Capitalizing on new insights and driving economic development

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Citizen services industries, including public sector, are being hit by multiple disruptive forces – technology, ever-changing consumers and an inundation of data.

- Citizens wants and needs changing
- New mediums emerging (mobile, smart sensors, social)
- E-commerce challenging traditional retailers and public sector services
- Data becoming extensive and ubiquitous
- Emerging markets are becoming even greater opportunities for economic development opportunities
- Consumers have access to perfect price visibility via technology


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The future of States & Local Government, and citizen services will be unlike the past; cloud will impact citizen experiences and operational efficiencies.

**Future of Citizen Services**

**MOBILE “BEACONS”**
- Governments and businesses will be able, via mobile “Beacons”, to tailor their communications with citizens via smart mobile devices based on geo location.

**CITIZEN ANALYTICS SOLUTIONS**
- Governments and businesses will be able to use data associated with citizens to create a custom experience for each citizen.

**COMPREHENSIVE VIEWS OF SUPPLY CHAIN**
- Governments and business operations, using data and analytics, will be able to get a holistic view of their supply chain where they can optimize inefficiencies as well as present new services and capabilities where they are needed when they are needed.

**MOBILE PAYMENTS**
- Citizens will be able to scan service requirement indicators, food, beverages & merchandise via their mobile phone and pay using a credit card or e-folio without having to wait in line.

Accelerated cloud adoption within government is driven by promises of increased speed and agility, improved efficiency and cost optimization.

Cloud computing benefits for government

<table>
<thead>
<tr>
<th>Speed, agility and scalability</th>
<th>Security-rich and highly available</th>
<th>Improved efficiency</th>
<th>Cost optimized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate faster delivery of services</td>
<td>Facilitate improved data security Help better manage compliance Help improve your disaster-recovery plan</td>
<td>Help more effectively manage IT resources Enable reduced need for human intervention with automation</td>
<td>Enable improved IT efficiency and economies to reduce IT costs Shift from fixed cost to variable cost</td>
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Governments around the world have accelerated cloud adoption ...

- **United States**
  - "Cloud First" Policy

- **UK**
  - "Cloud First" policy
  - "G-Cloud Programme"

- **Singapore**
  - "G-Cloud"

- **Moldova**
  - "M-Cloud"

There are a variety of cloud adoption models.

**Business process as a service (BPaaS)**

Any type of horizontal or vertical business process that is delivered on a cloud services model.

**Software as a service (SaaS)**

Cloud-based applications run on distant computers “in the cloud” and provided on service-basis, usually for a monthly fee.

**Platform as a service (PaaS)**

Cloud-based environment with everything required to support the complete lifecycle for building and delivering cloud applications.

**Infrastructure as a service (IaaS)**

Computing resources, including servers, networking and storage, on a pay-per-use basis.
Cloud is also available in several delivery models.

- **Private clouds**
  - On customer premise
  - Government data center
  - Customer operated
- **Managed private cloud**
  - On customer premise
  - Government data center
  - IBM operated
- **Dedicated private cloud**
  - Hosted by IBM
  - Government
  - IBM (or partner) hosted and operated
- **Shared (community) private cloud**
  - Hosted by IBM
  - Government
  - IBM (or partner) hosted and operated
- **Public cloud services**
  - Hosted by IBM
  - Users

Customization levels:
- **High**
- **Low**
Emerging Trend in Government

We have seen emerging trends in cloud adoption among governments.

**Emergence of “local clouds”**

Restriction of **data location (data residency)** and **use of local content** and staff requirements are common in many government clouds for their security and economic policies, making local clouds a viable option.

Use cases span from government to local business.

**New opportunity for “government cloud providers”**

Emergence of “local clouds,” the ability to scale cloud, and its potential cost benefits create an opportunity for entrepreneurial government agencies to provide IT services to other government agencies.
Cloud Marketplace enables **innovation** with hundreds of services **across the cloud spectrum**

**IBM Cloud Marketplace**
- Quickly address business needs by role with SaaS
- Speed app dev with Bluemix
- Scale with infrastructure and management as a service

**Software as a Service**
*Business-grade apps to accelerate innovation.*

100+ SaaS applications

**Platform as a Service**
*Powerful services and APIs via an integrated cloud platform.*

Bluemix

**Infrastructure as a Service**
*Self-service enterprise IT infrastructure configurable to your needs.*

Softlayer
Leaders need access to cloud business apps to drive citizen service and economic development opportunities.

Software-as-a-Service (SaaS)

- Accelerate business innovation
- Engage and collaborate
- Connect business processes fueled by powerful analytics

100’s of SaaS offerings aligned to business and IT
The IBM Watson Health Cloud will provide the platform that is HIPAA compliant, standard based, massively scalable to enable this insight.

- **Insights**
  - Cognitive & Advanced Analytics

- **Data**
  - Structured & Unstructured

- **Solutions**
  - IBM & Ecosystem Solutions

**The Healthy City – A Scalable Platform of Insights**

- **Individuals**
- **Researchers**
- **Govt.**
- **Payers**
- **Providers**
- **Life Sciences**
Example: Building Management Cloud Solutions

Achieving real results with cloud technologies

**General Services Administration**
Establish near-real-time monitoring of equipment sensors and link to corrective action

Predicts annual **energy savings of USD13 million** in initial 55 building installations

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**Portland School System**
Operate more efficiently and make better decisions where and when monies should be spent

Realizes over **300% ROI** and cuts facilities management costs by **15%** through increased productivity

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**IBM**
Enable cost reduction opportunities faster and help improve overall efficiency and reliability of assets

Estimates **year-over-year incremental energy savings of 5%**, and **delivers 8% annual savings** on equipment operating costs during pilot

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**UMass Amherst**
Increase accuracy of spaced used per PI and recover more indirect costs

Transforms a space management project across 250 departments—decreasing the project time by **67%**, from three years to one year

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The Connected City – Example: Miami Dade

**Challenge:** Disconnected programs for parks, businesses, and marketing lead to underutilized resources and lost revenue opportunities.

**Solution Description:** Mobile application connects users to parks, businesses, events, and transit in a single application. County builds partnerships, sponsorships, and other revenue generating opportunities for increased economic vitality.

Data collected from city and private sector operations...

- Park Foundation Program Information
- Businesses (Restaurants, Bars, Nightclubs, other POI's)
- County-sponsored events
- Transit schedules, arrival information, etc

Data is integrated, analyzed and visualized...

- End user sees destination information and how to get there. Can share information via twitter and facebook, and receive incentives for businesses, transit, events, etc.
- County and businesses can see coupon and application usage

Smarter decisions are made...

- Businesses: $$ from wash across city, view redeemed coupons
- Transit: Increased ridership and revenue, coordination of transit with user needs
- Parks: Highly attended, well-sponsored events (with add'l tax and membership revenue)
- Citizens/Tourists: Attend events, connect with city and businesses, get great deals!
**Challenge:** Disconnected programs for health, businesses, and patients lead to underutilized healthcare advantages in maintain chronic vs acute: healthy vs at risk..

**Solution Description:** Mobile application connects patients and medical care beyond the 4 walls of the hospital and into a healthy city.

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**Data collected from city and private sector operations...**

- Healthy Eating Certification Program
- Businesses (Restaurants, Groceries, Parks, other POI’s)
- City-sponsored Park events
- Transit schedules, arrival information, bike routes, etc.

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**Data is integrated, analyzed and visualized...**

End user sees destination information and how to get there. Can share information via twitter and facebook, Apple watches, etc. and receive incentives for businesses, transit, events, etc.

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**Economic & Health Vitality**

- City & Doctors can see coupon and health statistics/usage

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**Smarter decisions are made...**

- Businesses: $$ from wash across city, view redeemed incentives
- Transit: Increased ridership and revenue, coordination of transit with health options
- Parks & Participating Restaurants: Highly attended, well-sponsored events (with add’l tax and membership revenue)

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**Citizens/Tourists:** Attend events, connect with city, business and health officials - and, get great deals!
IBM’s New “Insights Marketplace” cloud for City/Government Data - capturing data in real-time, analyzing it in flight, and providing tailored information to individuals, organizations and solutions.

This provides the ability to monetize the data, and/or provide open data for businesses to enhance and monetize.
Digital.NYC Delivers Results
- 6,421 registered startups
- 215,000 sessions
- 166 investors
- 3,350 jobs posted
- 225+ NYC startups to IBM GEP

Local Digital Platforms are gaining momentum....
Digital City Start-Ups – Driving Economic Development

Community Groups

*NYTECHMEETUP*

*WOMEN WHO CODE*

*Startup Saturday*

On the Cloud

*stackoverflow*

*digit*

*GitHub*

IBM Innovation Spaces Co-located with Startups and Developers

- B.Amsterdam
- Singapore
- UNIUBE Brazil
- Koc Incubation Center Istanbul

The above examples and many more....
Opportunities to Innovate, Learn and Build

Developers, Startups, Academic

- Hackathons
- Global Entrepreneur Program
- Academic Initiative for Cloud

$120K in Free Cloud Platform Credits* for 1 Year

Technical Expertise Business Mentoring SmartCamps

6 month access to Bluemix Trial for students*

Bluemix Ambassador Program

*up to $120K based on meeting eligibility requirements and qualification levels, students in approved courses
Digital Cities Run on Cloud technologies to drive growth

IBM Global Entrepreneur
Providing the resources you need – exposure to 600+ expert mentors of corporate execs and serial entrepreneurs, plus access to a global network of industry leaders, technical experts, partners and clients. We also offer free software, including SoftLayer Cloud hosting and Bluemix PaaS development platform. If you’re a privately-held tech startup less than five years old and tapping into Cloud, Big Data, Analytics, Mobile, or Social to innovate – this is for you.

IBM Cloud MarketPlace
Find the startup in your enterprise. Explore hundreds of IBM and Business Partner services in the IBM Cloud marketplace.

IBM Academic Initiative
The IBM Academic Initiative partners with university faculty to close skill gaps, offering no-charge resources for educators and students in technology areas such as business analytics, big data, mobile computing, cloud computing, and cyber security. Members of the Academic Initiative take advantage of training and course materials, software, hardware and cloud capabilities, real-world challenges in the classroom, and a community of leading edge thinkers and doers.

DEVELOPMENT JUMP-START RESOURCES

IBM Bluemix
Looking to kick off a new project but undecided where to begin? With high-performance cloud infrastructure from IBM SoftLayer and dozens of IBM and 3rd party services, Bluemix is a great place to build, deploy and run new applications of all types. So what are you waiting for? Get started today with a 30-day free trial and you'll be launching new apps and services in no time.

Watson Analytics Beta
Go from data to analysis in seconds. If you can use the web, you can do this. Bring your data. Ask your question. In seconds, you get an insightful visualization just right for your data. And, getting started couldn't be easier. Watson Analytics—Project Neo from the IBM Labs—runs in the cloud so it supports any device you use. Register your interest for the Watson Analytics beta.

IBM SoftLayer
When your business lives in the cloud, you can't compromise on your infrastructure's performance... even if you're on a bootstrapped budget. The fastest-growing startups require consistent cloud performance and the ability to scale infrastructure up and down quickly and easily when customer demand changes. SoftLayer's innovative cloud platform is designed to meet those diverse and evolving needs.
Digital Cities Connect Innovators & Accelerators

WORKSPACES & CO-WORKING SPACES

WeWork HQ

WORKSPACES & CO-WORKING SPACES

QNS Collective

Collaboration for innovation. That's the guiding principle behind our mission at QNS Collective.

$395 / person / month, 1 space

The Yard

The Yard is a creative association of open coworking and private workspaces with locations throughout New York City.

$475 / person / month, 7 spaces

New Work City

A coworking space for people who would otherwise be stuck working at home alone in their K's. We built this place so...

$367 / person / month, 13 spaces

INCUBATORS & ACCELERATORS

HarlemGarage

INCUBATORS & ACCELERATORS

Samsung Accelerator

30 W 25th St, New York, NY, 10010

IBM Watson Center

51 Astor Place, New York, NY, 10003

State University Of NY Downstate Medical Center Incubator

750 Parkside Ave., New York, NY, 11225

Center For Social Innovation

401 West 25th Street, Suite 325, New York, NY, 10001
Community participation continues to grow

- **Wimbledon Hackathon**
  - 10-11 June

- For two days developers rapidly build new ways to create an even more exceptional experience for fans, using IBM Bluemix.

- **Cloud World Forum**
  - 24-25 June

  Keynote Theatre – Building Business in the Cloud

  *Presentation: Create your Future*

  ![](image)

  *Presentation: Innovation by Design; the Journey of a Start-Up*

  ![](image)

- **Imperial College**
  - Space App

  Engineering students implement Bluemix to provide sensor readings on a balloon’s journey to space and back.

  “It’s pretty incredible that the API can do this, and suits our needs perfectly.”

  – Imperial College

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Sample of Startups and Partners

**Monitise**
Providing Mobile Money services to over 350 financial institutions and more than 28 million users worldwide

**knownow**
Real Information. Delivered in Realtime. Automatically.

**Push Technology**
Create Your Unique Push Data Network
Turbocharge your apps that run over the Internet

**Kingdon**
Mobile tool for local businesses to bring and keep customers.

**US State & Large City**
Water Initiative – Build Internet of Things based cloud on water initiative; monetize data access, and create cottage industry of sensor development companies
Thank you.
Draw all of these personas to transit-oriented parks to create enjoyable experiences that promote health and well being and bring revenue potential to Brickell area businesses.

**Scenario 1:** The "post-game" celebration use case.

**Scenario 2:** The "fill free time" use case.

**Scenario 3:** The "daily fitness" use case.

**Scenario 4:** The "Taste of Brickell" use case.

**Scenario 5:** The "movie night in the park" use case.

**Scenario 6:** The "student day" use case.
These personas monitor and manage the economic operations that is driven by the end user personas.

Transit delivers people to destinations and provides incentives....

People enjoy parks...

People spend money at nearby businesses

- Is rider-ship up?
- Is revenue up so I can build and maintain transit operations?
- Will riders recommend transit to others?
- Are people riding transit to come to the parks?
- Are people coming to the parks?
- Are businesses investing in the program so I can generate revenue to maintain the parks?
- How much revenue is coming from transit-based discounts?
- Is the campaign working?
- Are more businesses signing up for the program?