# Organizational Capabilities of the Entrepreneurial University

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**Abstract:** Developing entrepreneurial capabilities has become a key competitiveness strategy in business across the world. Overall, organizational capabilities can provide performance improvements by taking an integrated approach to people, infrastructure and processes as means of codifying organizational learning. The paper proposes "organizational capability" as a valuable tool for universities who seek to develop their competitiveness entrepreneurially, especially across the EU, where higher education is no longer a guarantee for employment and alternatives are sorely needed. For this purpose, we explore conceptualizations of organizational capabilities, propose an integrative model and apply it to learn more about the development of capability from practice at Aalto University in Finland.

**Keywords:** organizational capability; organizational learning; entrepreneurial university

**JEL Classification:** L26; L30

## 1. Introduction

The global market for education has become very competitive, with universities increasingly reaching outside of domestic markets to attract students. While the best financed universities have actually shifted their income generation from fees to investment portfolio management (Harvard Business School being a key example), no higher education institution can forego the need of attracting the best students available in its class in order to keep the performance standards that endorse it.

Changes brought about by globalization, massification of higher education, technology, demographics (Allison & Javorka, 2014; Wilson, 2008), as well as resource stringency due to increasing competition and public budget cuts and performance-based allocation (Allison & Javorka, 2014) have forced HE institutions to reassess their business models. With lower, more competitive access to resources and increased uncertainty, taking the entrepreneurial path has been a solution for an increasing number of institutions (Gibb, 2012; Mets, 2010).

These trends are particularly important for Europe. Criticized for lacking entrepreneurial dynamism, the EU is lagging behind the US in innovative and entrepreneurial outputs. Entrepreneurship education

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and support have been hailed as the silver bullet, but the local and transnational actions taken have failed to reach the expectations fueled by the considerable budgets invested.

In this context, the entrepreneurial university plays a key role in the European economy, yet a comparative analysis of entrepreneurship education in universities (Wilson, 2008) shows this is a challenging mission especially in the following aspects:

- focus on SMEs rather than high-growth entrepreneurship;

- lack of clarity on the place and purpose of entrepreneurship education in universities, affecting curricular integration, cross-departmental cooperation and support for champions;

- insularity and low-level of interdisciplinary collaboration and (project-based) learning;

- teaching, curriculum-building and support networks more academic and relatively isolated from the business community in comparison to US universities;

- an ongoing search for a common definition (outcomes and results), as well as standards.

This raises several interesting challenges and opportunities for entrepreneurship education in universities across Europe, yet converting EU-level policy and intentions into practice has proved very difficult on a micro level. Universities tend to be notoriously inflexible institutions balancing the needs of very different stakeholders, regulations, traditions and multiple responsibilities going beyond the basic, educational first mission.

In this context, individual universities who find the solutions for innovating and overcoming these challenges are the key to driving change in entrepreneurship education in Europe. However, this type of organizational development cannot be piecemeal and opportunistic. Universities seeking to become strong competitors on the educational market need to cover much ground to catch up with current leaders. As such, these HE institutions must become *capable of intentionally delivering results in selected areas of entrepreneurship, as part of a deliberate strategy*.

It is particularly for this reason that we propose turning to the concept of organizational capability in order to provide answers to several valuable research questions:

- How can we better conceptualize organizational capabilities generally?

- What capabilities should the entrepreneurial university have?

- How can universities intentionally develop these capabilities?

The first step in answering these questions is exploring conceptualizations of *organizational capability* in search for a definition that is relevant for the entrepreneurial university.

## 2. Organizational Capabilities: Searching for a Working Model

There is a noticeable variety in the labels assigned by scholars for the factors that contribute to what makes an organization capable of consistently delivering specific results.

In this respect, the main conceptualizations relevant for the purpose of this paper focus on the practical aspect of capabilities. Selznick (1957), uses the term of *distinctive competencies* to describe "what makes an organization good at a particular thing". This approach is further developed by Prahalad and Hamel (1989), who focus on the core competencies of a business as "a harmonized combination of multiple resources and skills that distinguish a firm in the marketplace". The authors also propose that

such a combination truly becomes a source of competitive advantage when i) it provides potential access to a variety of markets, ii) it makes a significant contribution to the perceived customer benefits and iii) it is difficult to imitate by competition

A number of authors have proposed the term of *complex routines* as an alternative label. Nelson and Winter (1982) reflecting on it not as a replacement of *capabilities* as a concept, but as an explanation of how predictable, reliable processes and facts become, over the long term, concrete sources of organizational performance. Cyert and March (1963) consider routines to be repositories of organizational knowledge, a perspective shared by Cohen and Bagdayan (1994), who experiment with measuring learning and task performance in teams playing a card game to illustrate how behavior follows the coordinates of routines, becoming supra-individual and acquiring dynamics separate from those of the individual players.

A broader perspective on capabilities is proposed by Ulrich and Smallwood (2004) through the concept of *collective abilities*, indicating organizational skills that are built through a synergy between individual skills, governance and organizational culture.

However, the greater challenge remains ontological: where do we trace the boundaries between what is truly important for what generates performance in businesses and institutions?

The literature gravitates around four general approaches:

1. *A specific combination of resources and processes* with no differentiation between the dynamics and importance of material/capital resources and HR (Amit & Shoemaker, 1993).

2. A different perspective emphasizes *behaviors* with the exclusion of structure, process or resources from the definition. The Boston Consulting Group (2012) recognizes the importance of the latter elements, but separates them from the ontology of capabilities.

3. A third view focuses on *knowledge and skills* of the organization. King, Fowler and Zeithaml (2001) propose that capabilities are often embedded in employees, specifically middle management, and propose four measures to diagnose and build shared vision on which are the true capabilities of an organization (consensus, tacitness, robustness and embeddedness).

4. A fourth subscribes to any of the previous while integrating *culture* as an ingredient or a component in developing organizational capability (Walsh & Ungson, 1991; Starbuck, 1992).

While all perspectives provide useful insights, there is a need for a more encompassing view that takes un unbalanced approach to favoring either the hardware (infrastructure, resources, technology), or software (processes, knowledge, routines, culture).

For this purpose, we find the conceptualization proposed by Argote and Darr (2000) to be the most integrative. By studying the process of improving capabilities across a network of fast-food franchises, the authors propose that the value of *people, instruments and resources* and *processes* lies foremost in being repositories of experience, codifying organizational learning into concrete elements which can be recognized and managed appropriately to increase the capacity of a business to provide performance. This conceptualization is also useful in solving the static – dynamic paradox of organizational capabilities (Scheryog & Kliesch-Eberl, 2007), which stresses the conflict between the need for fixed, consistent and reliable capabilities and the need to continuously adapt to new conditions in the market. Taking the view that organizational capabilities are in fact learning codified in discrete, concrete elements opens new possibilities for managing them accordingly.

We find that this definition provides an appropriate foundation by bridging the views in existing literature and a starting point for developing a model, with the following additions:

- Integrating *results* as a fourth aspect of capabilities

Account for the expected results is a requirement, since *organizational capabilities* are not the goal, but the means to an end. It is only by stating clear expectations for results that they can be built or managed effectively. After all, capabilities should be focused on practical problems, while manifesting throughout the organization reliably (Schreyogg & Kliesch-Ebberl, 2007).

As such, an organizational capability represents learning embedded in the organization in a way that is actionable for the purpose of reaching specific results, both internal, in terms of what the organization seeks to achieve for itself (KPIs), as well as external, focusing on the "jobs" which customers seek to get done when employing products or services (Ulwick, 2005)

- Recognizing *culture* as a crucial factor for the development of particular *capabilities* (which have an impact on culture, especially through the *results* that reinforce and legitimize it).
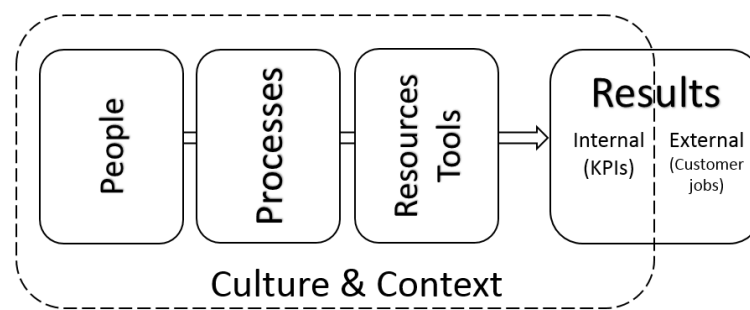


**Figure 1 The organizational capability map**

## 3. Organizational Capabilities of the Entrepreneurial University

Applying the proposed working model requires taking two steps: the first is looking at what capabilities should the entrepreneurial university have; the second is using the proposed model to understand the process of intentionally developing capabilities, using Aalto University in Finland as a case study. We consider that while this approach in especially relevant for EU universities in the context of this paper, the proposed model is applicable to any HE institution across the world.

### 3.1. Main Capabilities of the Entrepreneurial University

An inquiry into the literature investigating entrepreneurial universities provides little result in respect with a capability-oriented perspective. The only comprehensive study has been proposed as part of HEInnovate initiative (Allison & Javorka, 2014) a project developed with support from the European Commission, as "a self-assessment tool that allows higher education institutions to map out their status quo on": leadership and governance; organizational capacity, people, incentives; entrepreneurship development through teaching and learning' pathways for entrepreneurs; knowledge exchange; internationalization of the university; measuring impact.

HEInnovate provides useful tools for assessment and strategy formulation, but the 7 dimensions represent a heterogeneous mix of features, of which only some represent actual capabilities.

As such, the framework does not propose a ready-to-use structure of capabilities, yet offers a comprehensive view of the tasks of the entrepreneurial university. On this basis, we propose the following key capabilities for an entrepreneurial university in respect with entrepreneurial education and pathways to entrepreneurship for students:

- MARKETING: interacting purposefully with potential customers to maximize attractiveness for entrepreneurial potential students
- ENGAGEMENT: continuous engagement of existing students and staff to maximize interest and create a culture of entrepreneurship across the campus
- EDUCATION: providing effective entrepreneurship education to accelerate the transition from idea to student startup
- STARTUP SUPPORT: providing multiple support schemes, especially mentoring and contacts, to maximize the success rate of student and staff startups
- FINANCE: developing access to finance to maximize growth for student and staff startups
- EVALUATION: accurately evaluating the impact of education and support to reinforce learning and collect proof of impact
- PR: effectively communicating impact to maximize external contributions and attractiveness
- NEWTWORKING: interacting effectively with business community and institutions to increase support and contributions for entrepreneurial development

The proposal focuses on the educational mission of the entrepreneurial university for two reasons.

First, quality entrepreneurship education plays a major part in attracting funds: a study mapping the financial challenges and strategies of over 120 academic entrepreneurship centers from across the world highlights that irrespective of the region or business model, the quality of the students and that of the educational programs remain the driving factor in generating goodwill and income from a variety of sources (Kuratko, 2013).

Second, a report commissioned by Skoltech MIT Initiative highlights that universities have two paths towards developing entrepreneurially:

a) "bottom-up, community-led model" catalyzed by local community, focusing on regional/national development

b) "top-down, university-led model" driven by academic leadership, focusing on income generation from IP

We believe the first is more relevant for the EU, especially given the challenge of youth unemployment. Even more so, technology transfer is lagging or completely lacking in many universities, making the second approach relevant for only a minority of academic center. Finally, Europe has a markedly less entrepreneurial culture than the US, requiring quick improvement in engaging student participation.

It is particularly for the latter reason why we will prioritize ENGAGEMENT as a key capability. The choice is based on an understanding that a university may have the potential to offer excellent programs in entrepreneurship education and support, yet be unable to mobilize a critical mass of students to participate fully, invalidating an otherwise essential capability (EDUCATION).

**3.2. Developing Capabilities of the Entrepreneurial University. The Aalto University Case Study**

In June 2014, MIT Skoltech Initiative published a report (Graham, 2014) looking at the most innovative, entrepreneurial campuses all over the world. To understand how similar development can be driven locally, the research team has questioned 61 experts in 22 countries to identify:

- the most appropriate measures for university entrepreneurial performance

- global success stories and the most unlikely successes in particular

The search was followed by deeper qualitative research into 4 campuses that fit the "unexpected" success label. Selected both for impressive results, but also for how unlikely these are given local conditions, they can provide clearer insights into the role played by deliberate strategy rather than conditions or external support too favorable to be of reference for other initiatives.

To highlight the process of capability development, this paper zooms in on the Aalto University experience with student ENGAGEMENT. Just 3 years after it was founded through the merger of the 3 largest universities in Helsinki to spearhead entrepreneurship education and R&D in Finland, Aalto University has become one of the most vibrant campuses worldwide, with a level of participation and enthusiasm for entrepreneurship "like nothing I've seen anywhere in the world", to include a quote from one of the international experts. That this is happening in a culture notorious for its aversion to risk, negative perceptions of entrepreneurship and "Nokia culture" of seeking corporate employment is what makes the Aalto case a very interesting lesson.

By drawing the capability map of Aalto, the key ingredient of its student ENGAGEMENT is leadership provided by the student community. More important, the student movement is not a byproduct of policy, but the key driver of this change, with other elements in the environment and local policy supporting or challenging this grassroots leadership.

The origins of the student engagement capability at Aalto lie in the 2010 merger, which has provided the catalyst required for disgruntled students, unhappy with career prospects as well as the lack of entrepreneurial support and education available to them, to coalesce into the Aalto Entrepreneurship Society. This "radical" pioneering group has begun its activity in force, by occupying university facilities without asking formal approval permission in order launch its activities and has moved remarkably fast in launching projects and activities with unprejudiced openness to new ideas

During the past 4 years, the student movement has polarized in 2 entities: the Aalto Entrepreneurship Society remains the low-entry point of contact (5000 members) and keeps its risk-taking, innovative approach; the StartUp Sauna, led by alumni entrepreneurs, is more stable in its approach, managing a portfolio of tried and tested processes currently including an accelerator, an entrepreneurial internship program and SLUSH, Europe's 3rd largest tech entrepreneurship conference.
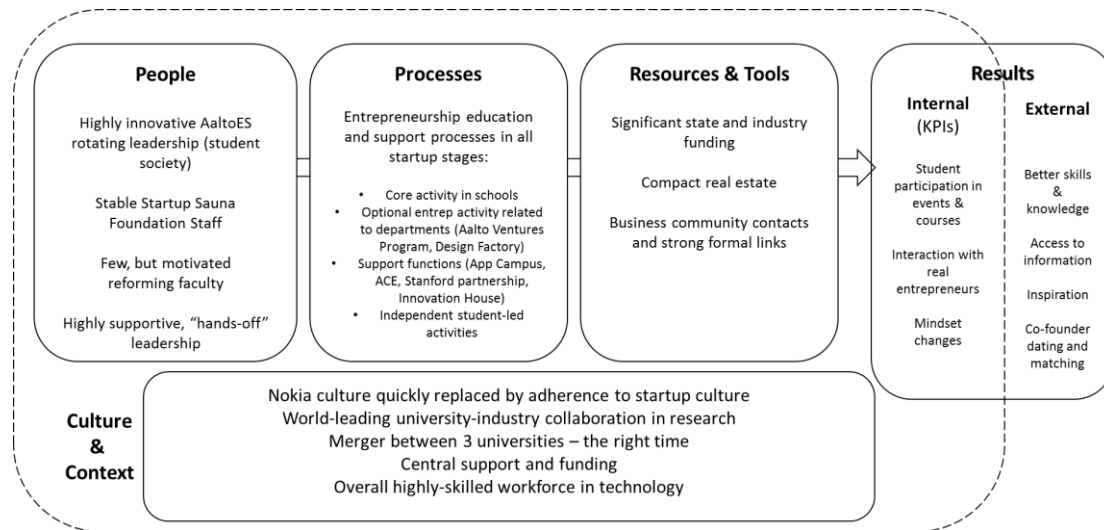
**Figure 2. Map of ENGAGEMENT capability at Aalto University**

Of course, true student ENGAGEMENT is only possible through integration across the entire academic landscape, which has been mapped as part of the *processes* component given that it is the way in which the people and resources which assemble them are brought together that makes the difference. This is especially important as the two student organizations cover the more extreme ends of the spectrum of ENGAGEMENT: low-entry contact with entrepreneurship role models and networking, and the actual startup process respectively. In this context, it is the role of the university and its formal – compulsory or optional programs – to bridge the gap.

However, it is by looking at how this climate of participation was established that we can begin to understand the nature of the development process and its key features:

    a)   contextual features

        a.   the stimulus of a new university, as well as the declared mission of fostering entrepreneurship through the 2010 merger

        b.   changes in the Finnish economy and specifically, the contraction of the Nokia giant coupled with national successes in entrepreneurship (notably, Rovio, as well as the large number of former Nokia contractors or employees seeking for new income)

        c.   long-standing tradition for student activism and national valuation of collective effort

    b)   deliberate elements of Aalto strategy

        a.   the quality of the student movement and especially that of its representatives, comprising individuals with startup experience and strong leadership skills

        b.   strong collaboration with the growing startup community, which has brought a core of serial entrepreneurs, mentors, coaches and advisers closer to the university

        c.   highly supportive leadership allowing student movement experimentation

## 4. Conclusions

By looking at these features, it quickly becomes visible that the human rather than institutional factor plays the key role. Of course, the Aalto lesson is also a case in point for the value of "the right intent at the right time" (Graham, 2014). The push for this change had come at a ripe moment. Too early - even just 2-3 years before – the message of entrepreneurship champions may well have fallen on deaf years, losing momentum without the impressive buy-in it has actually enjoyed. However, taking advantage of opportunities and the right combination of people, processes and resources is inherently difficult in a competitive world.

In retrospect, the strategy taken by Aalto University management to not only tolerate, but directly support the maverick approach of the student movement is a smart approach, as it transfers risk and allows for quick act-fail-learn cycles of innovative learning. This is not much different from the corporate practice of establishing separate innovation silos, where rules are rewritten and, in some the most productive R&D centers, often broken. Given the learning nature of the capability development process, this is natural and universities seeking to take a transformative route to entrepreneurship need to understand that this will often be a hit-and-miss process if it seeks to produce change that is relevant locally rather than copy best practices ill-suited to existing resources and customer base.

Of course, adaptation to local priorities means that the amount and responsibility of experimentation should be approached carefully: the community building emphasis at Aalto, where leadership had specifically sought to develop the environment ecosystem as a whole rather than increase its IP revenue is markedly different from the more managerial approaches which have made the Imperial College London or the University of Auckland top performers in research commercialization (Graham, 2014). However, both aims require a level of tolerance for iterative learning, as entrepreneurial management of the university inevitably requires a startup attitude if change is to be transformational.

That organization capabilities matter is no longer a hypothesis which needs further support. However, improved understanding of capabilities and how they can be deliberately developed rather than celebrated when they organically manifest, remains elusive.

The present paper has highlighted the key components of *organizational capability* in general and sought to provide an innovative perspective into the development of entrepreneurial university capabilities through a case study on building student ENGAGEMENT. The key stages identified are:

- Evaluating – internally and externally;
- Prioritizing;
- Planning;
- Gathering support;
- Acting (Failing/Succeeding + Learning).

However, the analysis raises more questions than it answers, as the main insight – that building new capabilities is more of an entrepreneurial rather than managerial process – points to the ever elusive questions of fostering entrepreneurship. For universities, further research can provide meaningful learning into how to attract entrepreneurial individuals in their orbit or how to entice them to come out of the internal "crowd". Answering these questions will be particularly challenging, especially since they seek to bridge an ethos built on acceptance of risk and chaotic action with the stable, scientific approach that most HE institutions have become accustomed to, highlighting a necessity to reanalyze incentive structures and values in academia.

## 5. Acknowledgement

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