1 Introduction

The importance of community Internet access in rural areas is a key point made by Harvard University's Center for International Development in their research document entitled, Global Information Technology Report 2001-2002: Readiness for the Networked World (GITR).

> "With more than half the world's population living in rural areas, rural communities promise essential new markets, new producers, and new ideas. Helping them to help themselves develop also offers security for urban areas and the developed world by contributing to the grander goals of social and economic stability (and prosperity) through increased economic opportunity, new channels for learning, better communication with government, and improvements in health and wellness.
>
> Economic self-sustainability for the Internet in rural areas is key if we want to avoid common development failures associated with donor initiatives, empower local communities, use the market to vet demand and interest, and ultimately link to real and legitimate development objectives.
>
> There are a handful of crucial issues determining the viability of the Internet in rural areas: costs, revenues, networks, business models, policy and capacity. Business, government, and nonprofit institutions have different roles and capabilities in pushing these drivers, and while they may have occasionally competing interests, they have an overriding and common goal in economically sustainable access to ICT in rural areas."

The report also stresses the importance of making market information immediately available to the rural sector, particularly pricing for farmers:

> "The farmers' primary interest is to maximize the profits they earn from their farms. To achieve this goal, farmers need price information for four important purposes:
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> > First, relative prices allow the farmer to make decisions on the mixture of crops to produce. Even if conditions restrict him to one crop, its price tells him how much to produce.
> >
> > Second, prices enable him to produce in a more efficient manner. He is able to purchase inputs (e.g., fertilizer, irrigation equipment) when and where they are cheapest. Prices may also alert him to the existence of inputs that would profitably boost his production.
> >
> > Third, price information allows him to know where to sell his output and the appropriate price to accept. For example, while prices often differ across villages, the farmer typically knows only the local price. So even if, say, the urban price is higher, he doesn't know to send his output to the city. Nor does he realize that it is profitable to produce more of that output (and perhaps less of another). He misses opportunities to earn more income, and urban consumers face excess prices. By not being able to pursue the highest price, farmers are not sending their output to where they are valued most, and lowering the price there for consumers.
> >
> > The fourth purpose of price information for farmers is to prevent their exploitation by middlemen."

In concluding remarks, the report highlights research that demonstrates how ICTs can create a "Digital Provide" that boosts incomes and ultimately leads to economic growth. It makes the further point:

> "ICTs have the ability to disseminate information to isolated, information-deprived locales. Those receiving this information (predominantly farmers and laborers), as both producers and consumers, will be, for the first time, able to participate in effective markets. The immediate consequence should be income gains for participants, and the ability to better spend their incomes. Over the long term, enhanced access to information should enable producers to significantly improve their practices. Such improvement lays the path to economic growth."

2 Project Scope and Objectives

To put theories into practice and to move from the lecture halls of Harvard University to the rural realities of the Philippines, AOEMA and the Philippines economy jointly proposed a project entitled EC Strategies for Rural SME's in APEC, with the following project proposal details submitted to the APEC secretariat:

> Rural regions in developing economies are the backbone of export, employment, and resource allocation. Many businesses in rural areas could be classed as "micro" businesses. Many of these businesses could benefit from the usage of electronic commerce as a new channel for the marketing of their products.
>
> In addition, many developing economies have formed cooperatives for the development of markets for agricultural products. These cooperatives and their members would benefit from the usage of EC as a tool in their activities.
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> A number of economies in the region have begun to use existing narrowband technologies to implement EC for their constituency. One economy in particular, the Philippines, has been very successful in developing EC in a sustainable way.
>
> Many economies could benefit from the experience of other economies in the development of EC in the agricultural sector fully utilizing existing narrowband infrastructures. In order to help economies realize the benefits of these developments they must understand the project structures. In order to do this we propose a project that studies these initiatives in order to achieve the following outcomes:
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> - Information regarding successful EC initiatives that make use of existing narrowband infrastructures
> - Details of the costs and resources required and strategies followed to provide these EC initiatives
> - The ability for the development to be replicated in other economies and the scope for cooperation in this effort.
> - Reporting to APEC on infrastructure capabilities required
> - Development of strategy recommendations that will enable micro enterprises to take advantage of the initiatives

At the time of scoping this project, AOEMA and the Philippines economy agreed that at least one other East Asian APEC economy should be included. Indonesia responded with interest and is included in this project report. Independent research was conducted by local sources in both the Philippines and Indonesia, using the following report structure:

1. Introduction
2. Business statistics
3. Telecommunications environment
4. Internet and PC penetration
5. Education
6. Legal framework
7. e-government
8. Case studies
   - Selection of 3-4 case studies
   - Aim and objectives
   - Cost and funding bodies
   - Participants
   - Technologies employed
   - Services provided
   - Impact and achievement
   - Lessons learned

A total of seven case studies are included in this report, with one serving as a benchmark example for SMEs in the agricultural sector. While there are similarities across the seven examples, each one represents a unique business approach, meeting the specific needs of each enterprise. Many of the lessons learned in the Philippines and Indonesia are consistent with those identified in other parts of the world, thus forming the basis of a strategy and set of recommendations that others might find useful when developing their own strategy and subsequent implementation plan.

3 Executive Summary

Considering more than half the world's population lives in rural areas, and nearly two-third's of the world's poor live in Asia and the Pacific, it is vital that we study ways to make ICT work for the rural poor. Call it the "digital divide" or "digital provide," it is all about providing relevant information to communities in need and closing the gap between the information rich and the information poor. There are many projects from all corners of the globe that demonstrate ICT's positive contribution to reduce rural poverty, but there are far too many failures as well. Identifying success criteria for ICT projects in the rural areas of the APEC region is a core objective of this project and one way to accomplish this is to review the selected case studies in terms of what worked and what didn't.

Project researchers in the Philippines and Indonesia interviewed both program developers and participants to find out what they learned from their experience. While the details are included in Sections 7 and 9 of this report, the following is a summary list of the more significant lessons learned:

- **Cost of involvement**: Most SMEs and farmers in developing economies cannot afford to pay fees associated with a program, no matter how good that program is. There is concern that programs charging fees will not be sustainable.
- **Strategic partnerships**: Programs are more likely to succeed and grow if backed by a consortium of strategic players. Refer to Section 5 for a detailed discussion on this important lesson.
- **Customer centric**: You must be customer centric in your focus and in so doing you will have to be prepared to regularly revise your business plans to meet customer demands.
- **Technology**: Make sure your technology provider has the necessary expertise, otherwise your clients may experience business losses due to system or application failures.
- **Phased implementation**: Implementation should be phased in over time and in response to actual user requirements. Don't over-engineer, especially in the beginning stages.
- **Brand**: Need to establish brand recognition for your program and market it aggressively.
- **User interface**: Take full advantage of mobile technology as an alternative for computer access (which is prohibitively expensive for many SMEs) and promote its use extensively.
- **Education and Training**: Provide access to telecenters and offer appropriate training programs to introduce the benefits of ICT.
- **Local involvement**: It is most important to assess the information needs of the local community and involve intended users in a process of continuous development.
- **Government**: SMEs tend to look to government for support and to lead by example.

As per the chart below, the anticipated project outcomes are identified and the relevant sections in the report referenced:

Project Outcome	Report section
Successful EC initiatives that make use of existing narrowband infrastructures	Section 7 – Case Studies: Enabling SMEs in the Philippines to Participate in the New Economy Section 9 – Case Studies: Enabling SMEs in Indonesia to Participate in the New Economy(take note of case study in Section 9.3 Case Study #3: BaliQualitySilver.com) Section 10.1–Booking Hotel Rooms in the Philippines
Ability for programs to be replicated in other economies and the scope for cooperation in this effort.	The case studies in this report provide a platform which other economies can replicate. Section 5 – Benchmark Case Study: b2bpricenow.com (Philippines) business model being considered by several APEC economies.

Development of strategy recommendations that will enable micro enterprises to take advantage of the initiatives.	Refer to the business strategy, achievements and lessons learned in each case study to learn what has worked and what hasn't.
Details of the costs and resources required to initiate these programs	Each case study in this report identifies the necessary resources and strategies with corresponding costs.
Reporting to APEC on infrastructure capabilities required	Case studies report on infrastructure requirements.
Recommendations on use of existing narrowband telecommunications technologies for the benefit of micro enterprises, particularly in the agricultural sector	Section 5 – Benchmark Case Study: b2bpricenow.com (Philippines)

Sections 6 and 8 profile the Philippines and Indonesia respectively. The following chart provides a snapshot comparison of these two economies in terms of key teledensity factors:

	Philippines	**Indonesia**
Population in millions	76	208
Telephone lines (per 1,000 people) – World Bank 2000	40	31
Mobile telephones (per 1,000 people) – World Bank 2000	84	17
PCs (per 1,000 people) – World Bank 2000	20	10
Internet users (per 10,000 people) – World Bank 2000	266	68
% Dialup	84%	93%
% Cable	6%	2%
% Leased line	6%	1%
APEC TEL East Asian e-Readiness & IT Indicators (2002)	7 (out of 10)	10 (out of 10)

Additionally, the following facts are known about the Philippines:

- 63.3% own and use mobile phones
- 72.4% of those who own mobile phones use SMS for transacting business
- 22.7% use PDAs for business purposes