mInnovation in the Caribbean
Key Stakeholder Workshop

Kingston, Jamaica
June 20, 2012
Objective

Demand-Driven and Participatory Design
Agenda

• **Morning Session 9:00am – 12:15pm**
  – Welcome and opening remarks
  – Mobile Innovation in the Caribbean
  – Preliminary model: Enabling Mobile Innovation across the Caribbean region
  – What’s happening now: Digital Jam 2.0

• **Lunch 12:15pm – 13:30pm**

• **Afternoon Session 13:30pm – 17:30pm**
  – Intense feedback sessions: Islands, Stakeholder groups
  – Deep Dive: Key Opportunities and Challenges
  – Way Forward

• **Networking**
GROWING INNOVATION

INNOVATE.
- Creating new business models
- Promoting unique products and services
- Finding solutions to tough development problems
- Supporting cutting-edge technology

CONNECT.
- Connecting entrepreneurs, policymakers, and investors
- Expanding ICT access for all
- Leveraging public resources and private sector incentives
- Marrying research with action

TRANSFORM.
- Building local capacity
- Creating jobs and growing small businesses
- Changing the environment for entrepreneurs
- Harnessing technology for agriculture and education

InfoDev’s Map of Global Networks
EPIC Background

- A 7 year, CD$20M program designed to create and grow competitive Micro, Small and Medium Enterprises (MSMEs) across the region. EPIC aims to help MSMEs overcome persistent market challenges in the Caribbean region by:
  - Using of business incubation to provide a suite of services for start-up entrepreneurs comprising of advisory services, mentorship, and access to office space and equipment
  - Upgrading skills and capabilities of incubator managers and policymakers supporting MSME development
  - Providing seed funding

- Three Focus Areas
  - Mobile Innovation
  - Climate Technology Innovation
  - Women Entrepreneurs
Mobile Innovation in the Caribbean

• In the context of EPIC, the bottom line question for the Mobile Innovation Component is:

What would it take to successfully turn the Caribbean into a world-class region for mobile innovation?

• To address this question, infoDev is designing a project that is building off from a portfolio of existing and planned mobile innovation activities around the world.
"Catalyzing new engines of job creation and economic growth by sourcing early stage mobile innovation and helping growth oriented entrepreneurs to take their ideas to market"
Demand Driven Design

- Phase I: Market Identification & Assessment
  - Market readiness, Local/Regional demand
  - Stakeholder identification
- Phase II: Comprehensive feasibility study and business planning
- Phase III: Implementation, Sustainability

<table>
<thead>
<tr>
<th>2-3 months</th>
<th>4-6 months</th>
<th>Implementation: 5 years</th>
<th>Final reports, M&amp;E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Diagnostic</td>
<td>Feasible Business Plan</td>
<td>Set-up, phased service roll-out, full-scale</td>
<td>Sustainability</td>
</tr>
</tbody>
</table>
Phase I

Goals:
- Estimate market demand/potential for mobile innovation activities
- Estimate local readiness and capacity to run/host the activities
- Gather useful data to help to proceed with more detailed business modeling and high-level design of the activities
- Conduct initial stakeholder identification and outreach

Guiding Questions:
- What would a mobile innovation program contribute to the market?
- Does the environment need our intervention and can it support it?
- What specific components and design specifications should our program contain?
- Is a proper business planning phase justified (feasibility study and a business model design)?
Mission to 4 countries form the main part of the market diagnostics phase. Jamaica, Trinidad, Barbados & Grenada over a two week period in February 2012. In each country the following was done:

- **Desktop research:**
  - Identify potential stakeholders and resources in the Caribbean and within the WBG

- **One-on-one Meetings:**
  - Meet stakeholders and policymakers and engage on the basis of a pre-determined list of questions

- **Focus Group Meetings:**
  - Hosting of focus group meetings with an emphasis on the potential beneficiaries.
Mobile Innovation in the Caribbean
The economy

- Often countries depend on single source of income (e.g., T&T on oil), financial crisis hit inflow of capital / FDI
  - Diversification of exports & investment in knowledge economy necessary
  - Better integration into global economy needed

- High prices for telecom
  - Fixed broadband costs almost 8% of GNI per capita on average for the region, compared to 0.8% of GNI per capita in developed countries
The economy

- Good arguments to create mobile innovation jobs
  - High level of youth unemployment
  - Brain drain of talented youth
- Likely opportunities for mobile innovators
  - High reliance on service sector
  - Enterprise and consumer applications that serve key sectors: Oil, (eco-)Tourism, Carnival, Marine & Fisheries, agriculture & agro-processing, Creative Industries (music, fashion), globally identified opportunities (mobile banking and payments), or local challenges (Crime)
Regional Business Environment

• Boundaries are low to do business within the region
  – CARICOM initiatives such as The Right of Establishment

• Regional collaboration challenging
  – University and business networks much more efficient than activities that require government level collaboration
  – Consensus that UWI is an important and neutral regional role player
Telecommunications

- Two main carriers are dominant within the region – Digicel and LIME – bandwidth limitations currently exist as current status of network is at 2G/3G being upgraded to 3.5G/4G;

- Data usage growing very fast
  - High usage of RIM Blackberry products and apps; due to attractive data prizing
  - Adoption of businesses to efficiently utilize faster mobile bandwidth is expected

External Environment: Relevant infrastructure & policies
Mobile Indicators

Mobile Market Penetration (%)

- Antigua and Barbuda
- Barbados
- Grenada
- Jamaica
- Saint Kitts and Nevis
- Saint Vincent and the Grenadines

% of 3G Connections (%)

- Barbados
- Jamaica

Growth Rate, Mobile Connections

- Barbados
- Grenada
- Jamaica
- Saint Kitts and Nevis
- Saint Lucia

- Very high mobile penetration
- 2G market is saturated
- 3G market is starting to emerge

All data: Wireless Intelligence
External Environment

Relevant infrastructure & policies

• Physical Infrastructure
  – Limited, cost-prohibitive access. Piggy-back off shared space with existing space within universities, private sector entities or government-sponsored organizations

• Policies
  – No targeted policies from government to further competitiveness and growth for innovation. Regional policies are non-existent. However reforms and policies target ICT regulation have increased competition, mobile penetration and decreased the digital divide.
Private Sector Development and STI Initiatives

- Many ICT-focused government PSD initiatives focus on infrastructure and BPO (Call centres provide large number of jobs in short term), but less on innovation
- Several concurrent regional and national PSD programs
  - Duplication of efforts due to lack of collaboration
  - Possibility to collaborate and leverage additional funding to be researched further during business planning phase
- UWI as an academic connector for STI activities
- Some push from the diaspora by CADSTI (The Caribbean Diaspora for Science, Technology & Innovation)
- India an active stakeholder supporting STI and ICT programs
Mobile developer communities exist but are limited, fragmented and disconnected regionally and sometimes nationally; existing activities are self-sustaining, which is promising

- Active communities in Jamaica fostering regional events and collaboration, but emphasis still on Jamaican startups
- Opportunity for the project to scale up existing activities rather than building something from scratch

Developer and entrepreneur communities tend not to communicate and skills do not overlap

Successful entrepreneurs who could be recruited as mentors may prefer to remain unknown, in order to avoid unnecessary attention
Almost no presence of government-funded initiatives; however, there is interest to support national innovation activities, but capacity, resources and linkages are limited.

Little incentive from government for tech startups (requirements do not match technology innovation reality, such as the need to have been two years in business), limited tax incentives.

Governments could support open data initiatives and move faster to facilitate mobile payments.

Starting a business is relatively similar in process/time across the region and is easier compared to the overall LAC region.
Brain drain and the lack of ICT R&D activities in the region are major challenges.

Due to the early stage of developer communities, tertiary institutions likely to be the main source of talent, and many communities already partner with key institutions actively.

- Dropout rates of computer science programs high (e.g., In Jamaica, one estimate was that there are only 40 graduates out of 250 who start the program).

Bigger events (like Caribbean Beta) the best opportunity to attract existing entrepreneurs and strengthen the deal flow.

Use of local networking events, well incentivized competitions, and developer forums to source and encourage professionals who are already employed, particularly by larger IT companies.
External Environment

Talent pool (cont.)

• No reliable data available on a potential mobile innovator talent pool, additional research needed to estimate the total market size

• Low level of women participation
  – Slashroots experience: less than 10%
Tech startup access to finance

• Very limited presence of venture capitalists or angel investors (more opportunities in T&T and Barbados than elsewhere)
  – Angel Investor network being established at least in T&T
  – VC initiatives have by largely failed in the past
• Banks reluctant to lend to tech businesses that they do not understand, are high risk, and who lack traditional collateral
  – Educating financing institutions and key individuals was identified as a need that EPIC could address
• Exit opportunities need to be researched further (we estimate that due to low funding availability these have not been tested properly)
MNOs do not have their own AppStores, although the possibility has not been ruled out.

RIM, the only MNC that has done significant developer outreach in the Caribbean:
- Android devices are expected to grow their market share quickly in the near future; Nokia’s brand strong in feature phone category.
- ZTE, an example of a Chinese manufacturer that is gaining market share.
- Some activities by Samsung and Microsoft.

Several active platform and technology specific developer and user groups (RIM, Linux, Android, Oracle).

Lack of local tech industry role models and champions who inspire youth to try out entrepreneurship.
Key Mobile Innovation Issues (cont.)

- Monetization is a serious hurdle for local developers
  - Operator billing behind gated walls, unsustainable revenue share models
  - Use of credit cards, or other available payment methods (Paypal) very expensive, limited market reach
  - Limiting regulation related to mobile payments (slowly changing); financial sector not ready to adopt

- Slow mobile data speeds and high data prices limit the usage of consumer apps
  - Unclear if apps targeting local users have a sustainable business models (willingness of consumers’ to pay for local apps?; business community big enough to provide sufficient advertising revenue?)
## Initial Stakeholder mapping

<table>
<thead>
<tr>
<th>External Environment</th>
<th>Jamaica</th>
<th>Trinidad</th>
<th>Barbados</th>
<th>Grenada</th>
<th>Regional Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tech Community (initiatives)</strong></td>
<td>Kingston Beta,</td>
<td>BrightPath, Internet Society, Computer Society, ICTS (Information and Communications Technology Society)</td>
<td>Information Society of Barbados, Hive foundry</td>
<td>Information Technology Association (iTAG)</td>
<td>Caribbean Beta, BrightPath, Slashroots, ICT-Pulse, Developing The Caribbean</td>
</tr>
<tr>
<td><strong>Incubation &amp; ED programs</strong></td>
<td>MSME Alliance, UTECH</td>
<td>eTeck, IBIS, American Chamber of Commerce</td>
<td>BIDC, Hive foundry, Barbados Entrepreneurship Foundation</td>
<td>GIDC</td>
<td></td>
</tr>
<tr>
<td><strong>Universities &amp; Business Schools</strong></td>
<td>UWI (MONA), NCU</td>
<td>UWI, Arthur Lok Jack SoB, UTT</td>
<td>UWI, Cave Hill SoB</td>
<td>ICT Centre for Excellence, St Georges SoB</td>
<td>UWI</td>
</tr>
<tr>
<td><strong>Government programs</strong></td>
<td>JAMPRO</td>
<td>NEDCO, various Ministries</td>
<td>BIDC</td>
<td>GIDC, Ministry ICT</td>
<td>Caribbean Export Board, CTU</td>
</tr>
<tr>
<td><strong>Pvt industry</strong></td>
<td></td>
<td>Blink Bband,bMobiTSTT, Teleios, Microsoft</td>
<td></td>
<td></td>
<td>Digicel, LIME, Scotia, FLOW, RIM</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Scotia Bank</td>
<td>NEDCO</td>
<td>Samdor, Invest Barbados</td>
<td></td>
<td>Compete Caribbean EGF</td>
</tr>
</tbody>
</table>
High level Conclusion

Caribbean Mobile Innovation Potential

• General market environment is positive, although the size of the economies indicates any successful initiative should be regional.
• Basic startup communities and mobile initiatives in a number of countries (Jamaica most promising, followed by Trinidad & Tobago and Barbados), including some regional activity. However, mobile innovation eco-system would clearly benefit from stimulation both locally and regionally.
• Sufficient talent pool for mobile innovation enablers (general technical capacity, aspiring and existing entrepreneurs). Coordinated marketing efforts needed for regional outreach.
• Early stage financing is not prevalent or readily available and should be developed. Some growth financing for startups, but entrepreneurs lack skills to pitch and articulate their ideas to potential investors. A seed fund in combination with current activities would be valuable.
• Mentors and Diaspora support is available, but co-ordination of efforts is required.
• Regional approach seems viable if supported by relevant local and regional institutions, and the mobile innovation community in particular.
High level Conclusion

Market Demand and Capacity (enterprise enablers/hosts)

• Needs analysis:
  – Need for regional and local co-ordination and structure
  – Technical support for structuring and maintaining a regional initiative, platforms for sharing
  – Financial support in setting up a regional effort
  – Financial and technical support for setting up targeted local activities and systems
  – Legitimacy and credibility on regional level for role players

• Local readiness and capacity to host activities:
  – Beneficiary group large enough to warrant support
  – Number of current activities to leverage on
  – Diverse stakeholder group (tech communities, private sector, universities, government) prepared to support the initiative
Mind-to-market path (defined later)

Needs analysis
- Entrepreneurs struggle to get off the ground, and to the market
- Technical and business development capacity
- Access to experienced mentors, coaches
- Seed funding (income security) and capacity to pitch to investors
- Access to international markets and networks
- Access to facilities, such as co-creation spaces

Market Opportunity
- Community prepared to pay for services and share returns (royalty or equity)
High level Conclusion

Mobile innovation program’s value to the market?

- Co-ordination of efforts, regional co-operation, Platforms for Collaboration
- Seed Capital and Business Model Support for Eco-System Development
- Increased Capacity, Models and Information
- Global Exposure, Partnerships & Networks, Credibility
- infoDev’s global mind-to-market initiatives
High level Conclusion

Proceed with Business Planning

- Market identification & feasibility assessment
- March - April '12 Caribbean mInnovation Model
- June '12 Stakeholder Workshop
- June - July '12 Surveys and quantitative analysis
- July - September '12 Detailed Business Planning
- September '12 Focus groups
- October '12 Delivery of Business Plan
- November - December '12 Selection of local partners
Enabling Mobile Innovation across the Caribbean Region (Preliminary mInnovation Model)
Suggested Model

Assumptions

• The initiative should be a regional effort as deal flow on individual islands is likely to be too small (Jamaica a possible exception).

• The focus initially should be on a few islands (max 6) to test the model before rolling out to all interested islands.

• A networked model should be employed with a regional hub in one of the major islands (Jamaica, Trinidad, Barbados). Choice will be determined by submission of a proposal by interested parties.

• The main drive will be to initially rally interest and grow the communities. Limit infrastructure requirements to minimize expenses.

• Financial sustainability will be an important decision factor.
From mind-to-market approach

Entrepreneurs
with
Skills
Validation
Strategy
Networks

Suggested Model

Fail Fast, Fail Cheap Model

Ideation
Design
Launch
Build
Chasm
Scale
Mature
Caribbean mInnovation Challenge & Alumni Network

Class of 2013 etc..
Top 6 (Winners)

Open Community & Tournament
- Coaching
- Challenge
- Hackathon
- Prototyping
- Training

Global infoDev A2MF Network and Initiatives

Caribbean mInnovation Alumni Network
- Mentorship & Coaching
- Incubation

Pre-Incubation: Launch!
- Startup Weekend

A2MF

Fail Fast, Fail Cheap Model

Mature

Scale

Build

Chasm

Launch

Ideation

Design

Pre-
Caribbean mInnovation Challenge & Alumni Network

Suggested Model

Class of 2013 etc..
Top 6 (Winners)

Open Community & Tournament
- Coaching
- Challenge
- Hackathon
- Prototyping
- Training

Online Caribbean mInnovation Community

Activities on the left form an annual cycle (the focus of the mobile innovation initiative for the Caribbean)

Ideation
Design
Launch
Build
Fail Fast, Fail Cheap Model
Building blocks

- The RC should be housed by an existing organisation focusing on regional enterprise development and promotion in either Jamaica, Trinidad, or Barbados as they have the largest mobile communities and activities.
- Up to 6 mHubs should be considered on different islands that may have no physical infrastructure, unless housed in an existing university/incubator. mHubs expected to source most of the funds required for local activities, such as creating co-creation spaces.
- Annual regional developer event to circulate from country to country, selection made by following a formal bidding process.
- Where possible, current activities and funding opportunities should be incorporated/leveraged.
Regional Initiative (RC and mHubs)

Suggested Model

Regional Mobile Innovation Coordinator

Contracting Party

Commercial Entity?

Requirements:
- Strong Community
- Government support
- Pvt Industry support
- UWI support
- Other universities and incubator support
- Provision of services

Financial and program support

Up to 6 mHubs

Commercial Entity?

Requirements:
- Strong Community
- Stakeholder support: Community, Government, University,
- Pvt sector
Suggested Model

Annual Challenge and Event Training Collaboration Platforms

- Local coordination & mHub services
- Local coordination & mHub services
- Local coordination & mHub services
- Local coordination & mHub services
- Local coordination & mHub services
- Local coordination & mHub services
Suggested Model

Regional Coordinator’s Role and Responsibilities

Open mInnovator & startup support
- Online Collaboration Platform
- Market Research, Intelligence

Open Tournament Coordination
- Training Program
- Competitions, Hackathons
- Annual Developer Challenge and Events

Caribbean mInnovation Class Coordination
- Pre-Incubation Program
- Mentorship Program
- Access to Markets and Finance Initiative
- mInnovation Alumni Network

WBG Administration
- Contracting
- Planning
- Monitoring
- Reporting
- Disperse funds
Customizable local mHub service portfolio

Suggested Model

Training, Knowledge
- Business Training
- Technical Training
- Industry Seminars
- Market Research, Intelligence

Advisory Services, Networking
- Advisory and Coaching
- Mentors
- Value Chain Partner Facilitation
- Networking Events

Innovation Acceleration, Platforms
- Competitions
- Ideation and Prototyping Events
- Acceleration Events
- Collaboration Platform, code repository

Access to Facilities
- Testing Environments, Handsets
- Broadband connectivity
- Working space (hot desking, offices)

Access to Finance, Clients
- Investment Facilitation
- Seed Grants
- Risk Capital Fund
- Technical outsourcing (e.g. government projects)

Actual service portfolio and business model to be designed by local stakeholders...but...
...they will benefit from infoDev’s mInnovation and incubation expertise and research.
Possible Financial Flows

Suggested Model

- Local Government
- WBG: CARCIP
- Private Sector Sponsors
- WBG (other regional donors)

6x mHubs

Regional Mobile Innovation Coordinator

Developers and Entrepreneurs

Financial Support?

% Annual Event Revenue

Hub Fee

Investments

Challenge Prizes

ROI?

ROI?, Training fees, Membership fees, etc..

Grant

In-depth modeling and analysis to be made during next phase.
Suggested Model

Potential development impact

**Economic impact**
- Job creation
- High potential growth industry cluster development
- Increase tax base
- Increase FDI

**mInnovation eco-system development**
- Acceleration of existing developer communities
- Co-ordination of current efforts (locally & regionally)
- Increased capacity of mobile innovation, value chain stakeholders
- Community platform, forums and repository

**SME acceleration and growth**
- Revenue and capital growth
- Access to international markets, technology transfer
- Access to coaching, mentoring and support programs
- Increased business & technical capacity
- Strengthened culture of tech entrepreneurship (confidence)

**Accelerated Inclusive Innovation**
- Enterprises and products addressing key development problems in the Caribbean, WBG sectors, and MDGs
- Enterprises and products targeting the local BoP markets
- Empowered Youth and Women
  - Women technology entrepreneurship
  - Youth technology entrepreneurship

**Potential development impact**

Suggested Model
Suggested Model

Funding Requirements

• A detailed financial analysis, including required co-financing to be prepared during Phase II, as a part of the business plan
• EPIC funds to mostly support regional activities, some support to mHubs where necessary co-financing requirements are not met
What's Happening Now?
Digital Jam 2.0
Feedback Sessions
Group Sessions

- Division into small groups
  - Up to 8 people per group
  - Session 1: Islands
  - Session 2: Stakeholder groups

- Intense feedback sessions
  - 35 minutes to answer the key question
  - Each group to share their feedback (3 minute summary per group)

- Key issues to be further discussed during a deep-dive session
“Does infoDev’s mInnovation model work for my island?”

Consider topics such as

- Is the division between regional and local activities feasible from your point of view?
- Does the model provide enough incentive to get involved and motivate to deliver results?
- Are all the potential key stakeholders been identified from your island?

Deliverable: Summary (flipchart)

- Strengths, Weaknesses and Suggestions
“Does infoDev’s mInnovation model work for stakeholders like me?”

Consider topics such as

- Does the model support the mandate that our institutions have and does it help us to achieve our own objectives?
- Does the model provide enough incentive to get involved and motivate to deliver results (and what are the key obstacles for your active participation)?
- On what areas could you use help/support and from whom?

Deliverable: Summary (flipchart)
- Strenghts, Weaknesses and Suggestions
Deep Dive

• Most Pressing opportunities and challenges identified during the group discussions
Agenda

Way Forward
• List three immediate action items that would help to make the model success (online survey being one of them...)
Thank You

www.infodev.org/mobile

Toni Eliasz
teliasz@worldbank.org