Smart Cities in Saudi Arabia – Current and Future

Presentation
By Ahmad M. Al-Sari
Smart Cities

Government services

Public safety

Transportation

Energy and water

Education

Other core ICT systems

Healthcare

Residents and businesses
Smart Cities

• Robust Telecom Infrastructure

• Applications and Services

• Content
Smart Cities

Figure (4): Internet Market Evolution (2001-2010)
Smart Cities

Figure (3): Broadband Market Evolution (2001-2010)
Note: Population teledensity is calculated by dividing total fixed telephone lines by the population, while household teledensity is calculated by dividing only residential lines by the number of households.
Smart Cities

Mobile Telecommunication Market

- Prepaid Subscriptions
- Post-paid Subscriptions
- Total Subscriptions
- Mobile Penetration (%)
Smart Cities

**Figure (7): Change in the Cost of Living Index (inflation) in Saudi Arabia over the period 2001-2010 (cumulative)**

Source: CITC analysis based on data published by the central Department of Statistics & Information (www.cdsi.gov.sa)
Figure (6): Real GDP growth by sector – compound annual growth rate (CAGR) over five years (2005-2010)
Smart Cities

Figure 1: Annual IT Spending & IT Spending Year-on-year Growth in Saudi Arabia 2006-2015

Smart Cities

Figure 2: Technology Markets 2010 Spending and 2011-2015 Forecast for Saudi Arabia

### Smart Cities

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT spending in KSA (2010)</td>
<td>SR 27.0 billion</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>IT spending in KSA year-on-year growth (2010/09)</td>
<td>23%</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>Hardware spending in KSA (2010)</td>
<td>SR 18.0 billion</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>Packaged software spending in KSA (2010)</td>
<td>SR 2.8 billion</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>IT services spending in KSA (2010)</td>
<td>SR 6.2 billion</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>IT spending as % of GDP in KSA (2010)</td>
<td>1.65%</td>
<td>IDC Blackbook Q4 2010, EIU Saudi Arabia Country Report March 2011</td>
</tr>
<tr>
<td>IT spending forecast for KSA (2015)</td>
<td>SR 46.3 billion</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>IT spending CAGR forecast for KSA (2011-2015)</td>
<td>11.4%</td>
<td>IDC Blackbook Q4 2010</td>
</tr>
<tr>
<td>Mobile penetration in KSA (2010)</td>
<td>186%</td>
<td>CITC 2010 Annual Report</td>
</tr>
<tr>
<td>Total number of mobile subscriptions in KSA (2010)</td>
<td>51.6 million</td>
<td>CITC ICT Indicators Report 2010</td>
</tr>
<tr>
<td>Total number of internet users in KSA (2010)</td>
<td>11.4 million</td>
<td>CITC ICT Indicators Report 2010</td>
</tr>
<tr>
<td>Broadband penetration for households in KSA (2010)</td>
<td>41.6%</td>
<td>CITC 2010 Annual Report</td>
</tr>
<tr>
<td>Number of broadband connections in KSA (2010)</td>
<td>4.4 million</td>
<td>CITC 2010 Annual Report</td>
</tr>
<tr>
<td>Number of registered domains in KSA (May, 2011)</td>
<td>23,343</td>
<td>Saudi Network Information Center (SaudINIC) Report</td>
</tr>
<tr>
<td>Percentage of companies in KSA that have a company website</td>
<td>47%</td>
<td>CITC Internet Ecosystem Study 2010</td>
</tr>
</tbody>
</table>
Saudi Smart Cities

Saudi Arabian General Investment Authority (SAGIA)
The road to 10 x 10

Institutionalizing the Competitiveness Management Process

Becoming the Most Competitive in certain Sectors

Building Pockets of Competitiveness
The economic cities are an infrastructure priority and are expected to attract $100b in investment

1. King Abdullah Economic City (West)
   Located in Rabigh
   Announced in Dec. 20th, 2005

2. Prince Abdulaziz Bin Mousaedd Economic City (North)
   Located in Hail
   Announced in June 16th, 2006

3. Knowledge Economic City (Mid-West)
   Located in Medina
   Announced in June 17th, 2006

4. Jazan City (South)
   Located in Jazan

5. ALEC Energy City (North East)
   Located in Alhassa

6. Tabouk City (North West)
   Located in Tabouk

In 2020:
• ~4.5m residents are expected in the economic cities
• Combined GDP for the new cities is expected to reach $150b
### Sample profiles of the new economic cities

#### King Abdullah Economic City
- **Investment**: SR 100b
- **Area, location**: 168 sq km, near Jeddah
- **Description**: The City will integrate itself into the Kingdom’s on-going drive to expand the economy and function as a catalyst to attract foreign investment, global trade, commerce and industry

#### Knowledge Economic City
- **Investment**: SR 25b
- **Area, location**: 5 sq km, Medina
- **Description**: Core industries to be KBI, education and media, supplemented by real estate, tourism and healthcare

#### Prince Abdul Aziz Bin Mousaedd (Hail) Economic City
- **Investment**: SR 30b
- **Area, location**: 156 sq km, 30 km north of Hail
- **Description**: Core industries to be agribusiness, building materials and logistics supplemented by light industry, tourism and real estate

#### Jazan Economic City
- **Investment**: SR 100b
- **Area, location**: Jazan
- **Description**: Will contain an advanced industrial zone, equipped with the most superior network facilities specifically for heavy industry projects as well as secondary (processing) industries
Smart cities around the world have shown impressive results.

**What does it really take?**
- Significant deployment of broadband
- Connectivity to knowledge workers
- Digital inclusion of all sectors of society
- Willingness to innovate and take calculated risks
- Effective marketing to attract new businesses

**Success stories**
- Busan, South Korea – The Logistics Hub
- Taipei, Taiwan – The ICT City
- Ichikawa, Japan – The internet city

Source: Intelligent community forum
Example of value creation through connected real estate and connected homes

**Benefit for Smart Cities**

- Attracts Residents
- Creates Jobs
- Boosts Performance

**Components:**

- Transformation
- Convergence
- Foundation

**Services:**

- Unified Communications
- Physical Security
- Building Technologies
- Building Information Network
Smart Cities

**Scope of Services**

- Residential
- Commercial
- Hospitality
- Transportation
- Industrial
- Healthcare
- Education
- Financial

**Smart City Branded Service Delivery Channels** (Portal, Call Centre, Retail)

**Basic Services**
- IP Voice
- Digital Broadcast Media
- On Demand Broadcasting
- Internet
- WiFi
- Security Monitoring
- Smart Home Management

**City E-Services**
- Help Desk
- Customer Care
- Dispatch
- Billing
- Portals
- Financials
- Human Resources
- Procurement & Logistics
- Fleet Services
- Intelligent Transportation
- Asset Management
- Performance Management
- Facilities
- Automated Meter Reading
- Citywide GIS
- SAGIA Registrations & Permits

**Enhanced Services**
- Mobile VoIP
- Presence
- Interactive Media & Gaming
- Managed Applications
- Applications Hosting
- Business Continuity
- Disaster Recovery
- Professional services

**Connectivity Infrastructure (Wired + Wireless)**
- Data Centers
- Call Center
- NOCC
- Converged Network Points-of-Presence
- Conduit & Duct Bank Systems
- Radio Towers
- Mobile Towers
- International Gateways
Smart Cities

My reality as a citizen
• I have up to 20-mbps internet access. Normally at 7mbps
• I am able to have IPTV
• I pay my utility bills and traffic tickets as well as transfer money online
• I can use any ATM machine to access my bank account to draw money or pay bills
• I communicate by email, SMS, Skype, Viber, Facetime Blackberry messaging, ..........
• I can exit and return through an e-gate (passport processing) at Riyadh Airport
• My driving is monitored by Saher, a system that monitors driving behavior including speed and intersection behavior
• Most of my hospital records are electronic within a hospital
As a citizen, I look forward to:

• One Giga-bps band width internet access
• The fruition of the Yesser e-government Program (Three billion Saudi Riyals allocated by the government for an ambitious e-government initiative)
• Better and more flexible online payment systems
• An electronic, secure and interchangeable health file
• More transparent government procedures through improved e-government
• Lower connectivity cost at home and at the office
• More internet-based services (Education, security, business services, personal services, e-commerce................etc.)
Thank You