SMART CITY
VNPT’s APPROACH & EXPERIENCE

VNPT Group

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1. Technology context for Smart City
2. VNPT’s Approach for Smart City
3. VNPT’s Experience in Smart City Development
1. TECHNOLOGY CONTEXT FOR SMART CITY
Industrial Revolution 4.0

- Building the platforms for digital revolution.
- Physical management in virtual workspace.
- Technology Disruption Cloud Computing, IoT, AI, blockchain, …

Digital Transformation

- 4 pillars in the value chain of service delivery.
- Connected, shared and analyzed data to engage the new values and smarter services.
Innovative technologies as the readiness factor for Smart City development:

- Mobile Technology, Mobile broadband network (4G, LTE Advance Pro, LPWA, CALM,... )
- Internet of Things
- Cloud Computing
- Big data analytics
- Artificial Intelligent (AI)
- Transmission Technology
  ...
10+ billion devices around the world are currently connected to the Internet. The number is expected to increase dramatically within the next decade, with estimates ranging from 50 billion devices to reaching 1 trillion. The Internet of Things has the potential to create economic impact of $2.7 trillion to $6.2 trillion annually by 2025.
Generations Of Smart Cities

**Smart City 1.0**

*Technology Driven* IBM (2007), CISCO and several other multinational technology companies were praising the potential for technology to transform cities into highly efficient, highly technologically driven havens for innovators

**Smart City 2.0**

*City-Led smart city, Technology-Enabled* the municipality—led by forward-thinking mayors and city administrators—takes the lead in helping determine what the future of their city is and technology is enabler

**Smart City 3.0**

*Citizen-centric smart city* Citizen centric, place the citizens (as end users) at the central of innovative services with personalization
Our focused areas in the 4.0 Era

**Digital Government**
Consolidate our role as a leading partner of the Vietnamese government in digital government initiatives.

**Smart Cities**
Leverage our competitive edge as a front-runner in smart city initiatives to increase market share and secure market control.

**Digital Transformation**
Expand our digital ecosystems across various industries to facilitate the digital transformation of businesses and the overall economy.

**Industry 4.0**
Focus R&D investments on emerging technologies such as AI, IoT, blockchain and create market-ready solutions for healthcare, education, agriculture, environment management, etc.
2. VNPT’S APPROACH FOR SMART CITY
Smart City Governance

Collaboration issues

End user delivery

Services

Data

Infrastructure and Technology

Traditional city operating model

Optimize the resources

Better Public Service

New value and services

End user delivery

Integrated governance

Data Marketplace

Change of process and culture

Service Management

Operation Management

Technology and digital management

Infrastructure and Technology

Smart city operating model
VNPT’s principles of smart city development

1. Citizen-centric: place the citizens at the central of innovative services
2. Update, ensure the neutral of technologies and integrate to the legacy systems, cost efficiency
3. Guarantee for the information securities and privacy
4. Follow to the development orientation of the Government, adapt to the specific conditions of the cities/provinces
5. Identify the quick wins projects and long-term projects in smart city development
6. Ensure the synchronization between tech and non-tech solutions, such as the policies, financial mechanisms, communications, training, etc.
7. Open data, open platform, and open community
Assessment of the Smart City maturity

**Level 0 (Ad-hoc):**
SmartCityTactical, ad hoc, and department projects based without attention to broader strategic to address a single business issue with a small scale.

**Level 1 (Opportunistic):**
SmartCity effortness projects with the proactive collaboration between some departments with key stakeholders.

**Level 2 (Repeatable):**
The city’s vision, mission, strategic goals, and investment priorities for Smart City have become more formalized. Government culture is change and ICT resources are optimized.

**Level 3 (Managed):**
Every project is consolidated and synchronized in business processes and data framework. Data analytics is accessible for prediction.

**Level 4 (Optimized):** “Smart City” is the statement of belief in city’s vision, mission and strategies. Realtime city management with data analytics and decision making support.
Suggested Deployment Methodology

Step 1
Refer:
- Current ICT plan of the city
- The vision, goal, expectation, challenges of each areas
- Current infrastructure assessment
- Validate the vision, goal, expectation, challenges of city in smart city journey

Step 2
Define the Smart City master plan
- ICT infrastructure for smart city services
- Integrated database and interoperated platforms, open data platform, integrated operation center for the city
- Decide the priority services to implement (Digital government, agriculture, health, education, etc.)

Step 3
- Implement other projects in the smart city roadmap
- Continuously improve and expand the scope basing on the effectiveness of the ongoing smart city implementation
Proposal & Roadmap for a smart city development

1. Reference Architecture
   - Technology architecture
   - Business architecture
   - Solution architectures

2. Proposed ICT solutions
   - Core solutions for a smart city
   - Solutions for specific areas
   - Roadmap & Implementation plan
   - Financial plan

3. Non-Tech Solutions
   - Strategic plan
   - Organization plan
   - Communication plan
   - Processes & Policies
   - Training and resources development
3. VNPT’S EXPERIENCE IN SMART CITY DEVELOPMENT
VNPT – a pioneer in Smart City Initiatives

We are working with over 20 cities to engage in smart city initiatives which focus on enhancing livability and sustainability.
An architecture framework that ensures the co-operation of all infrastructure systems and field solutions

- Demonstrates proven technology solutions and industry-standard solutions in a unified framework
- A reference model for building specific architectural models for each sector
- Comply with the guidance about SmartCity deployment of MIC, Vietnam
- Comply with open standards and refer to the standards of SCC, NASSCOM, ISO / IEC 18384: 2016, Microsoft ... as well as experience in the world.
Eg: Digital Government

Citizen Engagement
Create the most favorable conditions for citizen to access and use public services. Citizen can track their transaction progress. Citizen can contribute their ideas to the government anytime, anywhere.

Understanding Citizen
Thank to intelligent analytics tools, shared data sources will provide information that empowers the government to understand the needs of citizens when interacting with government through public services to find the suitable solutions.

Optimize operations
Interoperable, standardized and digitized processes provide integrated services that allow citizen to interact only with one single point of contact, helping to increase efficiency and reduce costs for government and citizen themselves.

Enhance transparency
Open data is provided to the public will help improve the transparency of government operations and enhance the monitoring ability of citizen and create the new value.

Nortable Solutions
- Administrative procedure digitalization, digital offices
- Online public services, one-stop portals
- Data warehouse
- Electronic Citizen Platform
- Citizen Engagement Applications
- Reports, Analytics
- Open Data Platform
- Provides integrated data visualization, real-time collaboration, and deep analytics that can help leaders prepare for problems before they arise and to coordinate and manage problems as they occur, to improve the efficiency of city operations.

- Major functions:
  - Report and Visualization workspace
  - Events and incident management,
  - Collaboration, instant notification, and messaging
  - Status monitoring
  - Analytic and Prediction Model

**Intelligent Operation Center (IOC)**
Smart City Cooperation model

- Turnkey model
- Rental model
- PPP model
Experience Conclusion

- Integrate all stakeholders: government, citizens, businesses, academy/organization, …
- Citizens are essential stakeholders
- Understand the value to the citizens of accessing the Smart City Data and Services
- The validation is required for any deployment and enhance the citizen experience and satisfaction
- Data is being restructured and shared
- End user data is endless → How to use effectively? → Integrate as much as data you have
- The information security and privacy are considered at the beginning
- KPI measurement and enhance the trust of citizens
- Deploy the appropriate scope (not too large or too small)
Thank you!