

Case Study in Technology Transfer Training



TecMinho

Universidade do Minho (UMinho)

This is one in a series of case studies in how the University-Technology Enterprise Network (UTEN) is helping Portuguese Technology Transfer Offices develop practices that lead to globally competitive and sustainable operations. A large component of the UTEN program has been the delivery of technology transfer best practices content and training to key Technology Transfer Personnel. This case study is an example of how UTEN delivers In-situation Training to complete the knowledge transfer of these best practices into Portuguese Technology Transfer Offices as a whole.

About UMinho

The University of Minho, founded in 1973, began its academic activity in 1975/76. UMinho is renowned for the quality of its teaching, the quality of its students, the public recognition given to its Alumni and for its intervention and strong links with the local community and the surrounding region.

UMinho has a student population of 16,000, out of which 1,900 are postgraduate students. The University has 1,200 teaching staff, of who 850 hold a PhD, and 600 administrative and technical staff. The University is located in the Minho region of Northern Portugal, a region with an extremely strong tradition of vibrant enterprise, essentially of small and medium-sized businesses.

UMinho has two campuses located 20 km apart: one in Braga and the other in Guimarães. The Rectorate is located in the heart of historical Braga, at Largo do Paço. The city of Braga has a centuries-old affiliation with Culture and the Arts, and is firmly established in the service industry sector. It is here, in this city, that the following institutes and schools are installed: the Institutes of Arts and Humanities; Social Sciences; and Child Studies; the Schools of Sciences; Health Sciences; Nursing; and Law, as well as some Engineering areas.

Guimarães, often referred to as the birth place of the nation, is dominated by the manufacturing sector with a strong investment in the Textile and Clothing, Metallurgy and Shoemaking Industries. The campus of Azurém, Guimarães, is home to the School of Engineering, and the courses of Architecture, Fashion Design and Marketing, Geography and Planning, and Applied Mathematics.

UMinho Constantly ranks within the top 500 best Universities worldwide and is within the top 100 European Universities.¹

Academic Units:

- Autonomous Department of Architecture (DAA)

¹ <http://www.webometrics.info/about.html>, 05/11/2010

- Institute of Arts and Human Sciences (ILCH)
- Institute of Child Studies (IEC)
- Institute of Education and Psychology (IEP)
- Institute of social sciences (ICS)
- School of Economics and Management (EEG)
- School of Engineering (EENG)
- School of Law (ED)
- School of Sciences (EC)
- The Health Sciences School (ECS)

About the TTO - TecMinho

Founded in 1990, TecMinho is a private non-profit association, sponsored by the University of Minho and the Association of Municipalities of Vale do Ave. Its basic mission is to be an interface of the University of Minho, promoting its connection to society, especially in the areas of science and technology, contributing to regional development by improving the competitiveness of organizations and increase the skills of individuals.

TecMinho is primarily focused on the following core functions:

- Promotion of innovation and development of new technologies / products / processes and their transfer to businesses;
- Promotion of continuous training activities (including e-learning), as well as organizational development and transnational mobility of human resources;
- Support to the creation of enterprises, with emphasis on academic spin-offs;
- Kick-start of projects of research / development, as well as guidance in its implementation.

TecMinho has been heavily involved in UTEN activities since the inception of the program. U Porto staff have participated in intensive onsite training, participated in extended internship programs and conducted technology assessments under the mentorship of UTEN and University of Texas at Austin Office of Technology Commercialization (OTC) staff. In addition TecMinho Licensing Manager, Pedro Silva, conducted a two-month U.S. internship at the OTC in Austin, TX working directly with OTC and UTEN staff.

Mr. Silva's internship was focused on developing skill sets needed to restructure UPIN TT processes. Primary objectives for this internship where:

- Setting-up a structured industry liaison program
- Getting valuable insights on proof-of-concept / prototype development strategies / programs / funds / agreements
- Pursuing commercialization routes for the most relevant technologies of the University of Minho in strict collaboration with UTEN officers, consultants and hosts (technologies have been carefully selected taking into consideration the U.S. context).
- Acquisition of substantial know-how and skills during the marketing and negotiation processes should be one of the main outputs of this action line
- Identification of suitable strategies, tactics, methodologies, tools, procedures and practices to be incorporated on:
 - Technology Scouting - Early-stage technology screening & evaluation - Market assessment and validation

- Identification of leads, targets and key contacts - Technology Marketing - Negotiation & Licensing

Needs Identification

Post UTEN training and internships, in discussion with Marta Catarino, TecMinho Manager, it was discovered that while Mr. Silva’s knowledge growth was considerable as a result of UTEN training that it was difficult for him to implement some of the practices he had learned through training and experience within the TecMinho office. It was felt that with the direct assistance of UTEN staff that the knowledge transfer could be completed only by and intense period of on-site assistance and work with all of the TecMinho staff. Prior to departure, Heath Naquin, Program Manager for Technology Transfer and Commercialization, worked closely with Ms. Catarino and Mr. Silva to identify skills gaps of the office at large related to not only technology transfer but in office operations. Key areas of focus for training, in addition to technology marketing and licensing were to include: project management, IT interface, support tools, invention disclosures and marketing of the TTO.

In-Situation In-Practice

In-Situation training was piloted as a one-week program which kicked off at TecMinho in September of 2009. A detailed schedule of meetings and project planning sessions was produced in advance designed to get direct input for TecMinho staff as well as to familiarize the office as a whole on UTEN trainings and competencies. Heath Naquin worked directly with Pedro Silva and Eduarda Silva over the course of the week and interfaced with other staff within the office as necessary and appropriate.

Scheduled breakdown of training session was as follows:

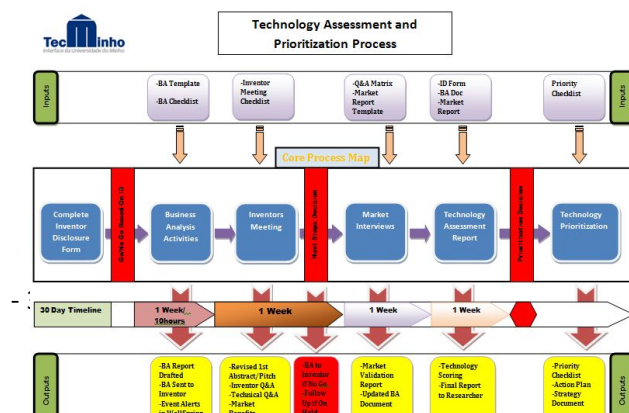
- Day 1: Meeting with TecMinho Departments/Planning Sessions.
- Day 2: Clearing the TecMinho IP Portfolio Working Session/Analysis of TTO Technology Intake Process.
- Day 3: Working session dedicated to designing and developing an updated technology intake process and creation of associated forms and support materials.
- Day 4: Project Management Integration of materials and process, IP integration strategy session.
- Day 5: New TTO Process for Intake, Evaluation and Assessment presented to management.

Created Materials

Over the course of the week long In-Situation Engagement, Pedro Silva, Heath Naquin and Eduarda Silva created the following key materials for use within the TecMinho ecosystem by drawing upon UTEN best practices training combined with the institutional reality of TecMinho.

Specific items created included:

- Business Analysis Guidelines for the Office
- Secondary Research Documentation
- Inventor Agreement Form
- Updated Inventor Disclosure Form
- Market Analysis Questionnaire for Staff
- Update Process for Office



The created items and associated processes were to be integrated into the TTO operations for determination of effectiveness and improvement over existing processes. At the time of this writing the draft process and tools are pending annual review.

Key Lessons Learned

Over the course of the In-Situation Training, several key lessons were learned related to the actual implementation of technology transfer best practices within a TTO.

1. Learning is Not Doing- As with any training, at a certain point the learning and knowledge must be transferred into implementation to be valuable to organizations. This is common across organizations but is readily apparent in the TTO context of universities. TecMinho is wise in ensuring that personnel take the next step to actually implement learning within the organization and top down support of this is almost a requirement for success.
2. Best Practices Aren't Always for the Best- Best Practices in the context of TTO's can more accurately be termed "Good Operating Principles." Given the unique context and nature of nearly every TTO worldwide, with the notable exception of IP strategy and protection procedure, TTO Best Practices collections are generally reduced to guidelines that form the basis for individual office best practices development. It is important to realize that while "best practice" content is important to gather each office must make a concerted effort to incorporate and develop them to be useful within their own context.
3. Staff Time is Precious-No mystery and common across all organizations, staff time within the TTO is precious. As was mentioned by Ms. Catarino, "Every hour of training and discussion of technology transfer staff is an hour taken away from marketing our technologies to the world." In any technology transfer related training, it is important to realize this fact and ensure that material being provided is focused on directly impacting staff effectiveness at their primary job-transferring technology.
4. Physical Presence-As with any complex knowledge transfer engagement, physical proximity is required. Despite the advent technology for video conferencing and collaboration, there is no possible way to recreate the context of the entire TTO setting virtually. It is the interoffice dynamics which are incredibly important to the successful implementation of TTO guidelines within an office. Without the direct placement of a change agent within an office, this is difficult if not impossible to achieve.