COMMUNITY EMPOWERMENT AND ENHANCEMENT THROUGH E-COMMERCE

A NOVEL MODEL OF PARTNERSHIP BETWEEN UNIVERSITIES, COMMUNITIES, INDUSTRY, AND GOVERNMENT FOR SUSTAINED ECONOMIC GROWTH AND DEVELOPMENT

A. Anil Kumar
Technology and Business Incubators
for Building Wealth in Texas - Conference
September 13, 2000

Prairie View A&M University
A Member of the Texas A&M University System
My Bottomline Message

• Waller County, in particular the Tri-City Region, is uniquely positioned to be an integral player and contributor to the global economy.

• Business incubators provide a very viable and effective vehicle for such a development.

• However, for successful and sustainable development, it is imperative to base such incubators deeply rooted in the communities, in their expertise and shared interests.

• Small businesses and minority institutions must play a proactive, assertive role in the creation of such incubators and the associated markets and services.
WHAT I WOULD LIKE TO SEE COMING OUT OF THIS CONFERENCE

A sustaining dialog between the community and the University, towards building a viable infrastructure leading to visible, tangible development of Waller County, its contiguous counties and the state of Texas.
EXPECTED SIGNS OF DEVELOPMENT

• Stronger, expanded businesses
• Initiation of new businesses
• Better and more housing
• Increased standard of living
• New and improved educational and training programs in schools
• Businesses an integral part of manufacturer supply chains and nationally recognized
• Enhanced interaction with Prairie View A&M University.
YOU HAVE HEARD THAT THE NET HAS CAUSED ...

The “death of distance” - no longer is close proximity a prerequisite for service delivery or collaborations or alliances.

The “irrelevance of place” - a company delivering service does not have to be at one place, or at any place at all. Telemorphics is a company that has no buildings, just a set of employees all over the country working together from their computers.
MYTHS

Myth: Electronic automation will put people out of work.

Fact: It opens up new types of jobs and opportunities.

Examples:

Needs for intelligent data handling and management increasing exponentially.

Knowledge based economy needs higher level skills.
Myth: Global nature of the economy and the Internet will supplant local, community based economies.

Fact: Communities are the building blocks of the global economy.

Myth: The Internet-based economy will make the “old manufacturing economy” obsolete.

Fact: It is the manufacturing economy that will always sustain other types of economy.

The IT is not supposed to supercede or replace humans but should extend their capability just as the industrial revolution extended the capacity of the muscles.
## Top Five in Percentage Growth, 1998-2000

<table>
<thead>
<tr>
<th>Job</th>
<th>Jobs Added</th>
<th>Percentage Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Engineer</td>
<td>323,000</td>
<td>108%</td>
</tr>
<tr>
<td>Computer Support Specialist</td>
<td>439,000</td>
<td>102%</td>
</tr>
<tr>
<td>System Analyst</td>
<td>577,000</td>
<td>94%</td>
</tr>
<tr>
<td>Database Administrator</td>
<td>67,000</td>
<td>77%</td>
</tr>
<tr>
<td>Desktop Publishing Specialist</td>
<td>19,000</td>
<td>73%</td>
</tr>
</tbody>
</table>

*NEW AGE: SEI workers jump from desk to desk*
HOW DO YOU TRANSLATE ALL THIS INTO SOMETHING THAT IMPACTS THE LOCAL COMMUNITIES?
SIGNS OF PROSPERITY

• Northwest corridor the only possible expansion possibility for Houston

• Rapid development along Hwy. 290

• A recent visitor to the University said, "I thought Houston was going to get here before I did!"

• Pace of industry and residential development along the Beltway during the past two years much greater than pace of Houston’s growth during the oil boom years!
SIGN OF NEED

- Overall unemployment rate in Texas still impressively low - 4.4% in June 2000, lowest since June 1979.
- However, averages end up being poor representations of individual communities.
- Examples: McAllen-Edinburg-Mission MSA has a 14.9% unemployment rate; El Paso is at 9.6% and Beaumont-Port Arthur is at 9.7%.
- Even the low unemployment rate does not necessarily signify sustainability in terms of local economic stability.
WHAT IS A BUSINESS INCUBATOR?

Business incubation is a dynamic process of business enterprise development.

Incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable.

Incubators provide hands-on management assistance, access to financing and orchestrated exposure to critical business or technical support services.

They also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space—all under one roof.

An incubation program's main goal is to produce successful graduates, businesses that are financially viable and freestanding when they leave the incubator, usually in two to three years. Thirty percent of incubator clients typically graduate each year.

National Business Incubation Association
A DIVERSITY OF INCUBATORS!

• For-profit and not-for-profit

• University-driven vs. local government (county) driven vs. VC driven vs. ...

• A common feature behind failure - built-in lack of sustainability and little or no involvement with local communities and educational institutions - universities, community colleges, schools, training centers

• Several incubators are a “Me Too” game!

• Growing “blurred-ness” of role of incubators

Eg. Only two companies graduated from EC2 in the past five years! “Incubation is the not the only thing we do. We are doing a lot more in terms of research and industry development. This incubator was not designed to make a few partners a bucket of wealth, but to foster the development of new technology in the community.” - Jon Goodman, Executive Director
Every Company Does Not Have to be a High-Tech Company!
EXAMPLE - PHYTOTECH

- Use plants to clean up environment - extract lead from the DOD firing grounds or uranium from Ashtabula site in Ohio
- Submitted 50 proposals for $11M to finally receive $1.1M
- Grow plants hydroponically, replant them and extract lead and other minerals - Iron, Chromium, Selenium - an excellent market for phytonutrients, fastest growth sector in industry
- 100 lbs of Chromium sold by GNC as chromium picolinate
- Selenium helps prevent cancer - received funds from National Cancer Institute for testing plant material for chimoprevention
Hotchkiss Torbellino (Spanish for whirlwind).

The front wheel design is from an African pushcart.

The rear hub is from a British motorcycle wheel rebuilt in Nicaragua.

They are welded together using the technique of mechanics in Zimbabwe.

The tubular armrests are adapted from an ancient Japanese wheelchair by craftsmen in the Philippines.

The Torbellino - the Land Rover of wheelchairs - is made for $100 in a small Sri Lankan shop and can be repaired by anyone who can fix a bicycle. "It's the very ordinariness," says Hotchkiss, "that makes it so beautiful - and useful."
CHALLENGES TO GROWTH – OPPORTUNITIES!

• Increasing digital divide
• Limited workforce availability
• Inadequacy of “accredited” training programs
• Lack of funding programs that address “systemic” “cross-boundary” issues such as education, training, retraining, etc.
• Limited interaction with the community
POTENTIAL PROJECTS FOR PARTNERSHIP

• Center for Research, Education, Training and Retraining (CRETR)
• Community E-Commerce Tele-Center (CE-CT) - A Shared-use Facility for Providing Training in E-commerce
• Broadband Telecommunications Infrastructure Development for Hempstead Business Park
• Education/Training Center in the New Apartment Facility (Location Off 290)
• Lake Sand Dave – Kids’ Game/Recreation Facility
What Can PVAMU Do?

- PVAMU can be a catalyst and the glue in fostering and sustaining new developments!
- Education and training of a new generation of technical managers
- Pre-incubation services for potential start-ups
- Orientation programs for the community residents
WAYS TO INTERACT WITH PVAMU

- Technical affiliation
- Cooperative research and development agreements (CRADAs)
- Joint proposals for Small Business Innovation Research (SBIR)/Small business Technology Transfer Research (STTR) initiatives
- Joint proposals for technology transfer projects
- Business and Technology Incubators
ACTION ITEMS

• Catalog community capabilities.
• Identify and prioritize business and community needs.
• Identify categories of capabilities for funding potential - SBIR/STTR, corporate foundations, philanthropic foundations, and generate proposals.
• Identify ways in which we can assist and support each other.
• Establish a CEETEC Committee and hold monthly CEETEC forums to continue to exchange ideas, update available opportunities, and devise and formulate productive responses.
• Develop a brief but comprehensive strategic plan for the County.
Waller County has an excellent opportunity to be a global player!
THE CHALLENGE OF CHANGE

“We are in an era of discontinuous change, whether we are talking about telecommunications, health care, financial services, high-volume electronics, retailing or the Internet. As a result, we are no longer talking about fine-tuning or improving an organization’s efficiency. We are talking about nothing less than reinvention — reinventing the business in fundamental ways.”

C.K. Prahalad, Professor, University of Michigan Business School

“Going are the 9–5 workdays, lifetime jobs, predictable, hierarchical relationships, corporate culture security blankets, and, for a large and growing sector of the workforce, the workforce itself (replaced by a cybernetic “workspace”). Constant training, retraining, job-hopping, and even career hopping, will become the norm.”

Mary O’Hara-Devereaux and Robert Johansen, Global/Work: Bridging Distance, Culture and Time
NEW PARADIGMS FOR THE NEW AGE

“The big won’t beat the small - the fast will beat the slow.”
- John Chambers, President, Cisco Systems

“Art, story-telling and humor are wonderful things. In a future where intelligent machines will reason and do our donkey-work, human artists will become the most valued and irreplaceable of professionals - unique in an automated world. Painters, sculptors, writers, actors, architects, animators and even people who can decorate a decent Easter egg will achieve unprecedented fame and fortune.”
- Bran Ferren, President, Disney Imagineering R&D, Inc.
Performance
Vision
Adaptivity
Multi-tasking
Universal