

# All IP

Is Swisscom ready to  
take up the challenge?

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# What does IP mean for Swisscom?

- New business model
- Investments in infrastructure
- Investments in services

## 1. Infrastructure

### a) Transmission-Networks

- Current
- Future

### b) Access, in particular VDSL2

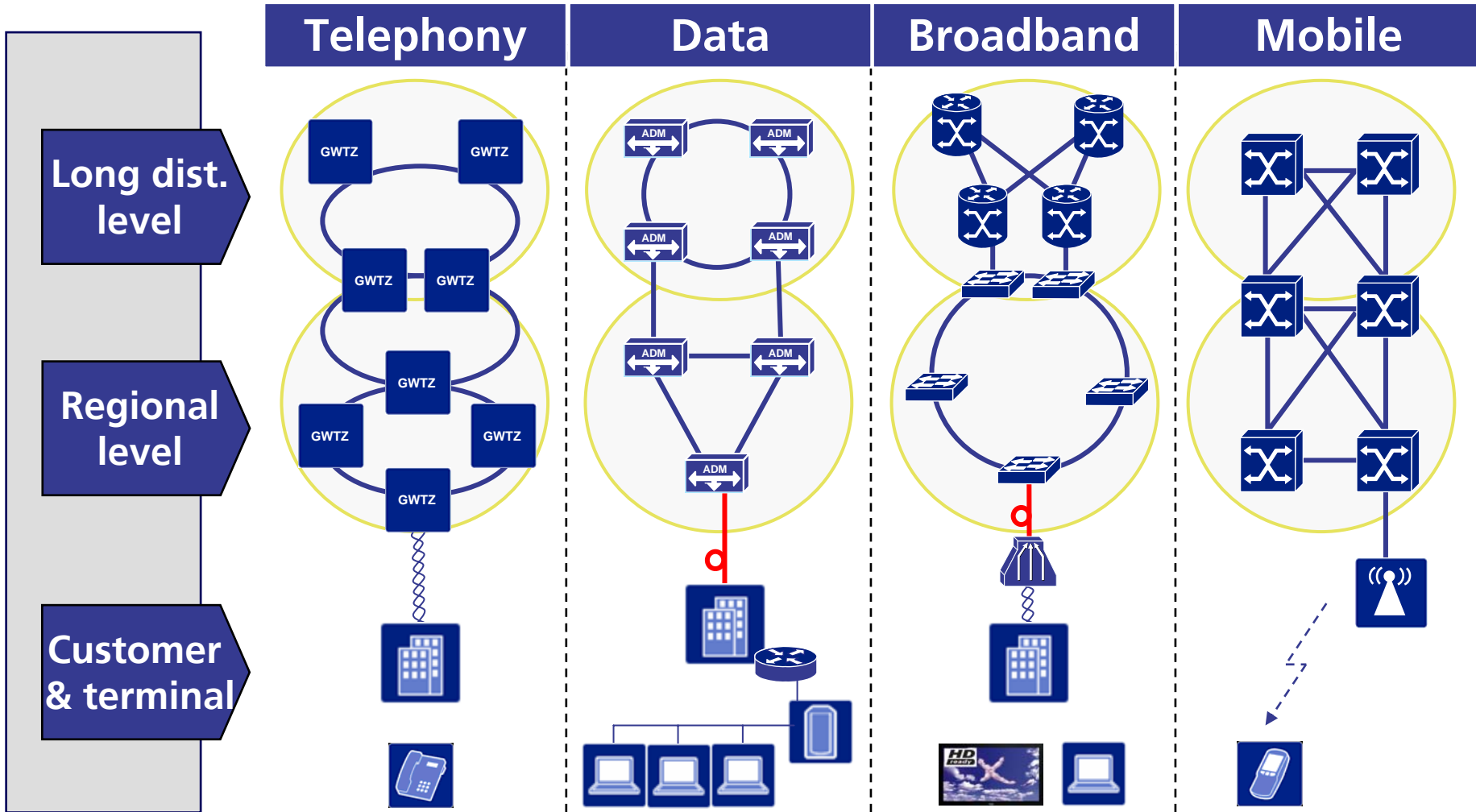
## ▪ Services

### a) VoIP

### b) IPTV

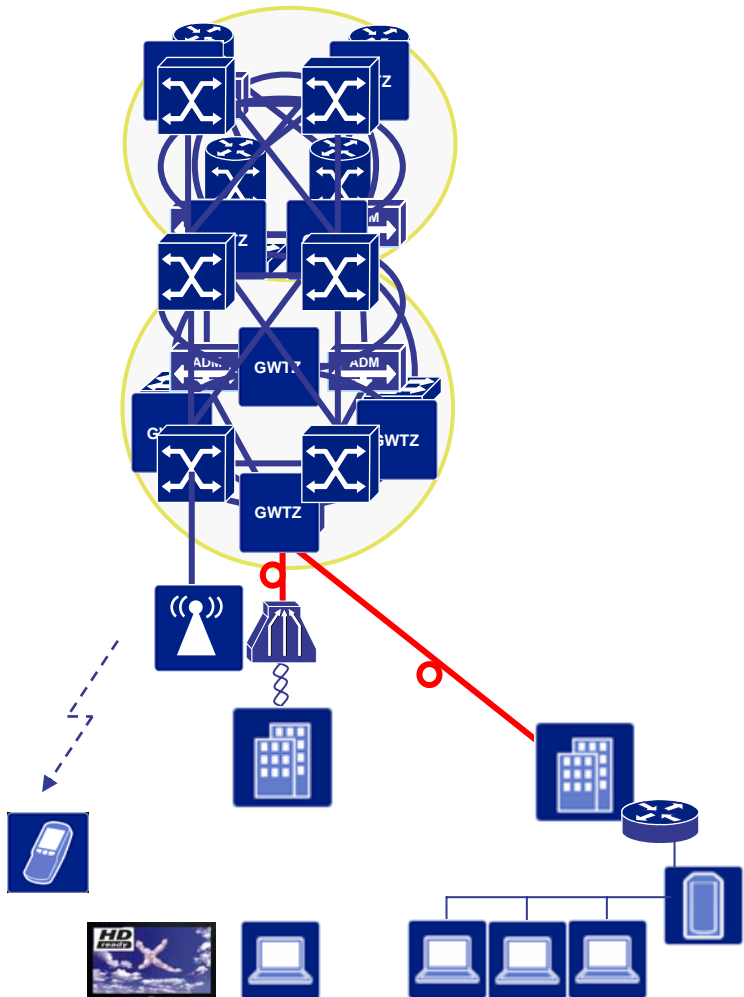
## 1. Conclusion / Outlook

# 1a) Current situation: "x" different physical networks

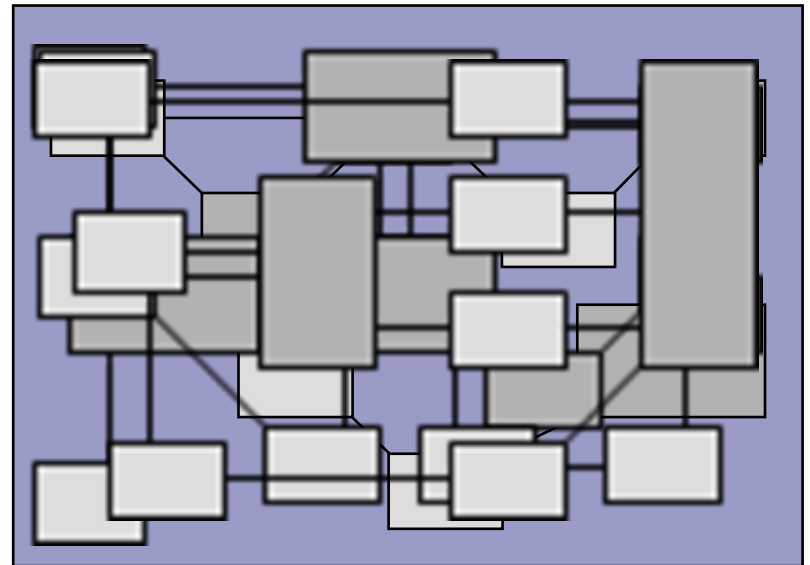


# 1a) Current practice: Overlapping, redundancy, complexity

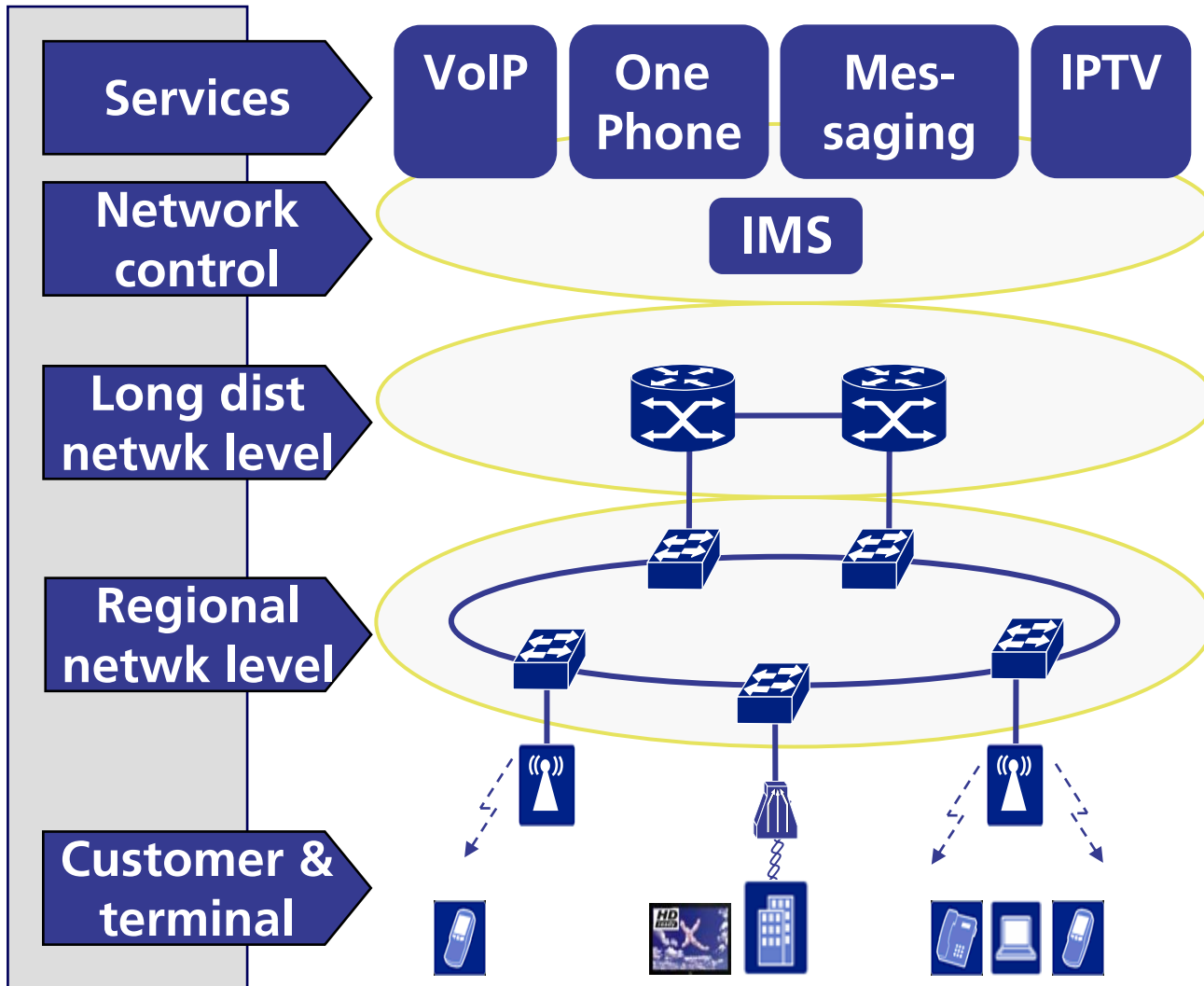
## Physical Networks



## IT systems (eTOM)



# 1a) Future: "ALL IP" = Time to market & increased efficiency, cost savings



## Technology

One technology, one network & operation

Unified IT for controlling the network

## Product Convergence

Access via fixed & mobile

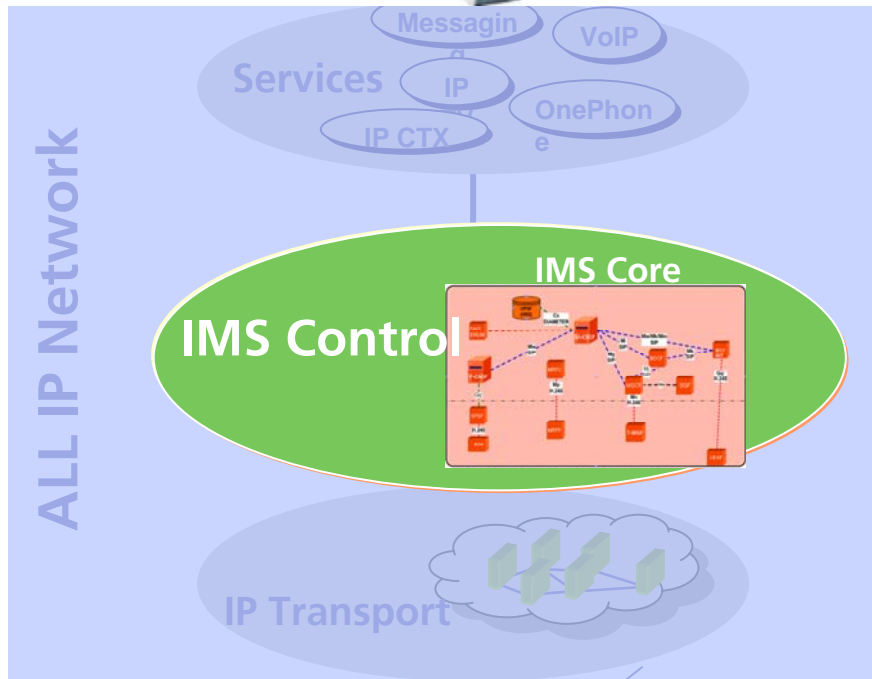
## Time to market

Rapid implementation of target group specific applications

## End2End

IP universally used, in the "network" and in the "home"

# 1a) Future: IMS (IP Multimedia Subsystem) = Control Layer for "ALL IP"



**IMS** enables multimedia services to be accessed by **all devices, regardless** of the access technology



xDSL



FIBER

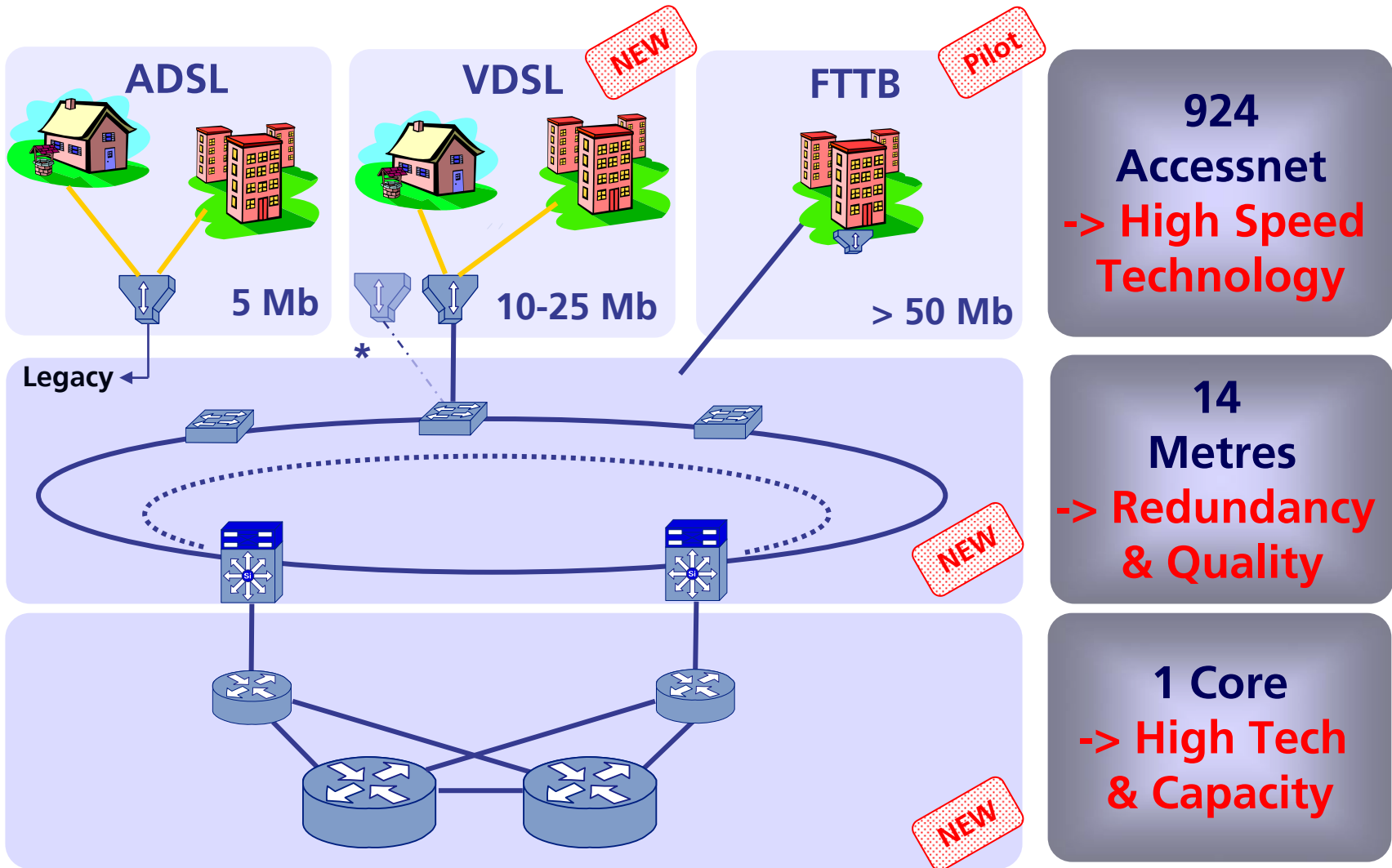


HSDPA



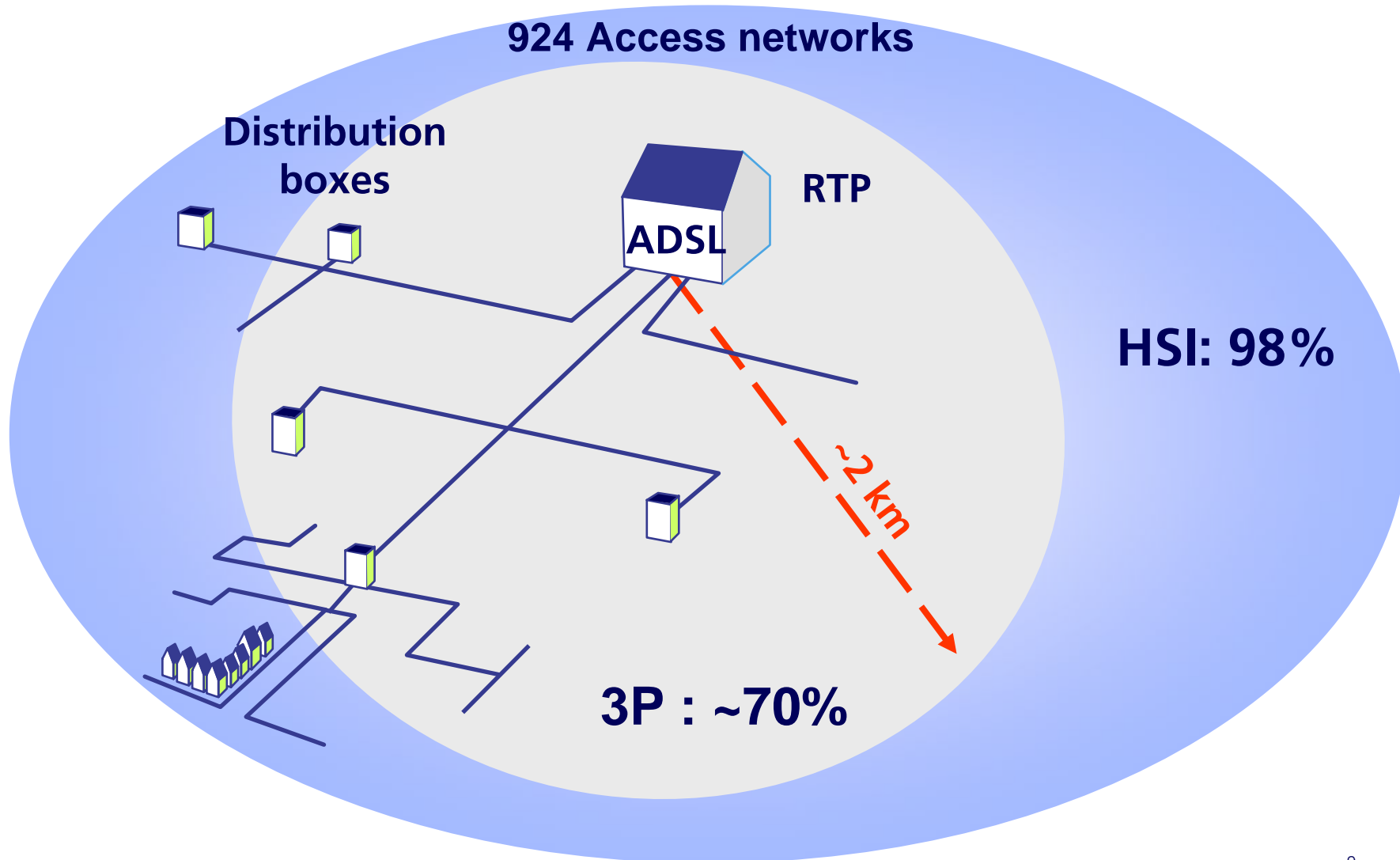
WiMAX

# 1a) Leading edge 3Play network architecture already built



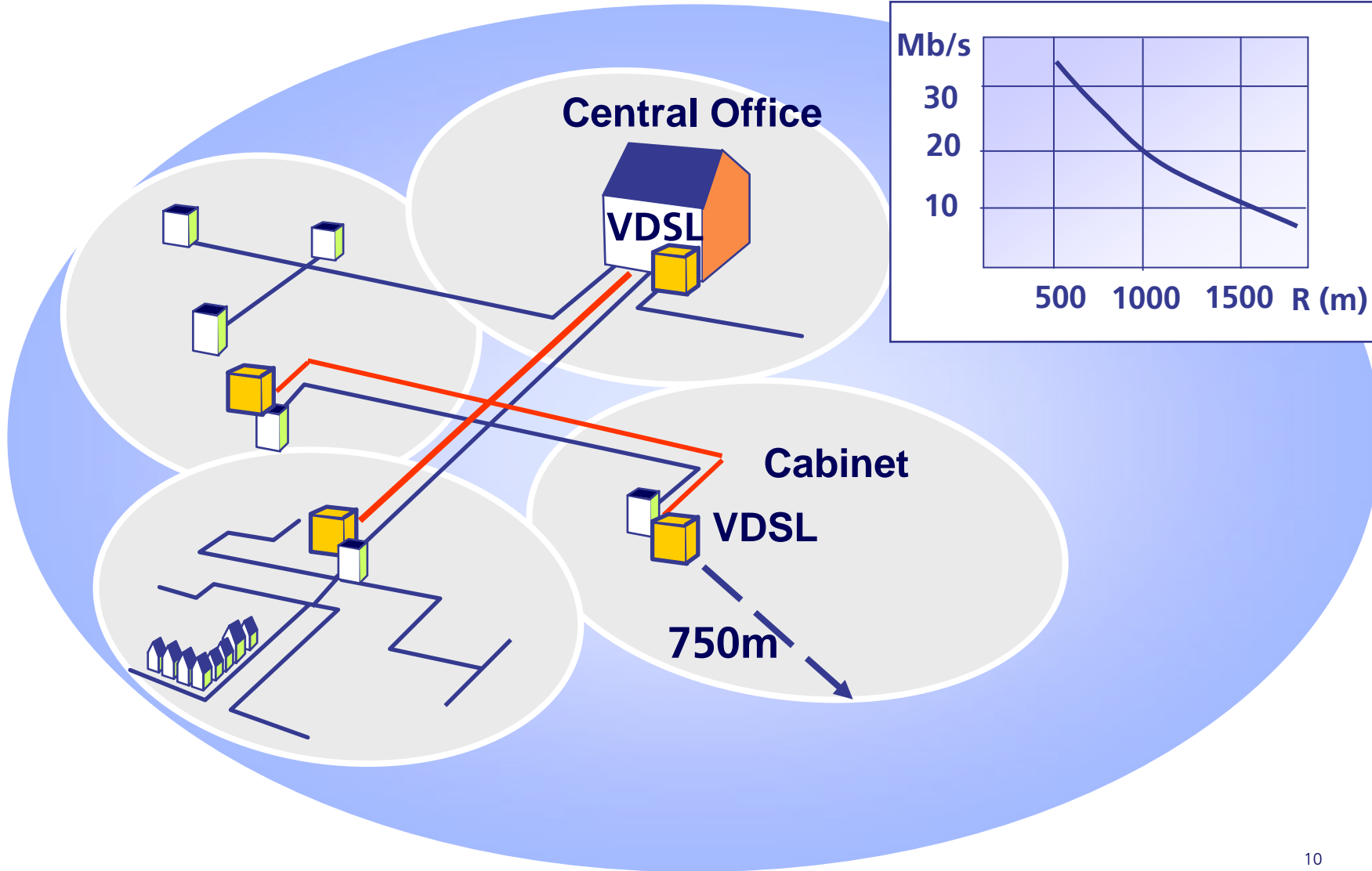
\* Tel. remains Legacy

# 1b) ADSL from a central regional transmission point (RTP) has limited coverage



# 1b) Provision to cabinets

## provides VDSL with additional bandwidth



# 1b) Cabinet build-out



## 1. Infrastructure

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## 2. Services

- a) VoIP
- b) IPTV

## 1. Conclusion / Outlook

## 2a) Bluewin Phone

### First VoIP service on the Swiss market

Sample configuration of VoIP 2ndLine

- DECT telephone with FXO interface (PSTN) and LAN port for VoIP calls
- Customer operates two phone numbers on one handset



## 2a) Customer requirements

**Residential**

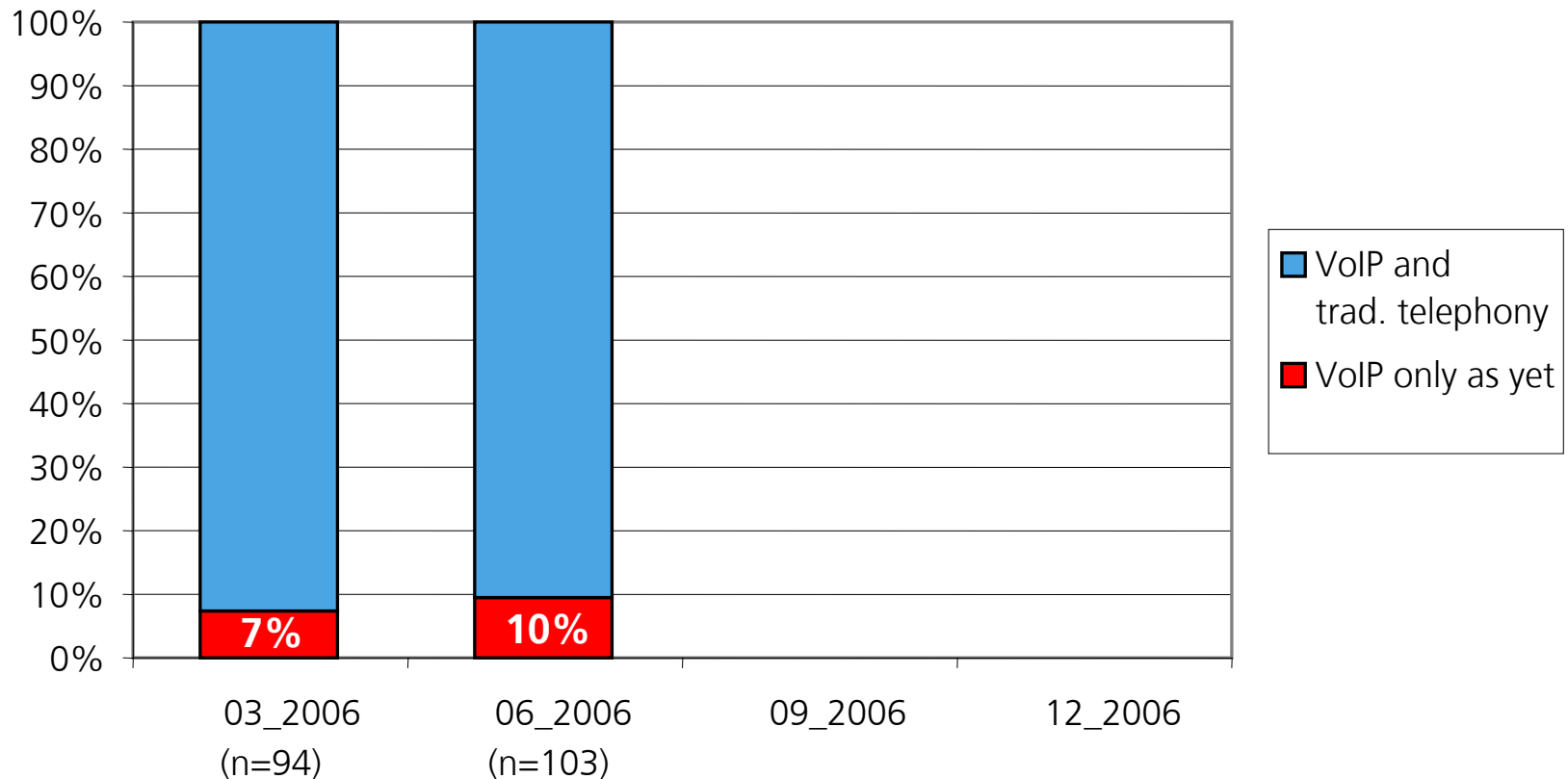
**SME**

**Corporate**

- **Cost reduction through simplified infrastructure**
- **Transparency and budget planning**
- **Increased productivity**
- **Ease of use & service availability**
- **Reliability and quality**
- **Investment protection**

## 2a) Extract from market research report on Internet telephony usage (VoIP) in Switzerland

- Only 94 (Q1) / 103 (Q2) of the 1000 asked use VoIP
- Of these VoIP users less than 10% use Internet telephony exclusively



## 2b) Definition of IPTV

- IPTV (Internet Protocol Television) refers to the **digital transmission of TV programs and movies over a digital data network**. The service uses the Internet Protocol (IP).
- The transmission of digital video signals requires high data rates (e.g. 6 – 13 Mbps for HDTV). IPTV can therefore only become a reality with the wide diffusion of broadband subscriber lines (VDSL) and the introduction of new compression techniques (VC1, H.264).
- IPTV is a broadband IP connection that feeds television signals directly to the TV set combined with interactive services via remote control. The drivers of IPTV include Video on Demand (VoD), exclusive content (in particular sports), digital Videorecorder (PVR) and high definition TV (HDTV); technology, i.e., TV over IP, is (still) irrelevant for the consumer

## 2b) Swisscom's triple screen vision



### Key elements:

- Content rights for all offers
- Platform control; joint and separate elements
- Marketing & Sales

## 2b) What is IP TV from Bluewin?



=



**Powerful content**

**Easy to use useful functions**

**Continuous development**

## 2b) IP TV: BluewinTV vs. Internet TV Streaming

Bluewin TV



Internet TV



<b>Screen</b>	TV	PC
<b>Video-rate</b>	Ca. 2.5 Mbps	Below 1 mbps
<b>Control</b>	Remote Control	Keyboard
<b>Zapping&amp;VOD</b>	Instant	Delayed (>3 secs)
<b>Content</b>	Major studios, 3 languages	Varying
<b>Availability</b>	Switzerland	Varying
<b>DRM</b>	Closed, PKI	“open”

# 2b) Services

## TV

### Guide 7:05

MON 6/12	2:30 PM	3:00 PM	3:30 PM	4:00 PM
6 MTVD	American Dad	TRL	TRL	TRL
7 D Eurosp	Tennis			
8 RAI uno	Che tempo fa		TG1	Don Ma
9	No information			
10	No information			
12 ARD	Tagesschau	Tag	Tagesschau	Tagesschau

**American Dad**  
2:30-3:00PM - 30 MIN LEFT  
Stan wird misstrauisch als er bemerkt, dass sein gesprächiger Nachbar Tuttle seinen Rasen nicht sprengt. Fortan schleicht er durch die Nachbarschaft, um dem Nachbar etwas nachweisen zu können...

### Program info 11:24 ...

[Summary](#) | [Details](#) | [Cast & Crew](#)

Rent for SFr.1.11

Watch preview

#### Angle Eyes

3 HR 42 MIN  
 SFr.1.11 - RENT FOR 15 MIN

ANGEL EYES, USA 2001, 103 Min.: Thriller- und Crime-Drama made in Hollywood: Jennifer Lopez als Polizistin, die sich in Chicago in einen geheimnisvollen Fremden verliebt; von «When a Man Loves a Woman»-Regisseur Luis Mandoki. ...  
 John Smith.  
 FSK 16, Released 1903.

## Internet-Guide

Startseite
News
Entertainment
Lifestyle
Marktplatz
Services
Internet-Zugang

Webseite  in der Schweiz

**Fernsehen**

**TV-Guide**

- Personliche Liste
- Spielfilme
- Serien / Fernsehfilme
- Unterhaltung
- Information / Dokus
- Kinder / Jugend
- Sport
- Kultur
- Musik

**Kategorien**

**Empfehlungen**

**Programmsuche**

**Tipplisten**

**Eigene Aufnahmen**

Mo	Tu	Mi	Do	Fr	Sa	So
11	13	14	15	16	17	18
Mo	Di	Mi	Do	Fr	Sa	So
19	20	21	22	23	24	25
Mo	Di	Mi	Do	Fr	Sa	So
26	27	28	29	30	31	01

**Direkt zu...**

ADSI

### Fernsehen

**TV-Guide** Logout

**TV-Guide für Samstag, 24.05. 2006** Sendergruppe: Sportsender

24.05.	SF 1	SF zwei	24.05.	SF info	24.05.
[81x66]	[81x66]	[81x66]	[81x66]	[81x66]	[81x66]
<b>17:30 Making Of</b> The Mummy Returns	<b>22:20 DOK:</b> Im Auge des Tornados	<b>20:00 Monk</b> Mr. Monk und Natalie fischen im Dunkeln	<b>17:40 Leben für die Liebe</b> Kapitel 7		
<b>Teletclub ab 20:00</b>	<b>SF 1 ab 06:00</b>	<b>SF 2 ab 06:00</b>	<b>SF info ab 06:00</b>		
<b>20:00 Finalspiel Champions-League</b> Real Madrid-Liverpool 6.- / 2 Stunden	<b>06:00 Eiger, Mönch und Maier</b> <b>07:10 Puls</b> Gesundheitsmagazin <b>07:50 10over10</b> (Angaben der Beiträge ab ca. 19:30 Uhr auf TELETEXT Seite 363) <b>08:15 Meteo</b>	<b>06:10 Monk</b> Mr. Monk und Natalie fischen im Dunkeln <b>07:50 24 - Twenty Four IV</b> 17:00 bis 18:00 Uhr (11:24) <b>08:50 24 - Twenty</b>	<b>07:30 Futurama</b> Der unvergessene Pharao		<b>08:25 Die Simpsons</b>

## Magazine

blu-win tv

magazin

Angelina Jolie in **ALEXANDER**

Mit Bluewin TV in NEUE WELTEN!

## 2b) Implementation

- Build on existing solutions wherever possible
- Involve partners in development of new solutions
  - Microsoft
  - Cisco
  - Alcatel
  - Cinétrade
  - Tandberg

1. Infrastructure
  - a) Networks
    - Current
    - Future
  - b) VDSL
- Services
  - a) VoIP
  - b) IPTV

1. Conclusion / Outlook

### 3) Conclusion

**"Is Swisscom ready to meet the IP challenge?"**

Yes, ...

- Major changes need to be addressed
- Large scale investments
- Basis for many possible services
- Customer decides, not the technology
- Different business model – same approach