

Panama Logistics Technology Entrepreneurship

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Why focus on logistics technology entrepreneurship?

- **Panama aspires to be a logistics and trade hub**
 - Entrepreneurship and thought leadership is critical to this goal
- **There are increasing opportunities for technology and innovation to improve logistics performance**
 - Visibility
 - Decision making
 - Performance measurement
- **Panama has a strong association with logistics**
 - Natural for logistics marketing
 - Collaboration with logistics stakeholders
- **Logistics research is primarily realized in software**
 - Does not require major infrastructure investment
 - Small companies have traditionally been the primary innovators
- **Increasing importance of logistics to Latin America**



Status of Panama Start-up Activity

- **Panama has an extremely small start-up activity around science and technology**
- **2011 Latin America Venture Capital Association scorecard**
 - Panama last among Latin American countries in entrepreneurship
 - Only country to get a score of “0”



Dynamic Business Ventures Midterm Report

- **Panama incubator network has had little success in generating technology start-ups**
 - Incubators not connected to research centers
- **Factors that will contribute the development of new ventures in Panama**
 - Perception of the opportunities
 - Recognition and social prestige for entrepreneurs
- **Weaknesses**
 - An education system that doesn't stimulate creativity
 - The lack of capital for startups and weaknesses of the capital market
 - Lack of policies and structure for transferring research and development to companies



Human Capital for Logistics Software Innovation

- Panama universities graduate 500+ computer science related students per year.
- Few opportunities for innovative jobs on graduation
- Little evidence of entrepreneurship thinking
- Some of the best and brightest students are educated in computer science because of their interest in technology and innovation and then cannot find jobs with these characteristics.
- The numbers of students graduated is not large enough to support the big software companies such as Microsoft but would be great for small, innovative development operations



Requirements for entrepreneurship?

➤ Role models

- Family influence
- Job influence

➤ Panama must find a way to “prime the pump”

- Cannot rely on spontaneous flow of start-ups
- Must generate interest in creating start-ups
- Must expose potential entrepreneurs to successful efforts
- Must marry ideas with capabilities
- Must provide “hands on” experience with start-ups

➤ Access to markets

- Must build for international markets
- Must get access to international markets

➤ Access to capital

- “Chicken and egg” problem



Incentive Programs for Technology Start-ups

- **Canada has a program that for the first \$2,000,000 spent on development, returns about 74% of at the end of each year as a tax rebate.**
- **US Small Business Innovative Research program to “support scientific excellence and promote technology innovation.”**
 - Each of 12 government agencies that fund research and development must set aside 2.5% of their R&D budget for this program.
 - Phase I awards up to \$150,000
 - Phase II awards up to \$500,000
- **SENACYT has a 2-1 matching program (up to \$250,000) but requires that the company be in business in Panama for 3 years in order to be eligible.**
- **There are no tax incentives for start-ups in the City of Knowledge.**



Recommendations

➤ “Logistics Cyber City”

- Incubator co-located with Georgia Tech Panama Logistics Innovation & Research Center
- Incentives to attract logistics software entrepreneurs
- Incentives to give computer science students “hands on” experience with logistics software development
- Incentives to give computer science faculty “hands on” experience with logistics software development
- Platforms for logistics stakeholders sharing needs and ideas with incubator participants
- Visibility for successful entrepreneurs
- Access to markets





Questions?

Comments?

