Smarter Cities

Bruno Di Leo
Senior Vice President, Sales and Distribution
Smarter Cities: Delivering improved citizen services

**Solutions**

- Leveraging information to make better decisions
- Coordinating resources to operate effectively
- Anticipating problems to resolve them proactively

**Industries**

- Government and Agency Administration
- Public Safety
- Social and Health
- Education
- Transportation
- Urban Planning
- Environmental
- Energy and Water

**Clients**

- Mayor
- Chief of Police
- Chief of Transportation
- Chief Water / Utilities Officer
- Chief of Operations
- Head of Social Programs

Leveraging information to make better decisions

Anticipating problems to resolve them proactively

Coordinating resources to operate effectively

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Smarter Cities solutions portfolio is expanding

Prioritized Industries
- Public Safety
- Government
- Transportation
- Energy
- Healthcare
- Water

Solutions

Planning and Management
- Operations Insight
- Law Enforcement and Public Safety
- Building Management

Infrastructure
- Transportation Management
- Water Management
- Utility Network Management
- Asset Management

Human
- Social Program Management
- Educational Outcomes
- Citizen Health and Safety
Key Smarter Cities projects – 2011

Major Markets: ~ 1900
- 38 of top 50 cities
- 78% of fastest growing cities

Growth Markets: ~ 500
- 38 of top 50 cities
- 62% of fastest growing cities

* Source IBM analysis and McKinsey Global Institute, March 2011
### Smarter Cities engagements

<table>
<thead>
<tr>
<th><strong>Intelligent Transportation</strong></th>
<th><strong>Renewable Energy</strong></th>
<th><strong>Intelligent Operations Center</strong></th>
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<tbody>
<tr>
<td><img src="image" alt="Companhia Paulista de Trens Metropolitanos (CPTM)" /></td>
<td><img src="image" alt="Elektrizitätswerke des Kantons Zürich (EKZ)" /></td>
<td><img src="image" alt="Miami’s Sun Life Stadium" /></td>
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<td>Companhia Paulista de Trens Metropolitanos (CPTM)</td>
<td>Elektrizitätswerke des Kantons Zürich (EKZ)</td>
<td>Miami’s Sun Life Stadium</td>
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<tr>
<td>- Generates key system insights by uncovering subtle correlations</td>
<td>- Shifts up to 50% of electric vehicle charging time to low peak hours</td>
<td>- Provides real time data into all stadium operations</td>
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<tr>
<td>- Achieved a 99% improvement in short-term needs analysis</td>
<td>- Increases owner control over a vehicles’ carbon footprint, while reducing operating costs</td>
<td>- Ability to predict and adjust, and deliver improved fan experience</td>
</tr>
</tbody>
</table>
### Smarter Cities: Where we are heading

<table>
<thead>
<tr>
<th>Large transformational solutions</th>
<th>$10M - $50M+ average value</th>
<th>EKZ - Zurich, SUI</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Services led, with cross-IBM support</td>
<td>WorkCoverSA, AUS</td>
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<tr>
<td></td>
<td>High-impact functional improvements</td>
<td>Transport for London, GBR</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Midsize repeatable solutions</th>
<th>$1M - $5M average value</th>
<th>Zhenjiang, PRC</th>
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<tbody>
<tr>
<td></td>
<td>Applies assets from similar engagements</td>
<td>MVV Energie AG, GER</td>
</tr>
<tr>
<td></td>
<td>Advanced capabilities through services</td>
<td>Bucheon City, ROK</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Scalable solutions</th>
<th>$50K – $250K average value</th>
<th>Miami Sun Life Stadium, USA</th>
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<tbody>
<tr>
<td></td>
<td>Software-based offerings</td>
<td>Geneva Cantonal Police, SUI</td>
</tr>
<tr>
<td></td>
<td>Rapid deployment and time to value</td>
<td>City of Lancaster, USA</td>
</tr>
</tbody>
</table>

### Flexible Deployment Options

Cloud, SaaS, Shared Services and On Premise
Growth Markets

Bruno Di Leo
Senior Vice President, Sales and Distribution

D.C. Chien
General Manager, Greater China

Takreem El-Tahomy
General Manager, Middle East and Africa
IBM Growth Markets performance in 2011

2011 Performance
- Revenue grew +11% @ CC
- Gained market share, nearly 40 countries grew double digits
- Outpaced Major Markets by 10 points
- 22% of IBM geographic revenue
- 47% of IBM gross profit growth

2015 Roadmap Objectives
- 2010–2015 ~ $17B incremental revenue
- Grow faster than market
- Outpace Major Markets growth > 8 points
- Approach 30% of IBM geographic revenue
- Drive margin expansion

Country / Market Selection
- Market Expansion
- IT Infrastructure Development
- Industry Leadership
2000-2011: IBM branch openings

92 new branches in 2011
31 face-to-face 61 virtual

31 face-to-face branches
- Balikpappan, Ind.
- Kuantan, Malaysia
- Kuching, Malaysia
- Davao, Philippines
- Chonburi, Thailand
- Izmir, Turkey
- Dneptopetrovsk, Ukr.
- Dalian, China
- Gui Yang, China
- Hu He Hao Te, China
- Coimbatore, India
- Guwahati, India
- Indor, India
- Ludhiana, India
- Nagpur, India
- Raipur, India
- Trivandrum, India
- Vizag, India
- Rosario, Argentina
- Aracaju, Brazil
- Bauru, Brazil
- Cuiaba, Brazil
- Manaus, Brazil
- Passa Fundo, Brazil
- Puebla, Mexico
- Querétaro, Mexico
- Tijuana, Mexico
- Toluca, Mexico
- Luanda, Angola
- Dakar, Senegal
- Dar es Salaam, Tanz.
2012-2015: IBM branch acceleration

**Market Expansion**

**Acceleration**
- Faster launches
- Wider footprint
- Deeper capabilities

**Branch Office Plan**

**Branch Office Acceleration**

- 76 new branches in Q1 2012
  - 33 face-to-face, 43 virtual

- Kanpur, India
- Nasik, India
- Patna, India
- Ranchi, India
- Surat, India
- Dong Nai, Vietnam
- Changwon, Korea
- Cheonan/Asan, Korea
- GyeongGi, Korea
- Incheon, Korea
- Jeju, Korea
- Jeonju, Korea
- Brasilia, Brazil
- Sao Luis, Brazil
- Vale do Paraiba, Brazil
- Doha, Qatar
- Goa, India
- Jamshedpur, India

**Branch Office Plan**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
</table>
2012-2015: IBM branch acceleration
IT infrastructure in support of economic growth

IBM in Growth Markets
#1 High-end Systems
   UNIX Servers
#1 Services
#1 Software Served IT

- Automate operations
- E-commerce
- Intelligent infrastructure
- Office productivity
- Smarter Computing
- Technology services
- Great Wall
- Cloud computing
- eSmart
- Mobile business
- Retaillink
- Smart Retail
- Business Analytics
- Safaricom

Market share source: IBM MI assessment based on IDC and Gartner data
Drive transformation and growth - Natural Resources

EBX: operates in Brazil, Chile, Colombia

- 5 companies focused on oil and gas, energy, logistics, mining, and offshore services and equipment
- Investing estimated $15.5B between 2011 and 2012
- World-class partner to build and manage industry solutions

Why IBM

- Industry solutions & best practice
- Market access
- Technology leadership & global skills
- IBM worldwide R&D
IBM Growth Markets delivering on commitments

2015 Roadmap Objectives

- 2010 – 2015 ~ $17B incremental revenue
- Grow faster than market
- Outpace Major Markets revenue growth > 8 points
- Approach 30% of IBM geographic revenue
- Drive margin expansion
- Greater China
- Africa

Country / Market Selection

- Market Expansion
- IT Infrastructure Development
- Industry Leadership

IBM Growth Markets delivering on commitments
IBM China outperforming the market

IBM China Revenue Growth

CAGR 2007 - 2011

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<tbody>
<tr>
<td>China GDP</td>
<td>9%</td>
</tr>
<tr>
<td>IT Market</td>
<td>15%</td>
</tr>
<tr>
<td>IBM</td>
<td>17%</td>
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</tbody>
</table>

Source: IBM Market Intelligence
IBM China investing to serve a growing market

<table>
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<th>IBM China Branches</th>
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<tbody>
<tr>
<td>2004</td>
</tr>
<tr>
<td>13</td>
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</table>

- **2 Research Labs**
- **6 Innovation Centers**
- **4 Software Development Labs**
- **3 Systems & Technology Labs**
- **5 Global Delivery Centers**
IBM is uniquely positioned to support China’s 12th 5-year plan

China’s economic development

Urbanization
- Market coverage and expansion

Industry Transformation
- Partner to innovation

Emerging Industries
- Scale services to transform clients

IBM’s uniqueness
Accelerating China market expansion

**Faster**
- Accelerate branch openings from 31 – 82 in 2012
- 20% workforce growth 2012
- Increase local university internships, hiring
- Faster on-boarding, training

**Wider**
- Extend coverage to over 50% of China’s cities
- Acquire 1000+ new clients
- Expand IBM brand to remote locations
- Grow business partner ecosystem to 2500+

**Deeper**
- 13 Smart Planet references 2011, target 20 in 2012
- 6 Intelligent Operations Center wins 2011, target 20 in 2012
- Improved Software – Services mix 10 points 2007 - 2011

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High value business transformation in China

Urbanization

Industry Transformation

Emerging Industries

IBM unique capabilities

Smarter Cities

Business Analytics

Cloud

Smarter Commerce
IBM is becoming an essential company in China

- IT is a critical enabler in China’s development
- Leverage geographic reach to lead business transformation
- Be innovation partner for China’s smarter growth
Africa: a long-term growth opportunity for IBM

GDP 2015 $2.5T growth
> 10% for several countries
South Africa 19% of Africa

Growing middle class
By 2015 87M households
in middle income group

Foreign direct investment
2010 $554B 16.1% CAGR
2002-2009 (India $198B)

Critical mass in cities
52 cities of over 1M people
(more than Europe)

Large companies
More than 75 companies with
revenue over $3B

Largest working age population
By 2040 to exceed 1.1B
(> China or India)
Building momentum in Africa - branches

IBM Africa 2009
- Egypt
- Morocco
- South Africa
- Tunisia

Middle East & Africa HQ

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Building momentum in Africa - branches

IBM Africa 2012
- Algeria: Mauritius
- Angola: Morocco
- Burkina Faso: Niger
- Chad: Nigeria
- Congo: Senegal
- DRC: Seychelles
- Egypt: Sierra Leone
- Gabon: South Africa
- Ghana: Tanzania
- Kenya: Tunisia
- Madagascar: Uganda
- Malawi: Zambia

Global Delivery Center: South Africa
Software & Hardware Lab: Morocco
Innovation Center: Egypt
Cloud Computing Center: Senegal
Regional GM Office: Tunisia

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Building momentum in Africa - infrastructure

IBM in Africa
#1 High-end Systems
#1 UNIX Servers
#1 Software Served IT

Market share source: IBM MI assessment based on IDC and Gartner data
Building momentum in Africa - industry
IBM is becoming an essential company in Africa

- Leverage broader IBM solutions and capabilities
- Build and develop local talent and agile organization model
- Develop innovation and IT skills on the continent

Dar es Salaam, Tanzania, June 2011
Dakar, Senegal, May 2011
IBM is back in Angola, Sept 2011
IBM differentiation through investments

**New in 2011**
- 13 Countries & 92 branches
- 3 Centers of Excellence
  - Cloud - Singapore
  - Natural Resources - Russia
  - Retail - Mexico
- 2 Global Delivery Centers
  - Argentina, Costa Rica

- Global Delivery Center
- Software & Hardware Lab
- Research Lab
- Innovation Center
- Cloud Computing Center
- Shared Services
- Natural Resources
- Telecoms
- Rail
- Health
- Energy
- Finance
- Retail
- Government

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IBM Growth Markets

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