Think 2032!

Position for ICT everywhere









Deutsche Telekom Group

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1.

Sneak Preview



Do you know Anna?





Sneak Preview – Smart Agents



Sneak Preview – Smart Business Networks

Business networks will become increasingly smart and transform the economy. Li & Fung has reached the 1st level of smartness already.

LI & FUNG GROUP CORE BUSINESSE Sourcing Distribution Retailing "Li & Fung today represents a new generation of multinationals based in Asia." Dr. Victor K Fung Group Chairman "Because of our asset-light model, our biggest Business network with asset light model investment is in people." no own factories or equipment Dr. William K Fung orchestrates a network of 12,000 Group Managing Director, Li & Fung Limited suppliers in more than 40 economies with 8000 agents

Li & Fung Group

- 16 bn \$ revenue in 2009
- 35.000 people
- designs, develops and sources consumer products for retailers worldwide
- customers: Walmart, Avon, Nike, Toy"R"Us, ...

ICT enables industrial convergence

A couple of Smart Business Networks have developed comprehensive business models overarching 'traditional industry' segments by distinct Business Operating Systems.



Key characteristics of Smart Business Networks

Business in a rapidly formed network with anyone, anywhere, anytime regardless of different computer systems and business processes.



2.

The Future ICT Ecosystem



The Future ICT Ecosystem

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From the mega trends in the ICT eco-system six ICT core beliefs result.



- 2 The Triad ages and ICT masters the challenges!
- 3 Mega-cities emerge with ICT as a competitive differentiator!
 - In a globalized economy ICT paves the way for SME biz!
 - The era of smart business networks is to come!
 - Smart agents have the say in the Internet of things!



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From the Past to the Future – An ICT Perspective

By looking back we start to realize how far the global ICT industry has come in the last twenty years and what we can expect from the next two decades.



3.

ICT meets Industries



ICT meets Energy

Smart Grids...... today's vision will become a reality by 2032 and will revolutionize energy supply and demand.



ICT meets Energy

The convergence of ICT and energy opens up new growth perspectives through innovative business models and service offerings.

Market size & development (US) With US\$ 433 billion, worldwide energy market by far outreaches the size of ICT technology market which amounts to US\$ 52 billion Market for renewable energy technology growing from US\$ 55.4 billion in 2006 to US\$ 226.5 billion in 2016 General market trend: stagnating demand, increasing prices Source: cleanedge, 2009 Market Drivers

- ,Unbundling', politically motivated increase of competition
- Climate protection/reduction of CO² emission
- Limited fossil energy resources
- Increasing geo-political dependencies
- Decentralized energy generation
- Advancing digitalization/mature ICT technologies at market relevant costs

Innovative ICT application fields

2010





Demand Response Management

- Automated, price-dependent mgmt. of energy supply, based on metered capacity and demand profiles
- Combination with Digital Home appliances and applications

Virtual Power Plants

- Centralized, ICT-based management of distributed energy supply & demand assets
- Avoidance of peek loads; less dependency from central energy supply

E-Mobility/Vehicle-to-grid

- Usage of decentralized energy storage
- Less dependency from volatile energy generation
- Decoupling of demand & supply

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ICT meets Automotive

Full access to all kind of real time information, multi-media and social network on the move; innovators like BMW are paving the way towards digitally connected cars.

Innovative ICT application fields

2010

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Internet in the car

- Route and location information
- Car remote diagnostic etc.
- Seamless digital media



Intelligent traffic management

- Centralized ICT based traffic mgmt.
- Traffic management; traffic congestions alerts



Car-to-car connection

- Communication/info exchange between individual cars
- Improved security systems, innovative mobility concepts, commercial services



Car Online



ICT meets Health

Medical will be entirely digital. Innovations such as digital pills are underway. While enabling new kinds of applications, implanted microchips raise new privacy issues.

Innovative ICT application fields

2010



Integrated information networks

- Smart health networks connecting the main participants of the health system
- Comprises data of medical care and supporting processes



DNA sequencing

- Low cost or free access to the results of complete DNA analysis
- Innovative value added services/apps based on Smart Health functions



Connected body implants

- Nano-robots: medical surgery on a molecular basis
- Intelligent pills: wireless communication & steering for targeted administration



Body Chips



ICTization

ICT for everyone, everywhere, in virtually every object – that will be the outstanding characteristic of the world of tomorrow.



- ICT drives innovation in all areas of life, the Internet of things will be reality.
- **2** ICT becomes a key production and differentiation factor in almost all industries.
- **3** Data and IP centric business models transform the economy.

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4.

Think 2032!

Think 2032! – From Vertical Disintegration to Horizontal Integration

Standardization and opening of value chain interfaces drive vertical disintegration. Horizontal integration emerges due to proprietary cross-industry interfaces.



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Think 2032! – A New Era of Convergence

The dynamics of ICT-convergence will expand to industry convergence and create a new industry structure.



Think 2032! – Future Industry Structure

New revenue opportunities open up, whilst competitive boundaries blur.



Think 2032!

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Each player has to position itself according to horizontal economies of scale depending on B2B2C maturity and vertical integration with respect to field experience.



5.

Take Aways



Six Take Aways (1/2)

"Think ICT 2032" affects your decision making today... be smart!



Six Take Aways (2/2)

We believe it's time now to think about the necessary strategic and organizational transformation processes.





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