UT Austin | Portugal

INTERNATIONAL COLLABORATORY FOR EMERGING TECHNOLOGIES, CoLab

University Technology Enterprise Network (UTEN)

Year 1 Report (March – August 2007)
and
Year 2 Plans (September 2007 – August 2008)

Submitted to
The Portuguese Science and Technology Foundation (FCT)

by

The University of Texas at Austin
and
Collaborating Portuguese Institutions

October 11, 2007

Excerpted from the Year 1 Report of the International Collaboratory for Emerging Technologies (CoLab)

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University Technology Enterprise Network (UTEN)

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This section contains an overview of the UTEN Program with a summary of Year 1 activities (March-August 2007) and plans for Year 2 (August 2007-September 2008).

1. Overview

UTEN's main participants include 13 Portuguese universities, four technology parks, and select research organizations (See Annex A) and The University of Texas at Austin, IC² Institute, and the Austin Technology Incubator in Austin, Texas.

Key Personnel
- **Portugal**
  - Dr. José Mendonça, Director; Professor of Electrical and Computer Engineering, U. Porto, and Director, INESC Porto
  - Dr. Teresa Mendes, Co-Director; Professor of Informatics Engineering, U. Coimbra
  - Jorge Liz, AdI Lisbon
  - Maria Santos, AdI Lisbon
  - Deolinda Silva, AdI Porto
- **UT Austin**
  - Dr. David Gibson, Director; Associate Director, IC² Institute
  - Isaac Barchas, Co-Director; Director, Austin Technology Incubator
  - Cliff Zintgraff, IC² Institute (technology assessments and market making)
  - Prentiss Riddle, IC² Institute (internships and coordination and communication)

2. UTEN Report for Year 1 (March-August 2007)

Year 1 (six months: March-August 2007) UTEN objectives and activities were to:
1. Build awareness of the UTEN program in Portugal and in Austin and to identify key UTEN assets, challenges, and opportunities
2. Establish "pilot programs" to assess, learn, and adapt initial UTEN activities concerning internships, training, and gaining US market access for Portuguese science and technology (S&T) companies and small and medium enterprises (SMEs)
3. Identify potential cooperative research projects on UTEN activities, processes, and metrics
4. Use Year 1 "learning-by-doing" to plan Year 2 activities and objectives

In summary, UTEN applied a "think, do, and evaluate" approach in Year 1, executing pilot programs that simultaneously provided valuable learning opportunities and results while also providing substantive feedback for future planning and execution of the UTEN program.
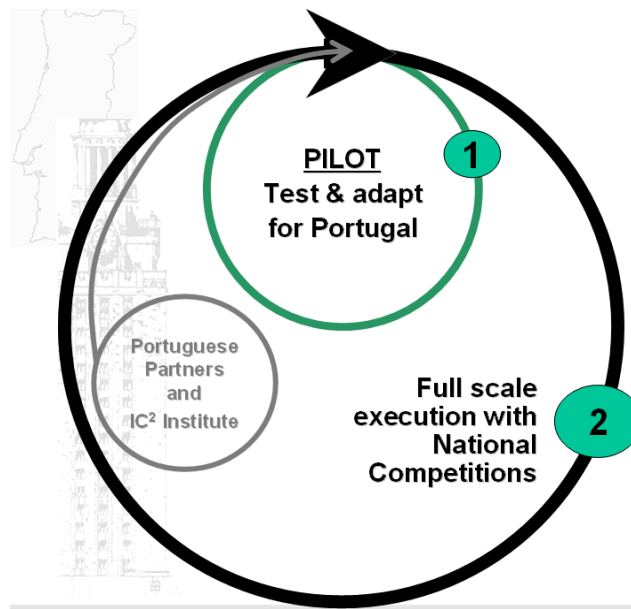
I. Pilot Program: Building Awareness and Cooperation

Initial UTEN activities focused on visits and network building throughout Portugal by UTEN UT Austin leadership and staff and hosted by UTEN Portugal directors, staff, and supporters. Portuguese hosts included José Mendonça, UTEN Director; Teresa Mendes, UTEN Co-Director and from Jorge Liz, Maria Santos, and Deolinda Silva (AdI). UTEN UT Austin visitors included David Gibson, UTEN Director; Robert Meyer; Cliff Zintgraff; Jim Brazell; Prentiss Riddle; William N. Hulsey III; and Darius Mahdjoubi. CoLab UT Austin members Juan Sanchez and Robert Peterson and UTEN Co-Director Isaac Barchas also participated in UTEN activities during Year 1.

The UTEN UT Austin team visited with staff of over fifty Portuguese organizations, including universities, technology transfer offices (OTICs), intellectual property offices (GAPIs), institutes, science parks, companies and unincorporated ventures (see Annexes B and C). Visited Portuguese organizations included AdI Lisbon, AdI Porto, INESC Porto, INOVISA, IPN, ISR, Tagus Park, SPIN VALOR, University of Alto Douro, University of Lisbon, University of New Lisbon, IST and VectorE, and University of Porto and MIETE. Following is an overview of Year 1 **UTEN-UT Austin visits to Portuga**l:

- **March 2 –** FCT-UT Austin Collaboration Agreement is signed and first CoLab Advisory Board Meeting held
- **March 3-6 –** David Gibson and Robert Meyer – Initial UTEN visits to Porto, Aveiro, Evora, and Lisbon
- **March 26 –** Creative Cities Conference in Lisbon attended by Jim Butler, Manager Creative Activities, City of Austin
- **March 26-April 14 –** Robert Meyer visited almost all UTEN Portugal participating institutions and key representatives, and coached GAPI and OTIC staff members
- **May 17-18 –** William N. Hulsey III, Austin intellectual property attorney, conducted IP workshops and discussions in Lisbon and Porto

- **May 21-23 –** David Gibson, Cliff Zintgraff and Jim Brazell visited Lisbon, Porto, and Coimbra for discussions with UTEN Portugal: José Mendonça, Teresa Mendes, and AdI
- **May 24 –** Cliff Zintgraff presented "Culture Shift for Active Commercialization" at the GAPI Conference in Lisbon
- **May 21-29 –** Cliff Zintgraff and Jim Brazell conduct technology and entrepreneurial assessments in Lisbon with AdI, Coimbra with IPN, and Porto with INSECH and UPIN. 42 initial and promising technologies were identified.
- **June 18 –** Second IP workshop in Lisbon, University of Lisbon, by William Hulsey
- **July 11 –** Second CoLab Advisory Board Meeting
- **July 12-15** Cliff Zintgraff interviewed Helena Vieira (Bioalvo), Nuno Almeida (HIV-2 diagnostic technology) and Nuno Correira (Critical Software) at AdI Lisbon
- **July 25-29 –** Dr. Darius Mahdjoubi presented "Action Business Planning" lecture to classes at IST, VectorE and U of Porto, MIETE

These awareness-building, networking and initial training and mentoring activities provided useful feedback for developing UTEN's Year 2 training and internship programs and the planned national competition for US S&T commercialization and market-making activities. In particular with regards to internships and training, feedback was provided on the need for training of staff from Portuguese GAPIs (intellectual property offices) and OTICs (technology transfer offices) on intellectual property issues and on US market realities and perspectives

II. Pilot Program: Internships

Due to the lack of competitive selections within Portugal there were no UTEN internships in Austin in Year 1. Candidate Portuguese interns were identified for select Internship opportunities in Austin, but it was determined that these internship opportunities could not be realized unless the Portuguese interns were competitively selected.

UTEN UT Austin has developed Internship opportunities for GAPI and OTIC staff members and entrepreneurs as follows:
1. In Austin with a focus on IT, Wireless, Clean Energy, Digital Media at UT Austin, in IC² Institute and the Austin Technology Incubator (ATI), and select professional firms (e.g., intellectual property attorneys) and businesses (e.g., entrepreneurial companies at ATI and in Austin)
2. In San Antonio with a focus on IT, healthcare, biotechnology at UT San Antonio's Management of Technology (MOT) program, at the University of Texas Health Science Center, the Center for Innovation and Technology Entrepreneurship (CITE), Texas Research Park, and InCell and TEKSA Innovations
3. Additional Internship positions have also been identified in other Texas regions and nationally and internationally with established IC² Institute partners

MS Program in Science and Technology Commercialization (MSSTC) at IC² Institute, UT Austin
As a Pilot initiative in March 2007, four Portuguese entrepreneurs (two from Coimbra and two from Lisbon) applied to and were accepted by UT Austin's Graduate School into the IC² Institute's Master of Science in Science and Technology Commercialization (MSSTC) degree program. As a comparative assessment, two Coimbra students from WITSoftware were to take the MSSTC Program on the Internet and two entrepreneurs

from Lisbon (representing the companies TimeBI and FlatPak) were to take the MSSTC classes in Austin. However, it was determined that since this selection was not the result of a national competition the use of "Public Funds" for MSSTC tuition of $46,000 was not acceptable. It was agreed that the two student entrepreneurs from WITSoftware would continue in the MSSTC Program as certificate students at reduced tuition. Through their MSSTC studies, these two entrepreneurs are gaining a deep understanding of launching successful entrepreneurial ventures in the US and are discovering commercialization opportunities for WITSoftware as well as building networks with other US MSSTC students and US technology companies. The two MSSTC students from the Lisbon area decided not to pursue a certificate program.

Year 2 Goals: To competitively select MSSTC candidates for the next MSSTC class that begins in April 2008 so they can pursue an MS degree from UT Austin at a reduced tuition rate.   An effort will also be made to build MSSTC links to existing and relevant masters programs in Portugal, including MIETE at the University of Porto and VectorE at IST.

III. Pilot Program: Technology Assessment

UTEN UT Austin evaluated 42 technologies during the pilot program of Portuguese technology assessments. These initial targeted technologies were selected by AdI and other supporting Portuguese organizations. UTEN UT Austin used a three-step "funnel" process that includes a "readiness assessment," "RapidScreen" and "MarketLook." A key objective was to determine the usefulness of these established assessment processes for UTEN activities and, if needed, to adapt them to Portuguese realities. The "readiness assessment" involved Portuguese entrepreneurs in a UTEN UT Austin-guided self-analysis exercise of their company to determine its readiness for the US market.

Based on these 42 readiness assessments with Portuguese entrepreneurs, 12 technologies were chosen by the UTEN UT Austin Team for 6-8 hour RapidScreens during August and September 2007.   RapidScreen is an IC² Institute commercialization analysis tool that uses a collaboration platform for capturing key assessment information. Six of the selected technologies represent established companies, products, and services; two are early stage companies; and four are university IP for license or venture formations. The industry breakout is: One energy company, one bio, two medical, three microelectronics, one nano, one packaging, two software and one telecom.

Science and Technology & Entrepreneurial
Readiness Assessment
Where YOU think you are

Screen
Where WE think you are

MarketLook
Where the MARKET thinks you are

Integrated Portfolio & History

Of the twelve selected companies, ten provided the needed communication, information, and cooperation for Rapid Screen market analyses. In September, these ten ventures received feedback on the initial US market analysis included in the RapidScreen. Six of these firms received useful US business development contacts.

Acacia Semiconductor -- ADC conversion for communications, consumer and sensors products	ADI	Henriques, Bernardo	Microelectronics
BIOALVO SA -- Robotics technology for drug testing	Bioalvo	Vieira, Helena	Bioscience, Drug Discovery, Mechatronics
BioFilms -- Measure/ID biofilms & deposits using vibrations	University of Porto	Magalhaes Mendez, Joaquim	Microelectronics, Bioscience
EdgeBox -- Multi-function Business Gateway	Critical Links, SA	Carreira, Joao	Microelectronics, Telecommunications, Software
ELISA-HIV2 -- Kit for HIV-2 Diagnosis and monitorization of Disease Progression.	: Instituto de Medicina Molecular, Faculdade de Medicina de Lisboa	Taveira, Nuno	Bioscience, Medical Diagnostics
FiberSensing -- assessment of signals generated by a sensing network	ADI	Alves, Pedro	Microelectronics, Sensors, Fiber Optics
Flatpak	ADI	Vargas, Luis	Packaging
Fluidinova -- NETmix	ADI	Lopes, Jose	Nanotechnology, Chemical Compounds, Ceramics
PET Mammography	PETSYS - Medical Pet Imaging Services, S.A.	Varela, João	Medical, Diagnostics, Hardware, Software
SRE Fuel Cells -- Small Power Fuel Cell	ADI	Rodrigues, Jose	Energy, Fuel Cell and Hybrid
TIMEBI -- mobile software for finding friends and the time to get to them	ADI	Sousa, Maria	Software, Telecommunications, Wireless, GIS
WIT Software	Instituto Pedro Nunes	Silva, Luis	Software, Telecommunications

Technologies chosen for RapidScreens

Based on the RapidScan Process, three ventures were chosen for 40-hour MarketLooks: *FluidInova*, *Bioalvo* and *edgeBox*.   The IC² Institute-developed MarketLook process emphasizes interviews with potential customers, end users, and potential partners in the US market.

Generating early success for UTEN

An important UTEN objective is to establish early success in terms of the following: useful IP assistance, location of development partners, creation of R&D collaborations; direct and channel sales assistance; and overall assistance in creating a US corporate presence.

Initial Portuguese SME/entrepreneurial visits to Austin and San Antonio, TX

1. Nuno Almeida of Critical Software visited Austin on July 25, 2007 and met with Isaac Barchas, Director, ATI and York Duncan, President of the Texas Research Park Foundation in San Antonio to explore possible business development activities. With York Duncan, Almeida provided a corporate overview and discussed in more detail Crticial's edgeBOX (Critical Links spinout) and xLuna products. Potential connections to Southwest Research Institute were initiated.
2. Two WITSoftware employees attended MSSTC classes on June 15 and 16, 2007 and visited with Isaac Barchas, Director, ATI, to explore the possibility of being a tenant company in ATI.
3. During August 14-September 1, 2007 YDreams CEO António Câmara and Marketing Manager Marta Vieira opened their US office in IC² Institute and developed initial business contacts and opportunities with established (e.g., AMD and Dell) and emerging technology companies in Austin and San Antonio.   One contact made for YDreams was with Gary Foreman of Native Sun Productions

regarding potential museum projects in San Antonio and throughout Texas. Other YDreams personnel continue to visit Austin, including COO Tiago Fonseca and R&D Director Ivan Franco during October 3-11.

IV. Pilot Program: UTEN Communication and Coordination

In an effort to increase awareness and communication within Portugal among UTEN's 13 Portuguese universities, four technology parks, and other participants including GAPI and OTIC staff and entrepreneurs and between UTEN Portugal and UTEN Austin, UTEN implemented several collaboration tools. These tools included:

- **Google Internet discussion groups** for OTICs and GAPIs, incubators, and science parks staff as a "discussion board" to share information and concerns with each other and UTEN Austin. This effort was not very effective in that active and continual participation was lacking.
- **Google Maps file** listing all participating UTEN organizations with key information, created by AdI. It is intended that in the future the Google Maps layout will be a useful tool for UTEN.
- **The RapidScreen Technology Assessment** platform was used to capture key information on 10 Portuguese entrepreneurial firms to enable the technology assessments. AdI's Jorge Liz, Maria Santos, and Deolinda Silva used RapidScreen to provide inventor contact and technology background information for the assessments, an important step to make sure needed information is readily available. This information and the results of the RapidScreen assessments are now archived and available for follow-up work by UTEN Austin and Portuguese staff members.

V. Pilot Program: Cooperative Research Projects

Baseline Data Collection and Metrics: The primary purpose of this research is to provide baseline data for key metrics on UTEN programs and activities as they relate to the performance of government programs, universities, and technology parks. In the Year 1 pilot program, national and EU comparative data were compiled from published research articles as well as various studies and reports of the European statistical and economic agencies.[1] It is clear that additional data at the level of specific universities, incubators, and research parks will need to be collected in cooperation with these Portuguese organizations. During August 6-10, 2007 Dr. Aurora Teixeira, University of Porto, visited UT Austin and IC² Institute to discuss research collaboration possibilities including the UTEN baseline study.

3. UTEN Plan for Year 2: September 2007 – August 2008

Mission Statement: To build globally competitive and sustainable S&T and SME commercialization programs and processes within Portugal

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[1] This initial research report, "Select Baseline National Metrics Affecting Technology Commercialization in Portugal" by Dr. James Jarrett and Fábio Ferreira, contains data from the European Innovation Scorecard, OECD S&T and Industry Scorecard, and World Bank Indicators.

Main Objectives:
1. Provide value-added US internships and training for competitively selected (1) technology transfer (OTIC) and intellectual property (GAPI) staff, and (2) entrepreneurial talent
2. Competitively select the best Portuguese entrepreneurial talent, SMEs, and Science and Technology for US business development and market making activities

As an overview the following sections will focus on internships and training, national Portuguese competition for selecting firms and S&T for US markets, research and education opportunities, communication and coordination, and industry affiliates.

I. Internships and Training

Objective: To provide value-added US internships and training for competitively selected (1) technology transfer (OTIC) and intellectual property (GAPI) staff, and (2) entrepreneurial talent.

Key Challenges: Portuguese entrepreneurs that are successful in the Portuguese market and perhaps EU markets face significant challenges in coming to US markets to grow their firm to increase jobs and wealth creation within Portugal.

Many Portuguese universities and R&D institutions have large patent portfolios that are too expensive to maintain or explore in terms of US or global patents and markets. OTICs and GAPIs and the institutions they represent need to get value from these patent portfolios and they do not know how to do this, especially in terms of US market access. University staff need assistance in selecting the best patents for gaining value either to license or to market in the US. <u>In short, Portuguese universities and institutions need a viable technology transfer and commercialization and patent strategy for US and global market access.</u>

Year 2 Goal: To competitively select Portuguese Interns and to successfully match them to Austin, San Antonio, and other US internship and perhaps international internship opportunities. This includes designating the relevant technology sectors and internship logistics (e.g., length of stay, funding, etc.)

1. **UTEN Internship and Training Programs in Austin and Texas**

Either or both of the following options could be pursued.

Option #1: With Option #1, a relatively small number of Portuguese GAPI and OTIC staff and entrepreneurs, say ten, are competitively selected by UTEN Portugal and AdI – perhaps they are selected by GAPIs and OTICs themselves. These competitively selected Portuguese will submit their resumes and internship requests (e.g., industry sector, length of time of internship) to UTEN UT Austin for matching with a suitable position and mentoring program. Based on matching processes of these internship candidates with available internship positions, a select few will receive internships.
- The initial location of these Internships will be in Austin and San Antonio, Texas.
- Visa: Interns will receive IC² Institute Visiting Scholar Status.

- Train the trainers – UTEN-trained OTIC and GAPI staff members would be expected to train and mentor their colleagues after they returned to Portugal - leading to enhanced S&T commercialization effectiveness and sustainability in Portugal.
- Entrepreneurship interns will receive valuable US technology and market sector learning-by-doing experience.
- This internship program could be offered on an on-going basis throughout Year 2 as qualified candidates and internship opportunities are selected.
- The initial group of interns is expected to participate in the refinement of the internship program by providing valuable input from the Portuguese perspective.

Option #2: A number of competitively selected Portuguese Interns – perhaps 15 to 20 – travel to Austin for a one-to-two week training program that focuses on GAPI, OTIC, and entrepreneur needs with visits to select technology transfer, IP, and entrepreneurial businesses, organizations, and institutions. The Portuguese will bring with them Portuguese S&T to use during class business development, market making exercises, and company visits with the assistance of UTEN UT Austin Mentors (learning-by-doing).
- A significant benefit of this option is the facilitation of team building among the GAPI and OTIC interns and entrepreneurs coming from geographically dispersed locations in Portugal, while focusing on real-life commercialization projects involving Portuguese technologies.
- Select Interns, with the assistance of UTEN UT Austin, will be encouraged to obtain invitations from the visited organizations and institutions and to return to Texas for internship opportunities. This process has the advantage of face-to-face introductions to facilitate follow-up commitments for internships
- Depending on interest and resource availability, this program could be offered two to three times per year.

Key Outcomes
For OTIC/GAPI Interns
- Enhance S&T commercialization skills and capability of OTIC and GAPI staff, especially in terms of access to US markets
- Enhance capabilities to successfully commercialize Portuguese-developed intellectual property through licensing, alliances, start-ups, and other means
- Promote OTIC and GAPI collaboration across Portuguese Universities through increased team building in the Austin-based training and internship programs
- Train the trainers – UTEN-trained OTIC and GAPI personnel would be expected to train/mentor additional colleagues after they returned to Portugal – leading to enhanced S&T commercialization effectiveness and sustainability in Portugal

For Entrepreneurship Interns
- Personally get to know US market commercialization issues such as how to present themselves and their companies
- Gain first-hand US technology and market assessments
- Accelerate US market making capabilities and network building
- Promote joint business ventures between Portuguese companies/entrepreneurs and US-based companies/entrepreneurs
- Enable collaboration and business engagements between Portuguese and US based companies for global presence and impact

B. Training Programs in Portugal

To increase the number of trained Portuguese OTIC and GAPI staff and entrepreneurs (small firms) and intrapreneurs (from larger firms) UTEN UT Austin proposes to conduct training in Portugal in collaboration with UTEN Portugal
- This training will include such topics as: IP issues in US markets, commercializing S&T in the US, venture development, action business planning, financing new ventures, marketing technological innovation, competitive technology-based strategy
- These training programs will focus on and use, when possible, actual Portuguese S&T

Outcomes:
- Increase the number of OTIC and GAPI staff and entrepreneurs that are trained – especially those who are unable to travel to Austin for Internships or training
- Increase awareness of US market-specific issues
- Better prepare Portuguese candidates for regional and national UTEN-sponsored S&T business competitions
- Build ties/links between Austin talent and Portuguese talent

C. MS Degree in Science and Technology Commercialization (MSSTC):

Competitively select qualified Portuguese to apply to UT Austin's Graduate School by March 2008. The MSSTC Program begins in April 2008. Admitted Portuguese students can attend classes in Austin or take classes on the Internet. When possible, Portuguese technologies will be used in the MSSTC class team building and business development exercises.

Outcomes
- Enhanced US and global teaming for S&T commercialization
- Enhanced network building with US entrepreneurs and technology companies
- It is intended that Portuguese companies will be launched in US markets by MSSTC graduation in May 2009.

II. National competitions

Objective: To use national competition(s) to competitively select the best Portuguese small and medium-sized enterprises (SMEs) and science and technology (S&T) for US business development and market-making activities.

Year 2 Goals: Hold at least one national competition in Portugal to competitively select the best Portuguese S&T and entrepreneurs to successfully come to the US market. Use the Year 1 pilot program S&T and technology review process as a platform, make appropriate revisions to the process based on lessons learned, and build on this platform for the national competition to select the best Portuguese S&T and entrepreneurs. Identify other needed support and mentoring processes including pre-competition coaching, a market-focused judging format, and delivery of services to those companies/entrepreneurs that win the competition.

As a direct result of experience with the pilot program (March-August 2007), and building on the substantial experience of AdI in the execution of S&T and entrepreneurship

competitions, a national competition for coming to the US market is being planned for **Fall 2007.** Following is a list of tasks and activities for holding such a competition:

- Promotion and invitations to Portuguese small and mid-sized businesses, and faculty, students, technology transfer officers, and research centers to participate in regional and national S&T business competitions
- Leverage existing Portuguese regional S&T business competitions
- Use Technology and SME Assessment Processes and results developed in the UTEN UT Austin Pilot assessments of Year 1
- Perform pre-competition coaching to prepare presenters: For select companies provide entrepreneurial coaching and mentoring conducted at designated locations in Portugal by UTEN UT Austin and Portuguese personnel ("learning by doing")
- Competition judges would include US business experts with finance, commercialization, and industry sector experience

Possible Outcomes of a national competition

- For all candidates participating in the UTEN national competition, provide business mentoring and development support as well as improvement of presentation skills
- All winning companies would receive focused commercialization, business development, and US market-making assistance by UTEN UT Austin
- Depending on business development possibilities select winning companies could:
  - Receive funded visits to Austin and other locations for market-making, business development, and network building
  - Receive support to apply to additional US and other international business plan competitions such as UT Austin's Moot Corp and Idea-2-Market competitions and other US/international competitions
  - Apply to the Austin Technology Incubator (ATI) or other US or international incubators with UTEN assistance

III. UTEN Research and Education

A. Benchmarking Research to evaluate and measure UTEN programs and activities

- Establish baseline S&T commercialization metrics of GAPIs, OTICs, Portuguese universities, incubators, etc.
- Establish metrics and collect data on UTEN activities and programs
- Research challenges to and facilitators of UTEN programs and tasks on such topics as technology valuation, technology transfer, international market access, inter-institutional collaboration and knowledge sharing, etc.
- Design methodology and collect data on UTEN metrics for select Portuguese universities, incubators, and Research Parks
- CoLab Innovation Systems – Research specific innovation systems at the country, regional, city, academic and industry levels

Outcomes:
- Important benchmark data
  - Assessing impacts of UTEN training, S&T commercialization, US market access, and job and wealth creation within Portugal

- o Establishing best processes and metrics on science and technology commercialization
- o Recommend actions to improve UTEN processes so they provide desired outcomes
- Diffusion of lessons learned and best practices through publications and workshops
- Collaborative research experience for faculty and students on UTEN-relevant topics
- Promote UTEN activities and accomplishments

B. Research on UTEN Collaboration Challenges and Facilitators

IT frameworks for collaboration: As it relates to knowledge transfer and commercialization in global and multidisciplinary environments, how can UTEN build a 21st century portal that improves regional and national collaboration within Portugal among the 13 UTEN universities and four technology parks and between Portugal and UTEN Austin and International Partners for accelerated S&T commercialization?
- CoLab programs on Digital Media, Mathematics, and Advanced Computing have also expressed a desire to research and develop better collaboration tools.

C. Provide advice on the development of a Portuguese Interdisciplinary PhD Program on "Innovation and Entrepreneurship" contributing to UTEN sustainability

UTEN UT Austin will work with Portuguese faculty on developing an interdisciplinary curriculum to educate and train needed talent to contribute to and sustain UTEN activities in Portuguese universities, incubators, and research parks. The University of Porto has expressed interest in working on this initiative.

IV. Communication and Coordination

Year 2 Goal: Increased information sharing and coordination across all Portuguese UTEN Institutions and between UTEN Portugal and UTEN UT Austin.

Based on Year 1 experience it is clear that more and better communications is needed (1) among UTEN participating institutions and staff (e.g., GAPI and OTIC staff) in Portugal, and (2) between UTEN Portugal and UTEN UT Austin.

In this regard, two initiatives for Year 2 are (1) more visits by Portuguese UTEN staff members to UT Austin, (2) increased use of available communication technologies such as Skype and videoconferencing, and (3) development of a useful web portal.

In an effort to facilitate awareness building and information sharing, CoLab UT Austin has hired a webmaster to design and implement UTEN IT support. In addition UTEN plans to
- Invite UTEN Portugal Staff to visit UT Austin on a regular basis
- Continue UTEN UT Austin visits to Portugal
- Establish regular times of UTEN Portugal-UT Austin voice communication using Skype and other means

V. Industry Affiliates and Support Networks

As UTEN accepts and places interns in Austin and Texas businesses, it will build a UTEN US Industrial Affiliates Program (IAP). UTEN is currently forming Advisory Boards in Portugal and Texas/US composed of businesses and professionals to help:
- Build know-how networks
- Evaluate and support Portuguese companies and entrepreneurs
- Leverage experienced entrepreneurs, venture capitalists, and business angels as well as technical experts concerning technology assessments and business development

Initial representation for the US UTEN Advisory Board includes:
Austin:
1. Jim Butler, City of Austin
2. Larry Graham, Professor emeritus Portugal/Brazilian studies
3. William N. Hulsey III, intellectual property attorney
4. António Lopes, former AMD Executive
5. Isaac Barchas, Director, Austin Technology Incubator
6. Erin Defosse, Director, Wireless Incubator
7. Joel Serface, Director, Clean Energy Incubator

San Antonio:
1. University of Texas Health Science Center at San Antonio
2. UT San Antonio Center for Innovation and Technology Entrepreneurship (CITE)
3. UT San Antonio Management of Technology program
4. Texas Research Park
5. InCell and TEKSA Innovations

Dallas
1. University of Texas at Dallas entrepreneurship programs (beginning discussions)

4. Annex A: UTEN-Portugal Participating Institutions

Institution	Main centers involved
Universidade da Beira Interior	UBIACTIVA (Oficina de Transf. de Tecnologia e de Conhecimento da UBI)[1]
Universidade da Madeira	TECMU (Transf. de Tecnologia e Conhecimento Madeira/Universidade)[1]
	GAPI at Madeira Tecnopolo[2]
Universidade de Aveiro	Uatec (Unidade de Transf. de Tec. da Universidade de Aveiro)[1]
	GAPI at grupUNAVE[2]
Universidade de Coimbra	IPN (Instituto Pedro Nunes), including GAPI
	OTIC UC (Oficina de Transferência de Tecnologia e de Conhecimento)[1]
Universidade de Évora	OTIC-UNE (Oficina de Transf. de Tecnologia e de Conhecimento da Universidade de Évora)[1]
	GAPI at Universidade de Évora (Fundação Luís de Molina)[2]
Universidade de Lisboa	TTC@UL (Oficina de Transf. de Tecnologia e de Conhecimento da Universidade de Lisboa)[1]
	ICAT (Instituto de Ciência Aplicada e Tecnologia)
	IMM (Instituto de Medicina Molecular)*
Universidade de Trás-os-montes e Alto Douro	OTIC-UTAD (Oficina de Transf. de Inovação e Conhecimento da UTAD)[1]
Universidade do Algarve	Algarve TransferTECH (Oficina de Transf. de Tecnologia e de Conhecimento da Universidade do Algarve)[1]
	GAPI at Universidade do Algarve[2]
Universidade do Minho	TecMinho (includes OTIC-Minho[1] and GAPI[2])
	Spin-Valor (Consultoria em Gestão Empresarial e Desenv. Científico)
Universidade do Porto	INESC Porto (Instituto de Eng. de Sistemas e Computadores do Porto)*
	OTIC@UP (Oficina de Transf. de Tecnologia e de Conhecimento da Universidade do Porto)[1]
	GAPI at UP (Fundação Gomes Teixeira)[2]
Universidade dos Açores	INOVA (Instituto de Inovação Tecnológica dos Açores)
	GAPI Universidade dos Açores[2]
Universidade Nova de Lisboa	GAPI at MadanParque[2]
	OTIC UNL (Oficina de Transferência de Tecnologia e de Conhecimento da UNL - Centro de Inovação e Criação de Valor)[1]
Universidade Técnica de Lisboa	INOVISA (Assoc. para Inov. e Desenv. Empresarial – Inst. Sup.Agronomia)
	IN+ (Centro de Estudos em Inovação, Tecnologia e Pol. de Desenvolv.)*
	GALTEC (GAPI at Instituto Superior Técnico)[2]
	CPIN-BIC (Centro Promotor de Inovação e Negócios)
	OTIC UTL (Oficina de Transf. de Tecnologia e de Conhecimento da UTL)[1]
ISCTE (Instituto Superior de Ciências do Trabalho e da Empresa)	INDEG/Audax (Empreendedorismo e Empresas Familiares)

Universidade Católica Portuguesa (Escola Superior de Biotecnologia)	TRANSMED (Valorização de Tecnologias e Conhecimentos Biomédicos)[1]
Avepark	Avepark (Parque de Ciência e Tecnologia, SA)
	Spinpark (Incubadora de Base Tecnológica)
Madan Parque	Parque de Ciência e Tecnologia Almada/Setúbal
Taguspark	Taguspark (Parque de Ciência e Tecnologia), including GAPI[2]
AdI, Innovation agency (national secretariat)	

1 OTIC (Oficina de Transferência de Tecnologia e de Conhecimento)
2 GAPI (Gabinete de Apoio à Promoção da Propriedade Industrial)

* Laboratório Associado (Associated Lab)

5. Annex B: Year 1 list of Portuguese educators and entrepreneurs who met with representatives of UT Austin UTEN

Almeida	Nuno	Critical Software, S.A.
Alves	Pedro	Fibersensing, SA
Barron	Wayne	Consolidated Container Company
Borges	Fernanda	University of Porto, UPIN
Carreira	João	Critical Links, SA
Claro	João	University of Porto
Cordeiro da Silva	Anabela	University of Porto
Costa	Diamantino	Critical Software, S.A.
Cruz	José	University of Alto Douro
Dimas	Paulo	TIMEBI, Lda
Dimas Almeida	Paulo	TIMEBI, Lda
Encarnação	Phillip	INOVISA
Espada	Ana	MoveVolumes - Embalagens Lda (FLATPACK)
Feen	Stuart	Plastic Bottle Corporation
Ferreira da Silva	Paula	Instituto de Biologia Molecular Celular
Fevereiro	Pedro	University of Lisbon, ICAT
Fontes	Carlos	Technical University of Lisbon
Henriques	Bernardo	Acacia
Lopes	José	Fluidinova, Engenharia de Fluidos, S.A.
Lopes	Ricardo	Micoplant
Machado	Jorge	University of Alto Douro
Magalhães Mendez	Joaquim	University of Porto
Maia	Alberto	Fibersensing, SA
Mata	Teresa	University of Porto, UPIN
Melo	Luis	University of Porto
Mendonça	José	INESC Porto
Mira	Luis	INOVISA
Moreira	Joana	University of Lisbon, ICAT
Moreira	Rui	WIT Software, Consultoria e Software para a Internet Móvel, Lda
Oliveira	Helena	Bioalvo
Oliveira	Maria	University of Porto, UPIN
Oliveira	Rui	WIT Software, Consultoria e Software para a Internet Móvel, Lda
Pais	Salomé	University of Lisbon, ICAT
Patrício	Ricardo	ActiveSpace
Peixe	Luisa	University of Porto
Pelizzari	Andrea	Critical Software, S.A.
Pinto	Avelino	SPIN VALOR
Ramalho	Fátima	University of Porto, UPIN
Rebelo	Irene	University of Porto
Reis	Arsenio	University of Alto Douro
Restivo	Teresa	University of Porto
Rodrigues	João	INESC Porto
Rodrigues	José	SRE - Soluções Racionais de Energia, S.A.
Rosado	Leonardo	Technical University of Lisbon

Santos	Maria	AdI
Santos	Paulo	Tomorrow Options
Silva	Deolinda	AdI
Silva	Luis	WIT Software, Consultoria e Software para a Internet Móvel, Lda
Simões	Nuno	INOVISA
Sorasio	Gianfranco	WS-ENERGIA
Sousa	Maria	TIMEBI, Lda
Taveira	Nuno	AdI
Tyndale	Peter	Critical Links, SA
Valle	Francisco	University of Lisbon, ICAT
Varela	João	PETSYS - Medical Pet Imaging Services, S.A.
Varela	Vasco	Tagus Park
Vargas	Luis	ISR - Instituto de Sistemas e Robótica
Vieira	Helena	Bioalvo
Wemans	João	WS-ENERGIA

6. Annex C: Complete List of Portuguese Technologies Identified During the Year 1 Pilot Program

Name	Inventor or Entrepreneur	Industries
Acacia Semiconductor -- ADC conversion for communications, consumer and sensors products	Henriques, Bernardo	Microelectronics
ActiveSpace	Patrício, Ricardo	Software, Mechatronics Control Systems
BIOALVO SA -- Robotics technology for drug testing	Vieira, Helena	Bioscience, Drug Discovery, Mechatronics
Biodevices -- endoscopic capsules	Meireles, Luis	Medical, Software, Image Analysis
BioFilms -- Measure/ID biofilms & deposits using vibrations	Magalhães Mendez, Joaquim	Microelectronics, Bioscience
Cluster Media	Soares, Vitor	Software
Continuous Pelletizer and Spheronizer	Pinto, João	
Cromones Derivatives - Probiotics for animals		Bioscience
Displacement transducer	Magalhães Mendez, Joaquim	Microelectronics
DoubleSun -- WS-ENERGIA	Sorasio, Gianfranco	Energy, Solar Energy
EdgeBox -- Multi-function Business Gateway	Carreira, João	Microelectronics, Telecommunications, Software
ELISA-HIV2 -- Kit for HIV-2 Diagnosis and monitorization of Disease Progression.	Taveira, Nuno	Bioscience, Medical Diagnostics
Enzyme for dairy market	Pais, Salomé	Bioscience
Enzymes for Biofuels and more	Fontes, Carlos	Bioscience, Energy
EXAMPLE -- PET Mammography	Varela, João	Medical, Medical Diagnostics, Hardware, Software
FiberSensing -- assessment of signals generated by a sensing network	Alves, Pedro	Microelectronics, Sensors, Fiber Optics
Flatpak	Vargas, Luis	Packaging
Fluidinova -- NETmix	Lopes, José	Nanotechnology, Chemical Compounds, Ceramics
Fluidinova -- RIMcop -- Reaction Injection Molding control, operation and pulsation	Lopes, José	Manufacturing, Injection Molding
Forest fire command and control system		Software, Homeland Security / Emergency Mgmt
Independent Software Verification and Validation		Software, Software Development
Instrument for pipe flow pulsation	Santos, Ricardo	Microelectronics
Linux platform for onboard software development		Software, Machine to Machine, Mechatronics
MicoPlant	Lopes, Ricardo	Food and Agriculture
Microdevice to determine body	Restivo, Teresa	Microelectronics, Machine

mass		to Machine
MOG Solutions	Texeira, Vitor	Software, Media, Broadcast Video
New derivatives of the bisnafta limidopropil	Cordeiro da Silva, Anabela	Bioscience
New drug for therapy of neurodegenerative diseases	Rodrigues, Cecilia	
PET Mammography	Varela, João	Medical, Diagnostics, Hardware, Software
Phospholipids detection method	Rebelo, Irene	Bioscience
Photovoltaics from Tagus Park -- need information		Energy, Solar Energy
Platform for producing recombinant proteins in plants	Fevereiro, Pedro	
Protozoan strains of attenuated virulence	Cordeiro da Silva, Anabela	Bioscience
Retina imaging analysis		Software, Medical
Salycilate antidote for paraquat	Carvalho, Felix	Bioscience
Silicon ribbons to lower cost of solar cells	Serra, João	Energy, Solar Energy
SRE Fuel Cells -- Small Power Fuel Cell	Rodrigues, José	Energy, Fuel Cell and Hybrid
Temperature Monitoring -- Record/Monitor Temp. of Food During Distribution	Barbosa, Jorge	Microelectronics, Machine to Machine
Ten new compounds for antioxidants and preservatives		Bioscience
TIMEBI -- mobile software for finding friends and the time to get to them	Sousa, Maria	Software, Telecommunications, Wireless, GIS
tomorrow options -- foot disease prevention for diabetes	Santos, Ricardo	Medical, Microelectronics, Software, Mechatronics
UAV technology for agriculture	Simões, Nuno	Aerospace
Vaccine against dental virulence	Tavares Gomes, Delfina	Bioscience, Vaccines
WIT Software	Silva, Luis	Software, Telecommunications
Wood Particles	Claro, João	Forestry and Lumber
Xarevision -- digital signage		Software, Media, Advertising