Innovation 2.0: Redefining Innovation in the Age of Digital Economy

创新2.0：重新定义数字经济时代的创新

SONG Gang
宋刚

http://www.mgov.cn/lab/

Doctor, Institute of Remote Sensing and GIS, Peking University
北京大学遥感与地理信息系统研究所博士

Vice-President, Beijing Institute of Internet of Things
北京物联网学会副理事长
1st  “Internet+” = New Generation ICT + Innovation 2.0
  “互联网+” = 新一代ICT + 创新2.0

2nd  Four Characteristics of Innovation 2.0
  创新2.0的四大特征

3rd  Managing Beijing: towards City as an Open Mass Innovation Space (COMIS)
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Innovation 2.0: Redefining Innovation in the Age of Digital Economy
Four Characteristics of Innovation 2.0

Managing Beijing: 北京城管案例：迈向城域开放众创空间

towards City as an Open Mass Innovation Space (COMIS)

Innovation 2.0: Redefining Innovation in the Age of Digital Economy
ICT and Public Service Delivery

ICT与公共服务提供

Government Service Delivery Model in Mainframe or Pre-ICT Era

Internet-based e-Government Service Delivery Model

Mobile Government Service Delivery Model

Social Topology, ICT and Government Service Delivery Model

The new Generation of ICT pushed forward ubiquity of computing, network and data, thus the democratization of innovation. Based on open knowledge infrastructure in the environment of innovation 2.0, the role of ICT is changing to enable collaborative democracy in the era of innovation 2.0, from the *tool of dialogue and discussion* to the *tool of action and creation*, from enabling *deliberation* to enabling *collaboration*.
## Social Topology, ICT, and Innovation Paradigm Shift

### Innovation 1.0

**Pre-Internet**
- **Social Topology**: Social Topology, Region
- **Characteristics**: Boundary
- **Typical ICT Application**: Mainframe, local network (and Pre-ICT)
- **Interaction**: Physical and co-located
- **Service Delivery**: Bureaucratic, office based
- **Globalization**: Countries
- **Government Model**: Hierarchy

**Internet**
- **Social Topology**: Network
- **Characteristics**: Relation
- **Typical ICT Application**: Telephone, Internet, e-mail, end user computing
- **Interaction**: Virtual
- **Service Delivery**: Standard transactions, informational
- **Globalization**: Companies
- **Government Model**: Internet Based E-Government

**Variation & transformation**
- **Social Topology**: Fluid
- **Characteristics**: Variation & transformation
- **Typical ICT Application**: Mobile, Ubiquitous technology (IoT, Cloud Computing, AI, etc.)
- **Interaction**: Virtual + Physical
- **Service Delivery**: User-Centric, Action oriented, Open, Tailored, coordinated, real time
- **Globalization**: Individuals
- **Government Model**: Mobile Government, Fluid Government, Smart Government, Government 2.0

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*Song and Cornford (2006) Mobile Government: Towards a Service Paradigm*
# Social Topology, ICT, and Innovation Paradigm Shift

## Innovation 1.0

**Pre-Internet**

- Region
- Boundary
- Traditional E-government
- Hierarchy

## Innovation 2.0

**Internet**

- Network
- Relation
- Internet-based E-government

## Innovation 2.0

**Internet+**

- Fluid
- Variation and Transformation
- Mobile government, Fluid government, Smart government, Government 2.0

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*Song and Cornford (2006) Mobile Government: Towards a Service Paradigm*
Innovation 2.0: From Manufacturing Paradigm to Service Paradigm

Innovation 2.0: 从生产范式向服务范式的转变

Innovation in the Industrial Age vs. Innovation in the Digital Age

Dissolving of traditional boundaries

Innovation of elite to mass Innovation

From “+Internet” to “Internet+” : Innovation Paradigm Shift from Industrial Economy, Industrial Society to digital Economy, Knowledge Society

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Digital Technology Reshaped by Innovation 2.0
创新2.0推动了互联网+，重塑了新一代信息技术
Emergence of New Morphology of Business (Enterprise 2.0), Government (Gov 2.0), City (Smart City), Governance (Collaborative Democracy) … Mass Entrepreneurship and Mass Innovation.
1st “Internet+” = New Generation ICT + Innovation 2.0
“互联网+” = 新一代ICT + 创新2.0

2nd Four Characteristics of Innovation 2.0
创新2.0的四大特征

3rd Managing Beijing: 北京城管案例: 迈向城域开放众创空间
towards City as an Open Mass Innovation Space (COMIS)

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创新2.0：重新定义数字经济时代的创新
Innovation 2.0: Redefining Innovation in the Age of Digital Economy
Focus on research and influences of pervasive and ubiquitous technologies, represented by mobile technology, in government, organizations, and in society at large.

Focus innovation 2.0 emerged in the mobile ubiquitous data and networking environment. Typical Innovation 2.0 mode of *Living Lab*, *Fab Lab*, *Application Innovation Park (AIP)*. And typical case of *web 2.0, open source, digital fabrication*, etc.

http://www.mgov.cn/innovation/20.htm
Characteristics of Innovation 2.0
创新2.0的四大特征

用户创新
Open Innovation
协同创新
Co-Innovation
大众创新
Mass Innovation
用户创新 User Innovation
The power of Internet empowers ordinary people. User Innovation become a common phenomenon.

Song, Chen, etc. (2008) Innovation Mode of Fab Lab and Its Enlightenment, Scientific Management Research, Vol. 26, No. 6,
The development of Fab Lab initiative promote global tide of makers and new industrial revolution.

Song, Chen, etc. (2008) Innovation Mode of Fab Lab and Its Enlightenment, Scientific Management Research, Vol. 26, No. 6,
Characteristics of Innovation 2.0
创新2.0的四个特征

用户创新
User Innovation

开放创新
Open Innovation

协同创新
Co-Innovation

大众创新
Mass Innovation
Open Innovation

Open Innovation 2.0

Open Innovation 3.0 as an ecosystem

Of Government, User, Industry, Academia and R&D

Network of Living Labs

- a first step towards a new Innovation System!

We are creating a network of Living Labs around Europe.

If you believe in involving people in the development of new ICT solutions and see this as a key issue for the development of European society-you are welcome to join in the process of defining and developing the European Network of Living Labs.

- Latest News -

Expression of Interest for 2^nd wave of the European Network of Living Labs now open (open until May 16 2007) >

Always: Welcome to join the Open Innovation Community >

21-23 May 2007: European Network of Living Labs Event, Guimarães, Portugal

Read more >

2007 End of launch of the European Network of Living Labs by the Finnish EU-presidency >

Pressrelease >

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me | The mission | The concept | About us | The network | Open innovation community | Even
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Characteristics of Innovation 2.0

用户创新 User Innovation
开放创新 Open Innovation
协同创新 Co-Innovation
大众创新 Mass Innovation
Collaborative Innovation of Government, User, Industry, Academia and R&D. ICT: From tools of communication for deliberation, to tools of Interaction, manufacturing, knowledge management and Visualization which enables better collaboration of knowledge, resources, performance, action and creation.

Song, Bai, An, etc. (2016) “Collaborative Innovation from Maker to Mass Innovation in Perspectives of Innovation 2.0: Case Studies and Implications”, e-Government
“listening to the city”

Critics of City Consultation in New York

精心策划的协商会确实给了人们关心民意的表象，但同时，却遮掩了正在上演的真正的权利政治，剥夺了纽约人实际参与而不是简单反应的机会。

"I Love Beijing" Government Wiki for City Management

问计于民，面向行动，实现了市民“自管理”和政府管理的融合

NewYork Times Cover Story in 2002

4500个纽约人现场出席，800人在网上参与，共同讨论世贸中心重建设计方案，备受世人瞩目

Characteristics of Innovation 2.0

用户创新  开放创新  协同创新  大众创新
User Innovation  Open Innovation  Co-Innovation  Mass Innovation
Mass Innovation as emergence in perspective of complexity Science.

New development Strategy of China: Mass Entrepreneurship and Innovation
城域开放众创空间

将是推进创新2.0时代大成智慧、新型智慧城市建设和发展的新路径、新载体；“大众创业、万众创新”深入发展的新趋势；是创新2.0时代的群众路线新实践。
“Open Source is the typical phenomenon of Innovation 2.0, with the spirit of open, sharing, free, collaboration and democracy. It will also foster proper environment for Innovation 2.0.”

“开源是创新2.0的重要特征。开源创新具有开放、共享、自由、协同、民主化的理念，开放开源既可为推动创新2.0发展提供良好的环境，也是体现创新2.0的典型案例。”

——Professor LU Shouqun, Chair of OSS
中国开源软件(OSS)推进联盟主席陆首群
创新2.0的实质（机制）

借助虚空（Cyber）之力重构实空（physical）业态

1. 虚拟与时空对接，将虚空中新一代创新基因注入实空，促其中传统业态嬗变重构；
2. 以虚空中的知识、信息资源取代实空中的人力、自然资源，使业态赖以生存的资源由原来的私有排他性、日常消耗性、运作低效性变成开放共享性、永续可用性、运作高效性，为重构新业态创造条件；
3. 以虚空中云物移大智等深度网信技术作用于实空中的传统业态，在经历碰撞、交互、融合过程后催生该业态升级换代；
4. 加入虚空中互联网思维，催生实空中新业态的管理创新、制度创新，以保障科技创新。

陆首群. 互联网+、虚拟网络空间、创新2.0模式与创客潮. [J]. 办公自动化, 2015, (8)
从信息共享、沟通、交流到共同行动、共同创造，从协商到协作

协同创新

从内部创新资源开发，到外部资源整合，到创新生态系统营造

开放创新

从个人通信，到个人计算，到个人设计、个人制造

用户创新

从简单线性到开放复杂巨系统的涌现

大众创新
Science 2.0, Technology 2.0, Management and Institution 2.0 shape Innovation 2.0 of the digital economy all together. Redefine the role of user, the value of application, the connotation of collaboration and the power of the mass.
1st  “Internet+” = New Generation ICT + Innovation 2.0

“互联网+” = 新一代ICT + 创新2.0

2nd  Four Characteristics of Innovation 2.0

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Data-Driven Command and Control in Beijing City Management and Law Enforcement

Towards City as an Open Mass Innovation Space (COMIS)

Enable the front line government employees and society in co-governance and mass innovation for a better city to live.

City as an Open Mass Innovation Space (COMIS) is the new trend of Smart City development. Smart City Management should take advantage of New Network and New Data Environment of Innovation 2.0, make the open city space we living, working, and governing as an open mass innovation space.

SONG Gang, WANG Lianfeng (2017) City as an Open Mass Innovation Space: New Approach to Smart City in Era of Innovation 2.0. Office Infomratization, No. 20
Mobile Patrolling, Supervision, and Law Enforcement Enabled by “All in One” PDA
执法城管通“五位一体”到掌端
移动巡查、执法及综合监管
Mobile Patrolling, Supervision, and Law Enforcement Enabled by “All in One” PDA

执法城管通“五位一体”到掌端
移动巡查、执法及综合监管
是国内最早的政府开放数据探索。

聚群体智慧，大众参与管理 (Public Participation, Crowd Sourcing, Collective Inteligence)
“I Love Beijing” Public Service Platform and APP

“我爱北京”城管地图公共服务平台及APP

“I Love Beijing” APP

Android

iOS

便民

举报

政务
Special high-level Seminar “Innovation Strategy and State Prosperity: Innovation 2.0” is held by Chinese Academy of Governance to promote innovation on economic development and state governance.
“Map Service Mode Based on Innovation 2.0 for City Administration” of Beijing City Administration and Law Enforcement Authority is awarded Technology Leadership by FutureGov Award in 2011. It is the first among the Ten Case Studies in the report “Rethinking Smart Cities” released by United Nations Development Program in 2015.

“Especially meaningful in the grand context of e-government in the age of innovation 2.0. The forward-looking nature of these projects inspires and drives e-government practitioners across China and Asia Pacific in general.”
- Former GovCIO of New Zealand, Laurence Millar

Rethinking Smart Cities - ICT for New-type Urbanization and Public Participation at the City and Community Level in China
Towards City as an Open Mass Innovation Space (COMIS)

Government 2.0, as the innovation 2.0 transformation of the government, is key to foster the collaborative innovation of the government, business and society. The Gov 2.0 practice of open data, wiki government can enable city as an open mass innovation space for better economy, society and governance. MoBike sharing, Navigation app powered by open data...
City as an Open Mass Innovation Space towards Digital Economy and Smart Society

The Interaction of new generation of ICT and Innovation 2.0 enables “Internet+”, foster the new network and new data environment of Innovation 2.0, makes the citizen living space and urban governance space an open mass innovation space of user innovation, open innovation, co-innovation and mass innovation ecosystem, where the digital economy and smart society flourish, and powers mass entrepreneurship and innovation.
Innovation 2.0: Redefining Innovation in the Age of Digital Economy

创新2.0：重新定义数字经济时代的创新

Innovation 2.0: Redefining Innovation in the Age of Digital Economy

Thanks for your attention😊