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# **Entrepreneurial-Innovative University Services: A Way to Integrate in the University's Third Mission**

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Fernando Jiménez-Sáez

## **Introduction**

The so-called 'Third Mission' of the university is under debate for the last 20–30 years (Laredo, 2007) and this mission has received a wide variety of interpretations. In this chapter we adhere to execution of activities that contribute to the economic and social development of its territory. This new idea of the university as an entrepreneurial one requires a reorientation of its strategy to cope with the challenges imposed by its new task towards society. In this sense, the Entrepreneurship Support Programmes (ESPs), as university services, are a central element in the fulfilment of the aims and objectives of any entrepreneurial university, as those that combine and integrate the traditional activities of education and research with the contribution to the economic and social development (Etzkowitz, 1998; Goddard, 1998). The ESP services consist, for example, of programmes that promote entrepreneurship in all the fields; they support the creation of new innovative companies with a scientific or technologic base; they support the development of university spin-off and training related to the creation and management of companies; and they promote university–company relationship and interaction between other factors (Arroyo-Vázquez & van der Sijde, 2008). The reorientation of the strategy of the university into an entrepreneurial one involves also a strategy with regard to the university's 'entrepreneurial' services, which have to adapt to the new demands and needs of the university's 'new' users, entrepreneurs and companies as well as university staff members.

In this chapter, we describe the role of the IDEAS Institute in the process of transformation of the UPV into an entrepreneurial one.

## **Theoretical Framework**

The study of the entrepreneurial universities' success has produced an extensive collection of literature on the characteristics of these universities and the way in which they could convert successfully into entrepreneurial ones. Some of these works are by O'Shea, Allen, Morse, O'Gorman, and Roche (2007), Etzkowitz (1983, 2004), Clark (1998), Tornatzky, Waugaman, and Gray (2002) and others. The entrepreneurial university can be understood as a flexible organisation that interacts with its social and economic environment, continuously adapting to changes. Therefore, to attend properly to the demands of the society and to be recognised as entrepreneurial university, it is necessary to transform not just the aims and strategies of the university but also its climate and culture. This transformation of the traditional university towards an entrepreneurial one has been studied by Clark with regard to European universities (Clark, 1998) as well as universities worldwide (Clark, 2004). Clark identified the following important conditions that need to be realised:

- A stimulated heartland
- A strengthened steering core
- A diversified funding base
- An extended developmental periphery
- An integrated entrepreneurial climate

A university office with a task to stimulate, support and realise such a transformation of a university into an entrepreneurial one needs to work on each of these five dimensions. An office as intended with the extended developmental periphery needs to create a basis for innovation inside the university to work on the characteristics (conditions) that are connected with an entrepreneurial university. In this sense, the connections between a flexible organisation that interacts with its social and economic surroundings adapting to the changes and looking for additional funding and the integrated entrepreneurial culture (Clark, 1998) is key for a university service that wants to implement innovation in its processes.

These extrapolations of the definition of entrepreneurial university to the one of innovative university service is in perfect tuning with the four typical conditions of the services sector identified in the literature (Evangelista & Sirilli, 1995), which have implications to define and analyse the innovation in services:

- The close interaction between knowledge production and its further application (Chang, Yang, & Chen, 2009). This fact involves that a large part of innovation in services activities are mainly oriented towards the adaptation of those services to the users' needs.

- The intensive content in information of the activities of services and of production. This factor confers huge importance on the generation and use of the information technologies in the activities of innovation of the companies of services.
- Human resources are a basic factor of competitiveness.
- The importance of the organisational factors in the performance of the companies.

Each time more evidence becomes available for the innovative activity in services of this nature (Gallouj, 1998; Sundbo & Gallouj, 1998; Miles, 1994; Teece, 1996). The management of ESP as an innovative service in the frame of an entrepreneurial university requires incorporating and adopting these characteristics, influencing conveniently the appearances mentioned and having in account the needs and characteristics of the Third Mission of the university.

## **Innovative University Services to Manage Entrepreneurial Universities**

We recognise two critical tasks related to the entrepreneurial culture within the entrepreneurial university that are closely related to its Third Mission. The first one is the *Entrepreneurship Encouragement* (EE) defined as ‘dynamisation’ (Castro et al. 2001) (and entrepreneurial culture building process) among the involved stakeholders (always including entrepreneurs) as well as the promotion of research and teaching activities in entrepreneurship and related fields. In this definition we want to point out that ‘dynamisation’ is understood as the induced behavioural change that ‘moves someone to do something’. According to these authors two activities must be promoted in the ‘dynamisation’ process: awareness and motivation on the one hand and the provision of facilities on the other. The second critical task is the *Business Development Support* (BDS). We define it as the process that encompasses the opportunity search and recognition, opportunity development, business start-up and business development and growth. We argue that these two tasks must be developed jointly, within an integrating framework since many stakeholders are involved in both and the different activities of each task can benefit from a synergic stream among them, therefore improving the whole EE&BDS process. Arroyo-Vázquez and van der Sijde (2008) developed this integrating approach constructed around four main pillars reflecting those activities and tools that may help implement this approach. The model must be taken into account under a generic consideration, and it needs to be adapted and rearranged in each case in order to make it operational. This proposal of EE&BDS integrating model is shown in Figure 1. It depicts on the one hand, the different areas that we have to promote in order to achieve an integrating process and, on the other, the activities that we have to carry out in each one.

The authors show that the proposed model could yield optimum results when stakeholders take on their assigned roles. However, to achieve these results and the objective aims of the Third Mission, it is necessary that stakeholders agree and interact with each other. This requires delicate stakeholder management, balancing the interests of the internal and external stakeholders of the Third Mission and building a university service with the characteristics of an innovative service that allows the appropriate management of the EE&BDS model.

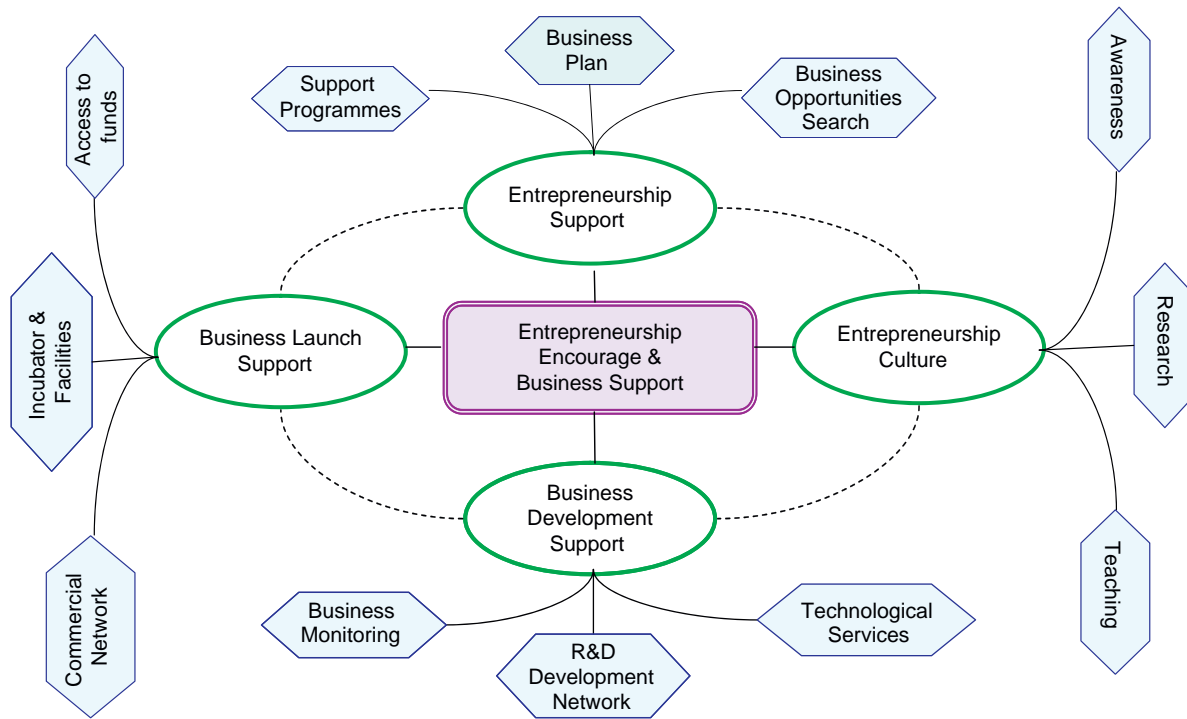


Figure 1: The EE&BDS model.

Table 1: Entrepreneurial and innovative service characteristics.

<b>Scope</b>	<b>Characteristics</b>
Entrepreneurial	Alternative research for funding Flexible organization
Entrepreneurial/Innovative	Interaction with the surroundings Integrated entrepreneurial culture
Innovative	Adaptation to the users' needs Use of IT Training and training of human resources

The characteristics that identify these services have to deal with the duality of the entrepreneurial-innovative university. Table 1 shows the already mentioned characteristics, indicating whether they correspond to entrepreneurial, innovative or both services.

## **The Case of the IDEAS Institute of the Polytechnic University of Valencia as an Entrepreneurial and Innovative Service**

The IDEAS Institute, created in 1992, is the office of the Polytechnic University of Valencia responsible for the creation and development of innovative and technology-based companies. From its creation, this office has been continuously adapting to the needs of its users, inside and outside of the university. The evolution of the IDEAS Institute over 18 years of its existence has followed a path that has allowed gradual transition and incorporation of new services in response to university needs.

The mission of the IDEAS Institute is to encourage and develop entrepreneurship at the university, create awareness and promote dynamisation in the university community, and support the creation and development of innovative and technology-based companies — all in accordance with the ‘third’ mission of the UPV as an entrepreneurial university (IDEAS Institute 2006, 2007). The current organisational structure of IDEAS Institute is depicted in Figure 2, which shows the differentiation between the management of IDEAS and its relation with the university and university offices, and the services rendered to entrepreneurs and companies.

Regarding the resources, the IDEAS Institute receives funding from the UPV. However, as innovative and entrepreneurial office, it has to explore new avenues for additional funding. For this activity, the Institute has a project manager whose task is to scout funding through subsidies, collaborations, agreements, etc. In 2007 the IDEAS Institute explored sponsorship as a financial source. As a result, the current financial structure of the service is divided equally in three sources of funding: finance by its own university, projects and collaboration, and sponsorships.

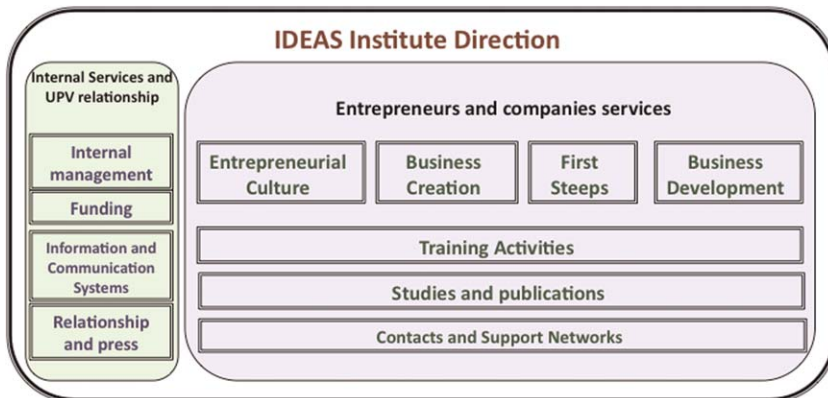


Figure 2: Organisational structure of IDEAS Institute.  
*Source: IDEAS Institute (2006, 2007).*

With regard to the flexibility of the services, the IDEAS objective is to help an entrepreneur with all its available means. For instance, the office as part of the university is able to tap into the PR resources and promote the entrepreneurial culture within and outside the university by developing programmes open to university staff as well as entrepreneurs.

The flexibility should also consider the services loaned. Sure enough, the entrepreneurs always have different problems for which they explore different solutions and, in most cases, innovative solutions. The IDEAS Institute tries to constantly develop its services and adapt them to the needs of its users. Finally, the IDEAS Institute can be considered as an entrepreneurial and innovative office stimulating entrepreneurship in the broadest sense (Table 2).

## Conclusions

Clark sets the pathway to create an entrepreneurial university: Indicating that it must fulfil five lines of actions. In this chapter we focused on the IDEAS Institute that can be characterised as the implementation process of the extended developmental periphery of the UPV. This extended developmental periphery has both an inward-oriented task (to stimulate and contribute to an entrepreneurial climate in UPV) as well as an outward-oriented task (business creation and service to companies). This combination requires special 'Janus' competencies (training of human resources), and in this sense this chapter can be viewed as an extension of Clark's view, to be able to deal with the internal stakeholder(s), the UPV and the schools and institutes of UPV, and the external stakeholders, the institutional environment of UPV.

To be able to interact with both types of stakeholders the IDEAS Institute must behave as flexible organisation that serves both internal and external stakeholders and applies new ICT means to communicate with them. By balancing the interest

Table 2: Implementation of characteristics of innovative and entrepreneurial services at IDEAS Institute.

Characteristic		Application to the Case of the IDEAS Institute
Entrepreneurial university service	Diversified funding base	Funding not only of the UPV, but also: <ul style="list-style-type: none"> <li>• From projects, collaborations and subsidies</li> <li>• By sponsorship of (other) agencies and companies</li> </ul>
	Flexible organization	The organisational structure, the timetable and the services have been more flexible in order to adapt it to the users needs, on the one hand, and allow the interaction with the rest of agents and the generation of new processes and procedures, on the other.
	Interaction with the environment (extended developmental periphery)	Collaboration with agents in the environment such as: <ul style="list-style-type: none"> <li>• Public entities</li> <li>• Companies and business associations</li> <li>• Financial entities and investors</li> <li>• Scientific parks, technologies and universities</li> </ul>
	Integrated entrepreneurial culture	Fostering of creativity, commitment and innovation in the form to attend to the entrepreneurs and companies. To attend to the requests of the service, currently exists an integrated entrepreneurial culture in the people that offers the service and that has been fruit of a process carried out from the start of the programme.
Innovative university service	Adaptation to its users' needs	The IDEAS Institute has a set of services that evolves constantly to adapt itself to the needs of the users. The philosophy is not 'this is what we offer', but 'what the entrepreneur needs are and how can be satisfied.' New services are constantly arising from the needs of entrepreneurs and companies.
	Communication (use of IT)	From the beginning the use of IT is considered essential. IDEAS has implemented online services, has



Table 2: (*Continued*)

Characteristic	Application to the Case of the IDEAS Institute
Training human resources	software for entrepreneurs support, has developed a virtual commercial centre to innovative companies, TV magazines, tools for videoconferencing, implementation of the last trends (web 2.0, interactive blogs, etc.) as a means to communicate with its constituencies. The team of the IDEAS Institute receives constant training related with its activities. In addition to the continuous training offered by the university, IDEAS Institute promotes the support to conferences, presentations and courses in its domain.

(adaptation to its users' needs) of both constituencies the IDEAS Institute is able to generate funds internally and externally for its activities — in other words, 'legitimacy' is generated within both constituencies, securing funding (Clark: 'diversified funding base').

The extended developmental periphery as outlined by Clark is an important instrument in the transformation into an entrepreneurial university. We state that, based on this single case of the IDEAS Institute of UPV, the role of such an organisation cannot be overestimated: an extended developmental periphery needs to balance the interest of the internal and external constituencies, and not only serve the internal university constituency. This requires that such an organisation is flexible and needs to gain legitimacy from both for its 'raison d'être': contributing to the entrepreneurial culture of the university through encouragement and stimulation of entrepreneurship, ESPs and services to the entrepreneurship and business world outside the university. The results of the IDEAS Institute show that this is not only possible, but highly appreciated internally and externally.

## References

- Arroyo-Vázquez, M., & van der Sijde, P. C. (2008). Entrepreneurship encouragement and business development support at universities and science parks. *Industry and Higher Education*, 22(1), 37–48.
- Castro-Martínez, E., Fernández de Lucio, I., Gutiérrez-Gracia, A., & Añón, M. J. (2001). *La estrategia de dinamización en la cooperación investigación-empresa: desarrollo conceptual y*

- aplicaciones*. IX Seminario Latino-Iberoamericano de Gestión Tecnológica (ALTEC) Proceedings. San José, Costa Rica.
- Chang, Y. C., Yang, P. Y., & Chen, M. H. (2009). The determinants of academic research commercial performance: Towards an organizational ambidexterity perspective. *Research Policy*, 38(6), 936–946.
- Clark, B. (2004). Delineating the character of the entrepreneurial university. *Higher Education Policy* (17), 355–370.
- Clark, B. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation*. Oxford: Pergamon Press.
- Etzkowitz, H. (1983). Entrepreneurial scientists and entrepreneurial universities in American academic science. *Minerva*, 1(2–3), 198–233.
- Etzkowitz, H. (1998). The norms of entrepreneurial science: Cognitive effects of the new university-industry linkages. *Research Policy*, 27(8), 823–833.
- Evangelista, R., & Sirilli, G. (1995). Measuring innovation in services. *Research Evaluation*, 5(3), 207–215.
- Gallouj, F. (1998). *Innovation in reverse services and the reverse product cycle*. S14S Topical Paper No. 5, STEP Group.
- Gallouj, F. (1998). Innovating in reverse: Services and the reverse product cycle. *European Journal of Innovation Management*, 1(3), 123–138.
- Goddard, J. (1998). *The role of universities in regional development*. Working paper for CRE-Columbus, UNESCO, Paris, 1 de agosto de 1998.
- IDEAS. (2006). Annual Report 2006. Valencia, 2007.
- IDEAS (2007). Annual Report 2007. Valencia, 2008.
- Laredo, P. (2007). Revisiting the third mission of universities: Towards a renewed categorization of university activities. *Higher Education Policy*, 20, 441–456.
- Miles, I. (1994). Innovation in services: Part 2 — Sectoral and industrial studies of innovation. In: M. Dodgson & R. Rothwell (Eds), *The handbook of industrial innovation* (pp. 243–256). Gran Bretaña: Edward Elgar.
- O’Shea, R. P., Allen, T. J., Morse, K. P., O’Gorman, C. Y., & Roche, F. (2007). Delineating the anatomy of an entrepreneurial university: The Massachusetts Institute of Technology experience. *R&D Management*, 37(1), 1–16.
- Sundbo, J., & Gallouj, F. (1998). *Innovation as a loosely coupled system in services*. S14S Topical Paper No. 4. STEP Group, Oslo.
- Teece, D. J. (1996). Firm organization, industrial structure and technological innovation. *Journal of Economic Behaviour and Organization*, 32(2), 193–224.
- Tornatzky, L. G., Waugaman, P. G., & Gray, D. O. (2002). *Innovation U: New University roles in the knowledge economy*. North Carolina: Southern Growth Policies Board.