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Business Considerations for Migration to IMT-2000

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Wireless Providers are Facing Significant Pressures on ARPU and Overall Revenue

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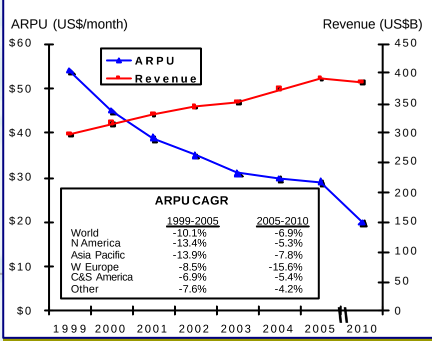
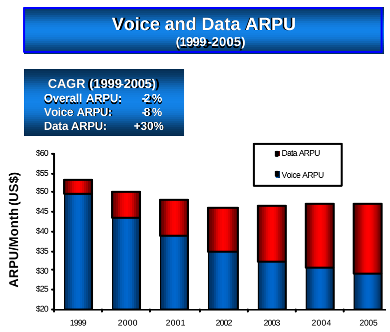
In the wireless industry, falling prices and yet high demand of bandwidth is generating significant pressure on operator margins





Source : Deloitte Consulting Analysis, Ovum

Data Service Revenues in Middle East will grow to1 Billion Euro in 2005

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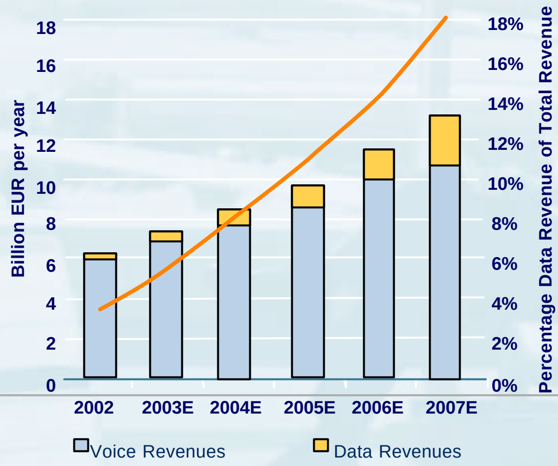
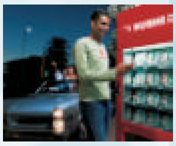
Service Revenues: Split in voice and data





- Demand for mobile data services is quite strong in ME

- In 2007 18% of the total Revenues will be done with data applications

- UMTS/ GPRS as push for new revenue streams through data traffic for MNOs

Importance of new technologies

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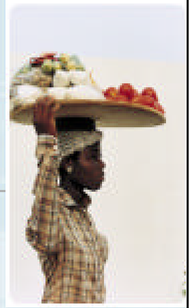
- **Deliver a differentiated end to end service proposition**
- **GPRS/EDGE are key to enabling new data services**
- **3G brings new functionality, increased capacity, voice & data lower long term cost- the first move towards Broadband**

mobile users are hungry for

REAL services



Is GPRS Pricing Currently too Complex?

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The Pricing Options:

Volume – the more you use the more you pay

Event – you get something and you pay for it

Quality of service – you pay more and you get something faster

Subscription – you pay whether or not you use it

Session – you pay to log in

Flat rate - „All you can eat“

What can we learn from our experience going forward?

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-Operators need to understand the market and segment it.

-Don‘t assume that data will be like voice and only focus on the high value corporate or business customers. The youth market and/or the prepaid could be the early users, particularly of services such as MMS. Operators should ensure that there are low threshold services available.

-Successful and profitable services will depend on the people who want to communicate being able to access the same service.

Operators need to:

Build a critical mass of users

First co-operate with each other then compete - the payback from non voice services will come from volume not churn

Building on the footprint of GSM

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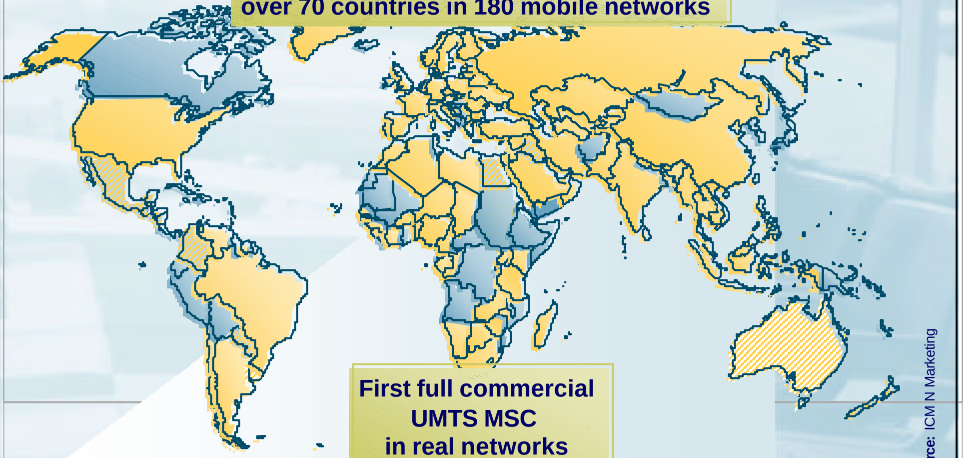
More than 1000 installations in over 70 countries in 180 mobile networks



First full commercial UMTS MSC in real networks since Mid 2002

GSM customer base (January 2003)

Source: ICM N Marketing

The future for 3G in Mid East is promising

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		Drivers for 3G	Things yet to do for 3G
	End user	➢ Prestige / Image for the 3G user ➢ Personalization and localization of services and content anytime, anywhere ➢ Multimedia capability (pictures, videos, etc. on colored screens)	➢ Costs for handsets and usage of new services and content ➢ Full coverage and network interoperability
	Mobile Network Operator	➢ New applications and content addressing business customers as well as consumer life styles ➢ New revenue streams and revitalized, increasing ARPU	➢ Frequency clearance, regulatory issues ➢ Successful migration of existing customer base towards 3G ➢ Convincing services and applications (“killer application”) to create customer´s demand
	Supplier	➢ Value-based selling by providing End-to-end solutions ➢ Operators “need” to invest in order to fulfill coverage requirements of the regulator	➢ Standardization of interfaces ➢ UMTS handsets for mass market rollout

UMTS commercial launches-12 networks of which 6 are supplied by Siemens/NEC

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H3G – UK
Launch:1Q2003
Subs to date: **25,000**
Supplier:NEC/**Siemens**

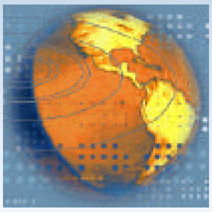
Vodafone – Ireland
Launch: 2Q2003
Subs to date: n.a.
Supplier n.m.

H3G – Sweden
Launch: 2Q2003
Subs to date: n.a
Supplier n.m..

NTT DoCoMo – Japan
Launch: 4Q2001
Subs to date: **421,000**
Supplier:NEC/**Siemens**

Manx Telecom – UK
Launch: 4Q2001
Subs to date: n.a.
Supplier:NEC/**Siemens**

UMTS Launches worldwide



Approx. 1.8 Million subscribers

J-Phone – Japan
Launch: 4Q2002
Subs to date: **34,900**
Supplier: n.m.

3G – Luxembourg
Launch: 2Q2003
Subs to date: n.a.
Supplier n.m.

H3G – Austria
Launch: 2Q2003
Subs to date: n.a.
Supplier:NEC/**Siemens**

H3G – Italy
Launch:1Q2003
Subs to date:~ **90,000**
Supplier:NEC/**Siemens**

Monaco Telecom – Monaco
Launch: 4Q2001
Subs to date: n.a.
Supplier:NEC/**Siemens**

A1 – Austria
Launch: 2Q2003
Subs to date: n.a
Supplier n.m.

H3G – Australia
Launch: 2Q2003
Subs to date: n.a.
Supplier: n.m.

Challenges for the Mobile Network

Operators have to launch a variety of services while managing their increasing network complexity cost efficiently

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	Exceeding user expectations	Reducing – Total Cost of Ownership
Voice	■ Voice quality ■ Availability ■ Low time-to-market (3G)	■ Investment protecting 3G introduction ■ OPEX reduction ■ Flexibility in network adaptation
Real-time Multimedia	■ Successful launch of attractive multimedia services	■ Optimal traffic routing for peer-to-peer multimedia services
Data	■ Excellent service quality and throughput	■ Cost efficient management of strong traffic growth

Goal

- **Variable service access**
- **Easy service introduction**
- **Flexible network optimization**
- **Reduced costs by network simplification**

We Help You Move Towards Continuous Success – Maximum Speed, Flexibility and Cost-Efficiency

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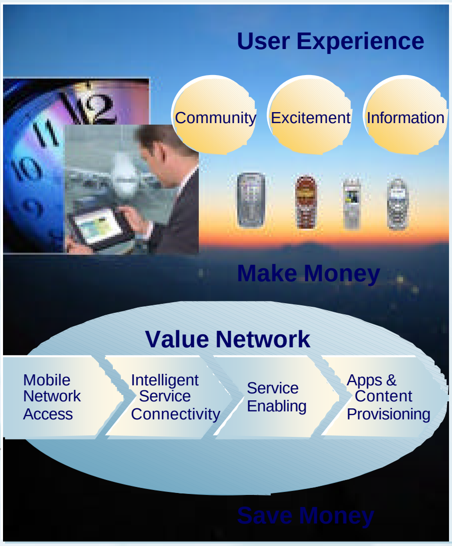

Our networks and solutions are built around your primary business drivers:

- **Superior User Experience**
  Best possible customer retention and differentiation on the basis of personalized, attractive services;
- **Make Money**
  Safe introduction of new data and multimedia services and industry-leading charging capabilities
- **Save Money**
  Maximum reliability, solid upgrade path, high flexibility and cost-efficiency

Mastering Both Opportunities and Challenges
Making Money and Saving Money with Your Mobile Network

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Personalization
- Meet user demand by offering personalized services tailored to preferences and terminals

Flexibility
- Stay ahead of unpredictable changes by fast creation of new services and business models

Innovation
- Get ready for fast and safe launches of innovative and attractive real-time multimedia

Simplification
- Stay in control of increasing complexity of multi-service network

Smooth migration
- Gain upper hand in cost efficient migration steps towards 3G

Performance & Reliability
- Satisfy bandwidth hunger of new real-time multimedia services efficiently

IMS – new multi-media services

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Communication

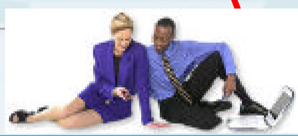
- Push-to-talk / push-to-see
- Instant Messaging
- Multi-Party Chat
- Video Telephony
- Multimedia Conferencing

Entertainment

- Person-to-Person Gaming
- Audio and Video Streaming
- Interactive Shows and Events
- Multi-Media Mobile Advertisem

Enterprise and on the road

- Dynamic Info Services
- Interactive guidance
- Remote Facility Control
- Collaborative working
- Interactive learning



Is 3G business different?

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What does the mobile operator need to do to take advantage of the new business opportunities that Mobile Internet offer?

– It is not enough to work with one business model to capture all the opportunities that 3G offer. The business model for communications services like voice, text and images, is very different from the business model for entertainment services such as games, music and video clips. What happens if a customer asks for the closest restaurant but gets the restaurant who paid the most to be on top of the list?

– The business models of traditional industries like the wholesale, distribution and media industries can fruitfully be adopted in the 3G business too. Using traditional business models will facilitate both the implementation and the marketing communication.

– The choice of business models should guide the choice of partners. Which partner would you choose if you were to sell financial information or if you were to use it as a media to sell commercials?

Service Convergence

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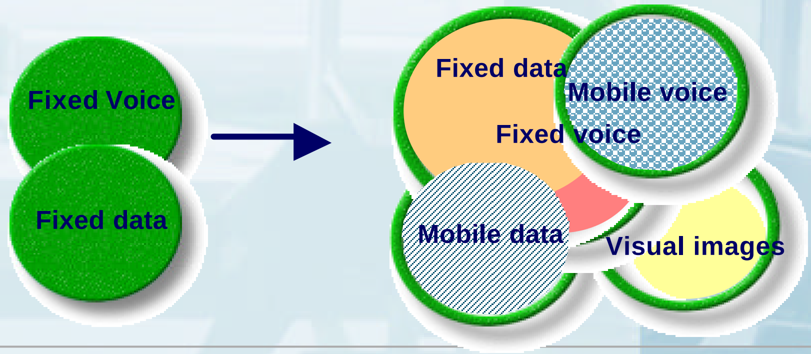
UMTS permits mobile to converge with other telecommunications Services!
Some revenues will be from new sources!



UMTS competing in same revenue pool as fixed
Þ UMTS will compete for same investment pool as fixed

New market players will determine the Business model

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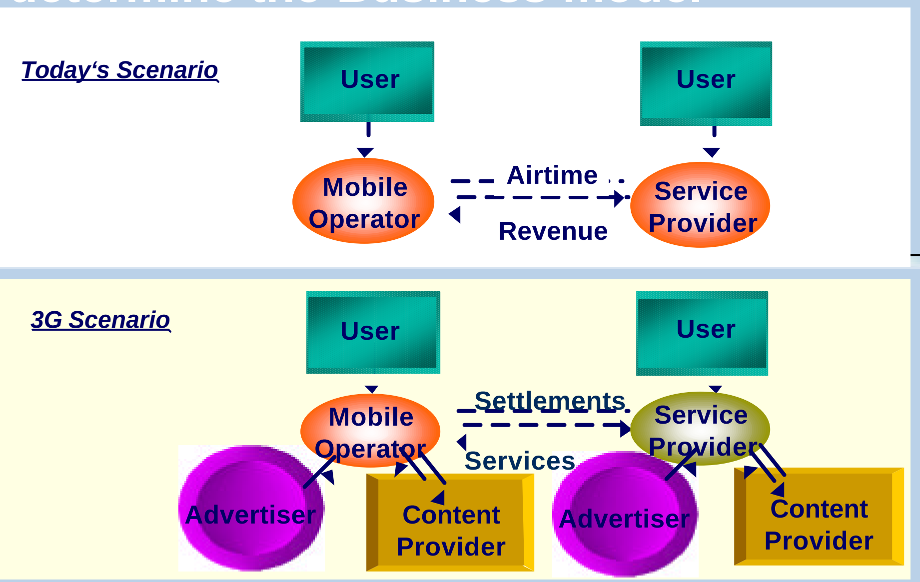

Key components of a Business Case for 3G

The data 'product cycle' – who are early, high volume users

- What do they want? Small group of high volume users will pay large amounts provided UMTS gives additional service.
- Managing the transition to mass-market
  - adoption and use are critical, not penetration
  - what are costs of transition – GSM handset subsidies were high
  - Need for market research to underpin 'story'
- How will you charge for it?

CAPEX Related Costs

- License costs
- Network Related Costs
  - linked to the number of subscribers : 20 to 30% of cumulative Capex
    - Core Network, OSS, Application Platforms (WAP Gateways, Multimedia Platforms…)
    - linked to coverage & traffic : number of sites needed 70% to 80% of cumulative Capex
      - Radio
      - Transmission
      - Sites Acquisition
  - The number of sites needed in closely linked to the population, surface to be covered and density. Cumulative Capex / population can differ in a wide range in function of the country's profile
      - 50US$ / pop

What will UMTS/3G bring?

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- New revenue streams secured via differentiated end to end service proposition, ease of use and simple consumer and business applications
- Recreating value is about delivering excellent operational and financial results
- Mobile devices
  - One of many platforms for media consumption
  - With a bright future

Business Plan Development – Customers benefit

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Business Development Process

Typical questions to be answered

- We intend to buy a 2G/3G license. Could the project be feasible from a financial point of view?
- How does market, penetration, ARPU etc. look like? Can investors expectations be met?
- Is our strategy in line with my financial expectations?
- When do we have to consider technology migration?
- What new services do we need to improve financial performance?

Contribution of Siemens

- **Financial feasibility study**
- **Investors Case**
- **Development of fully comprehensive operators business plan**
- **Strategy assessment**

Siemens Business Plan Support is modular

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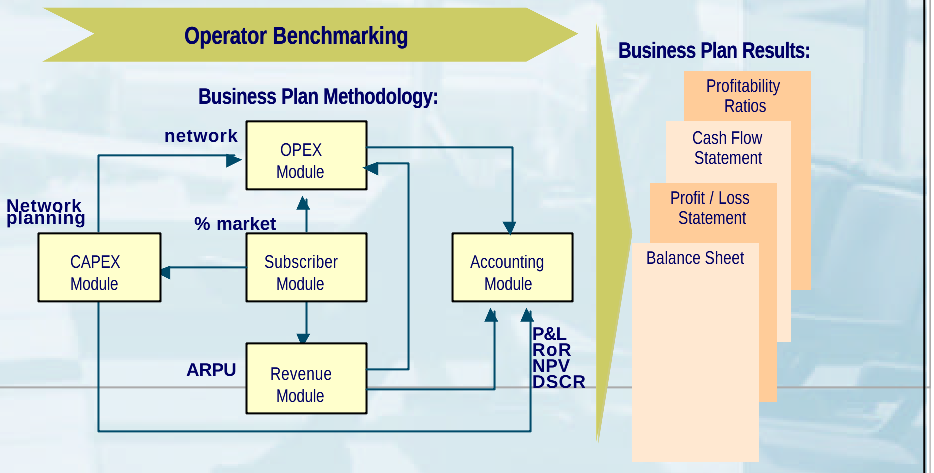
The market and revenue simulations are the key modules of our business plan tool.



Our services cover all market phases from late 2G entrant to future IMT-2000 incumbent

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Customer Market Phase

New entrant in delayed market	Investors' case Fully comprehensive business plan	Stimulate investors
Migration 2G ? IMT-2000	Detailed subscriber model Migration benefits, operators' market attractiveness, competitive churn, technology churn, retention mechanisms	Position against "new comers"
"2nd wave UMTS" - UMTS new entrant	Data revenues, applications/solutions centric, bottom-up scenario modeling	Build key strategic relationships
"2nd wave UMTS" - UMTS incumbent	Supplier/product related incremental revenues, OPEX, CAPEX Link to product business plans	Evaluate alternative relationships

Conclusion

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- License Auctions are the wrong way to go !
- Users care about Services not technology !
- 3G investments are not that high compared to the high voice capcity and Data mix services that bring in new revenues
- UMTS is the first step towards Broadband Communications
- There no incentives to delay the roll out of UMTS But User transition needs to be well planned-to meet promises!

Siemens is well established in Middle east and North Africa

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ICM Networks - strong regional presence

Business Strength of

Reliable Partnership with

SIEMENS
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Thank You very much!