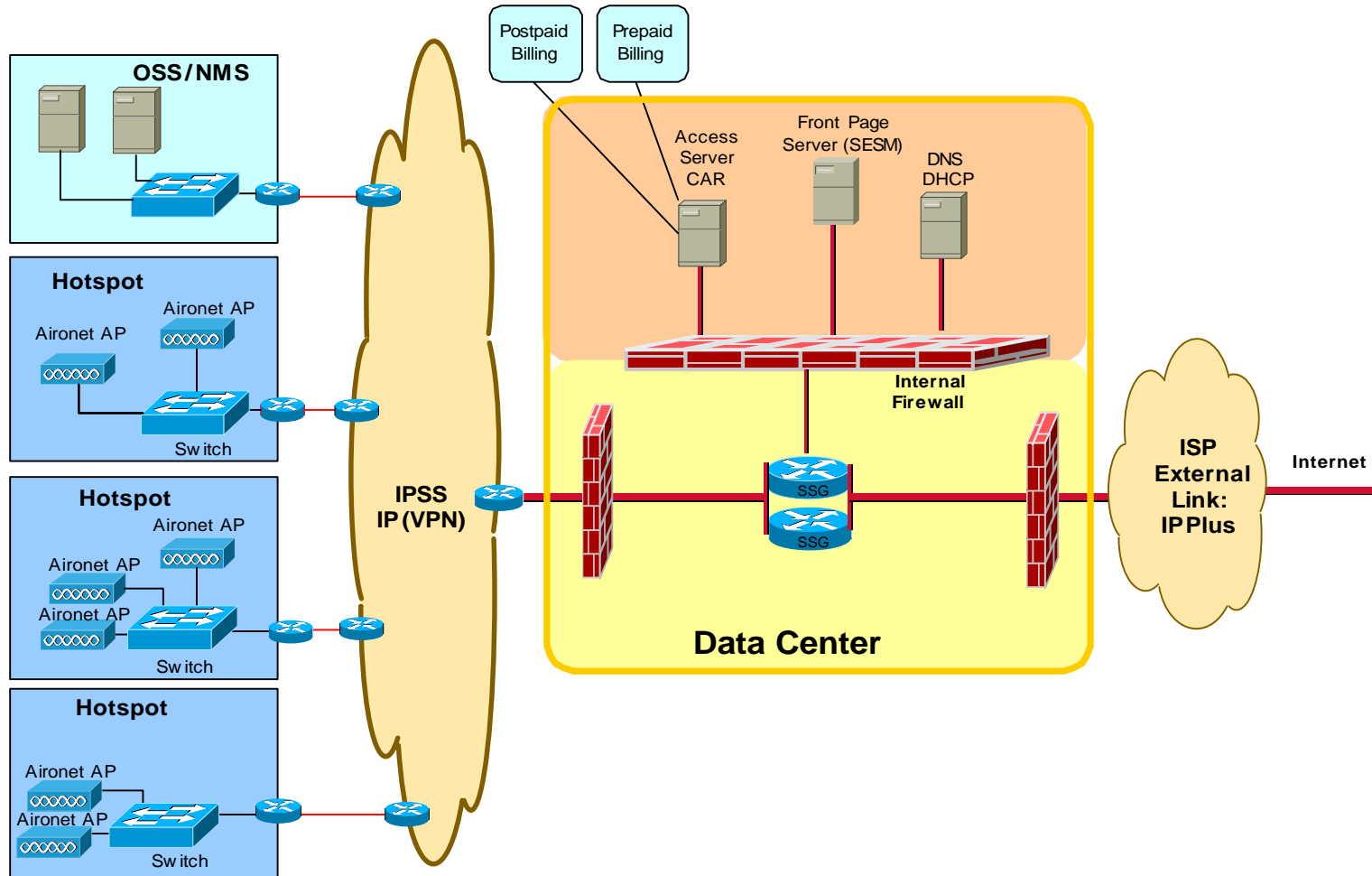
Basic Business Model



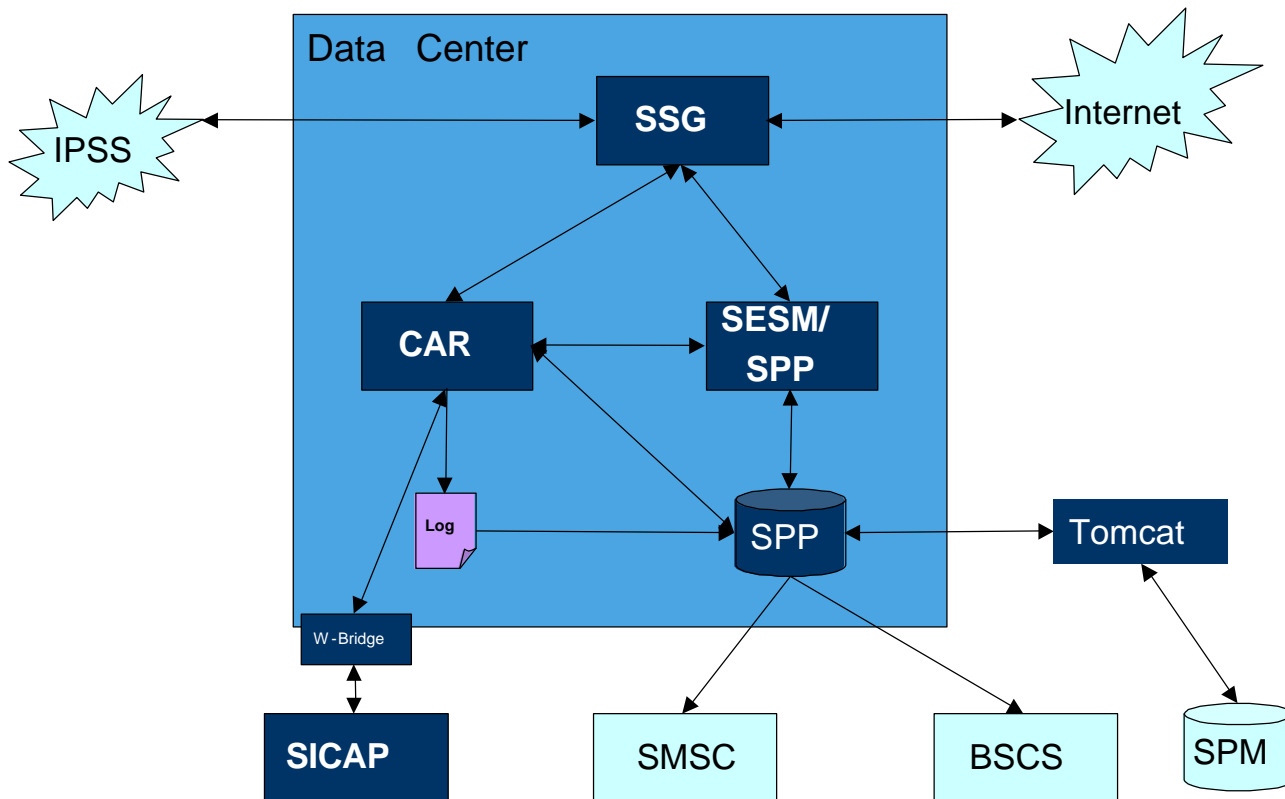
- Provide own service in Switzerland (MSISDN / SIM related)
- Roaming with other partners abroad (in definition)
- In the future: Integrate Corporates into the Model

The current technical Solution (1)

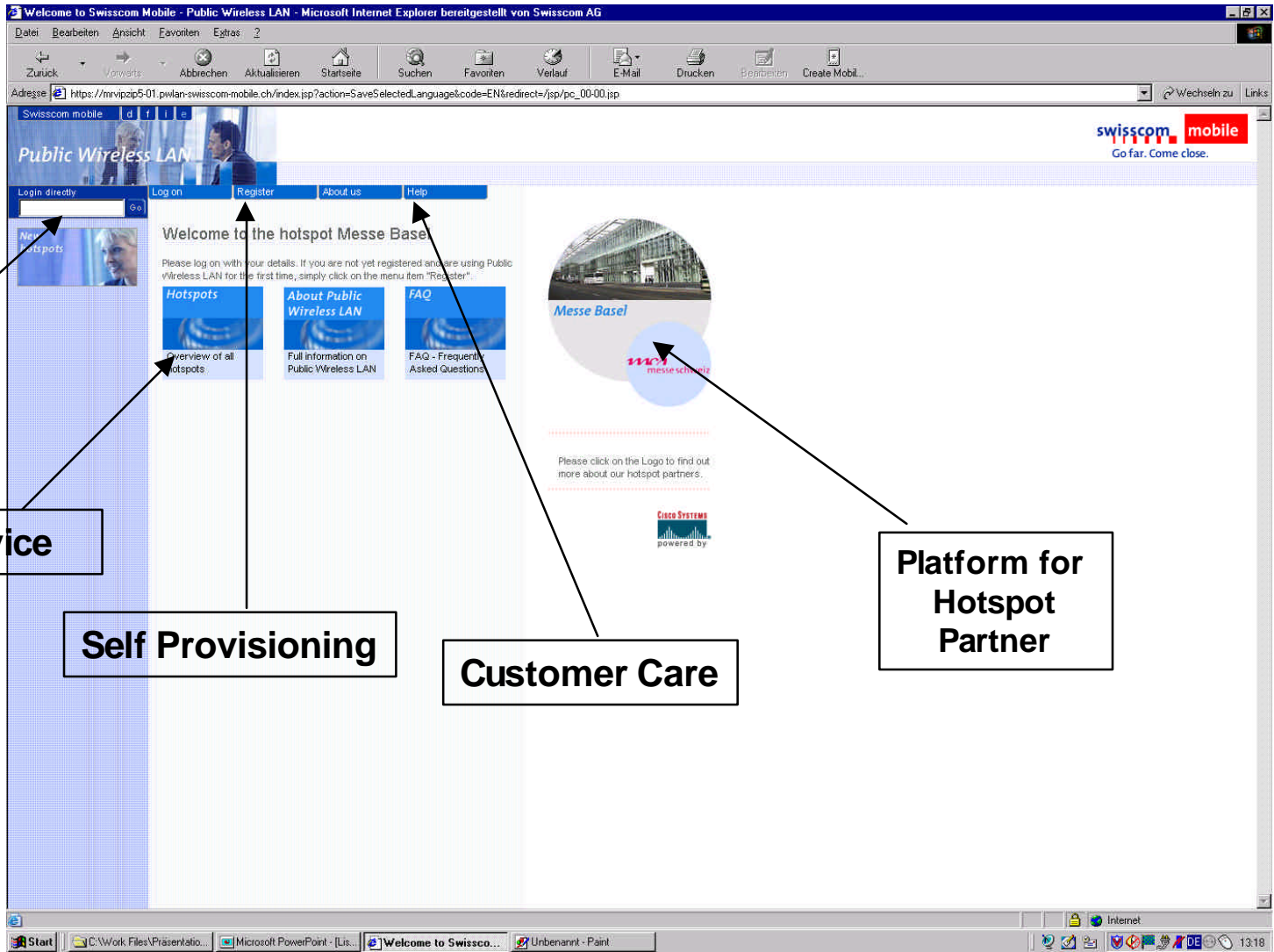
Public Wireless LAN Swisscom Mobile



The current technical Solution (2): Data Center



Customers Perspective: Entry page



Login

Service

Self Provisioning

Customer Care

Platform for Hotspot Partner

2 End User Market Offerings

Postpaid

0.90/minute
max. 81.-/month,
no subscription

Billed with Natel®
Subscription

Prepaid

Value Card
(session based)
2h: CHF 19.-
24: CHF 48.-

Value Card

Professional technical Hotline 8-22 / 8-17 (Sunday closed)
first 5 minutes free, then CHF 2.-/minute

High-Speed Access

Hotspot Infrastructure

Project, Roll Out and First Experience



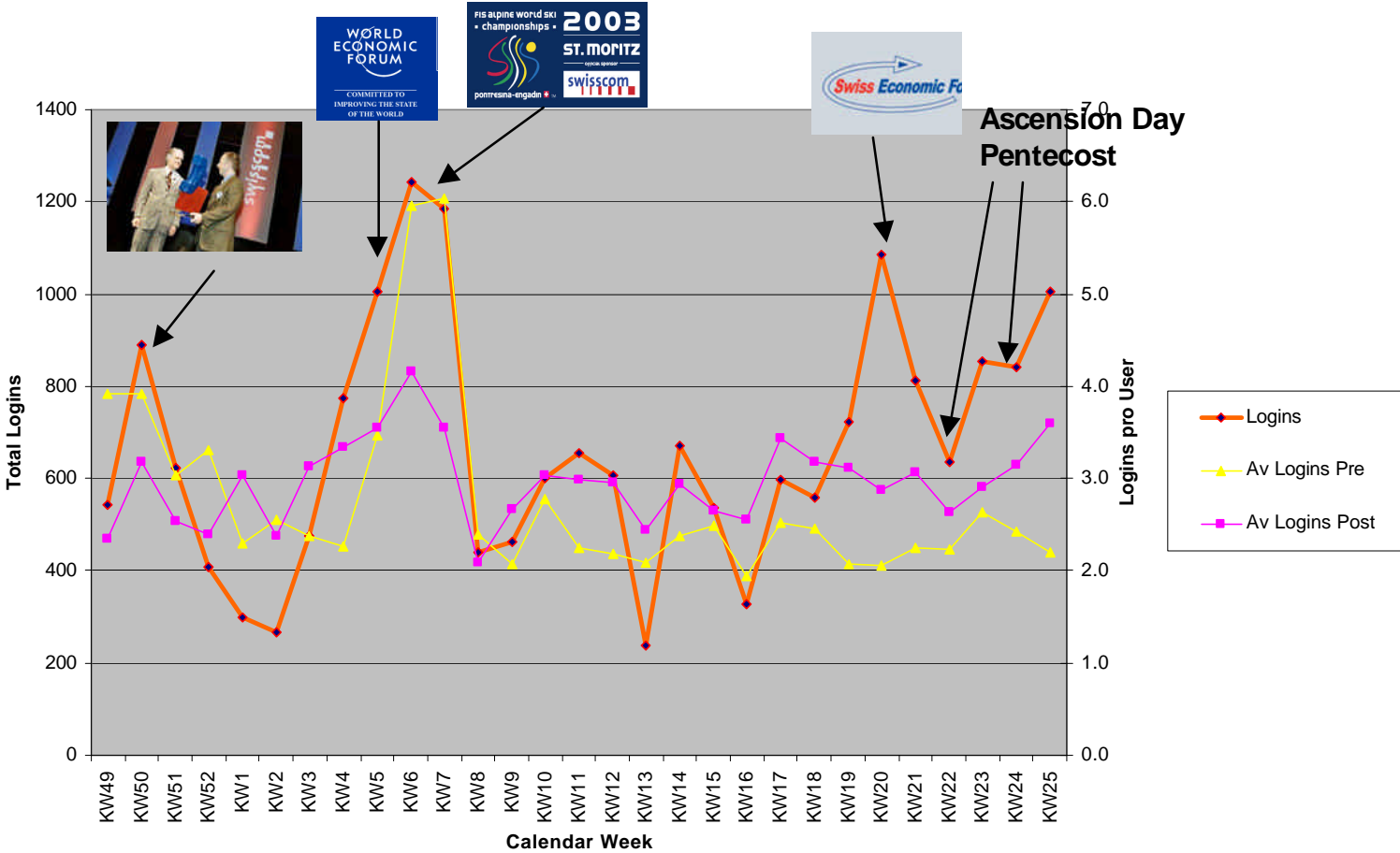
Swisscom Mobile Strategy

- Phase 1: focus on business customers (2003)
 - National Hotspot acquisition at business locations
 - Further at railway-stations, airports etc.
 - In parallel Eurospot activities
- Phase 2: mass-market (2004 at earliest)
 - possibly new product-mix (e.g. bundling offer)
 - > 500 Hotspots end 2006

Milestones Public Wireless LAN

- August 2001 decision to build the Public Wireless LAN service
- March 2002 first Media announcement
- April 2002 pilot network with 20 Hotspots
- September 24 announcement of Launch
- **December 2002 Service operational / launch**
- 100 Hotspots online in Switzerland by end of 2002
- Currently 350 under contract and 230 operational

Usage



- Equipped events seem to generate peaks
- Users who have used it once use it more and more

Profiles

It is still very early for clear statements about user profiles.

Av. Duration per Login Total	76 Mins
Av. Duration per Login < 81.-	10 Mins
Av. Duration per Login > 81.-	110 Mins.

- Journalists very event specific
- Consultants long online time

Locations

- Railway station Hotspot is highest used single location
- Congress Centers / Places with events generate peaks
- Airports and its hotels are regionally highest used areas
- Geographical ranking:
 - Zürich (43%), Bern (23%), Geneva (15%), Basel (10%), Davos (8%)

Some Learnings

- Only a few companies use Public Wireless LAN today:
 - availability of VPN access to the company network
 - awareness and knowledge
 - cost pressure
- Users don't want to miss the service after first use
- Even synchronized users stay online longer
- Users are willing to pay price premium for bandwidth
- Significantly higher login rate for postpaid users
- Obviously more national business users than intl. travelers
- Business users from all segments (Corps as well as SME)
- Steady but very moderate increase of service usage

Open topics

- Roaming expected to be as seamless as with GSM
- Market is not enough educated yet
- Better coverage of highways and railway stations required
- Hotspot recognition is very low
- Hotspot partners dislike prepaid cards

The current planning of the Roadmap

Outlook / roadmap

- ◆ Additional prepaid card levels
- ◆ Targeted no of operational swiss Hotspots in 2003: 350
- ◆ Public Wireless LAN roaming
- ◆ Credit card vouchers
- ◆ EAP SIM pilot
- ◆ Multiple provider platform
- ◆ Convergence with other access technologies (Hand-over)
- ◆ Integrated billing (for service rather than for access technology)

Thank you for your attention

