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Building Innovation Alliances on Complementary Competences

Part One: The Beacon Case Study

(Version for the Beacon Managers in the
Case Game)

Case study

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This case was written by Alice Comi, under the direction of Professor Dr Martin J Eppler, Università della Svizzera Italiana, Switzerland and Professor Dr Roberto Pietroforte, Worcester Polytechnic Institute, USA. It is intended to be used as the basis for class discussion rather than to illustrate either effective or ineffective handling of a management situation. The case was compiled from published sources.

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Building Innovation Alliances on Complementary Competences: The Beacon Case Study

Version for the Beacon Managers in the Case Game

“... In a world characterized by increasing competition, bringing knowledge and creativity to management challenges is essential for future growth and success ... ”

(Henry Irwig, Executive of Beacon Construction)

1. Company Profile

Beacon is a medium-sized construction company with headquarters in Boston, Massachusetts, a North-Eastern State characterized by a long tradition of industrial development and high-technology research. Founded in 1945 by a young graduate of the Massachusetts Institute of Technology (MIT), Beacon contributed to shape the urban tissue of Boston, while also undertaking a variety of building projects along the Western Coast. Since the early seventies, the company gradually shifted attention towards *real estate*, a related sector delivering superior returns in comparison to the construction business. Beacon pursued a growth model focused on the development of *managerial expertise*, rather than on the acquisition of technical competences. Nowadays, Beacon is configured as a *service-oriented company* with expertise in the management of the entire building process, from project initiation, to construction operations, and property maintenance.

By acknowledging the multiple-interface nature of the building delivery process, and the blurring of traditional functions, Beacon plays diverse roles along the building value chain, according to the varying requirements of clients and projects. In the *construction phase*, Beacon may act as a general contractor, as a subcontracting company, or as a *project and construction manager*, therefore assisting the customer throughout the building operations. Often, Beacon takes the role of a *consulting company* by selling projects and services on a fee basis, without necessarily taking lead of the subsequent construction process. In undertaking real estate investments, Beacon usually provides upfront financing, retains temporary ownership of the building property, and after completion sells back to final customers. In this regard, Beacon has an outstanding expertise in *financial engineering*, and accordingly fosters *project initiation* by mastering the relationship with financial institutions, insurance companies, and equity investors.

At present, the bulk of Beacon's customers is represented by private educational and health care institutions, controlling a large building portfolio with recurrent needs for construction and rehabilitation projects. In order to retain customers, Beacon's strategy is to

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consult customers from the *planning phase* of the building program, by actively participating in the formulation of *project scoping, feasibility studies, and design management*. At project inception and on short notice, Beacon involves the customer in a decision making process, by cooperatively defining project objectives, exploring alternative options, and outlining an implementation plan. This requires *interpersonal skills* for building the “right chemistry” with the client and the project team, as the basis for the successful definition of project priorities and constraints. Besides acting as a professional consultant, Beacon takes the role of a *fiduciary agent* to the final customer, by suggesting financial programs, taking care of land acquisition, and securing the building permit on the part of urban regulators. Beacon’s early participation in the planning process enhances the value of the client’s investment, for facilitating the control of construction operations, with considerable advantage to both the sides. In turn, the value placed by the customer on Beacon’s services lays the basis for a durable relationship, while also opening the door to future working relations. Beacon also provides *post-construction services*, by managing maintenance operations, while also advising customers on *property management*, with ad-hoc advice on property rentals, space planning, and interior furnishing.

Besides delivering construction-related services, Beacon has the competence to manage the downstream phases of the project process, through a careful definition of subcontracting criteria and on-time delivery systems. In particular, the implementation of *housing projects* requires the development of a prototype design, followed by the definition of construction procedures, to be further refined through repetitive projects. Presenting extensive capability in *subcontract management*, Beacon is inclined to contract out projects of a repetitive nature, such as row houses, postal offices, and highway-related facilities. The management of subcontractors involves expertise in the purchase of building materials, while also requiring cost *estimate capabilities*, especially in the scheduling of quantity and production rates. In dealing with repetitive projects, Beacon continuously improves the operation efficiency, by transforming construction sites into a kind of assembly line, with extensive use of prefabricated components, and systematic definition of work procedures. A leading example of Beacon’s housing projects is the construction of 1200 units at the military site of Fort Devens, Massachusetts, completed eighteen months earlier than the contractual deadline. In order to shorten the delivery time, Beacon relied on its superior *coordination capabilities*, while also performing careful supervision of site operations.

In addition to housing projects, Beacon is involved in *large-scale projects* characterized by managerial and technical complexity, requiring the coordination of multiple phases along the building delivery process. Actually, large-scale projects present an open-ended process, which involves negotiation with different stakeholders, continuous change management, along with flexible and customized organizational approaches. As a result, Beacon has developed a *process-oriented culture*, combined with capabilities such as multi-stakeholder dialogue, delivery process management, and innovative organizational approaches. Already in the late eighties, Beacon acted as a general contractor in the construction of Rows Wharf, a seafront complex in downtown Boston, characterized by delivery complexity, design uniqueness, and high-quality finishes. Designed by Skidmore Owings and Merrill, a well renowned architectural-engineering company, the hallmark project incorporated several uses with different technological requirements, such as hotel, office, residential and underground

garages. In this project, Beacon requested the collaboration of a civil engineer of the Massachusetts Institute of Technology to coordinate technical operations at the building site.

By constructing landmark buildings in critical urban areas, Beacon has become a privileged voice among the social, political, and economic forces shaping the urban fabric of the city of Boston. By building consensus with city planners and establishing cooperative linkages with the architectural profession, Beacon came to master the complexity of the building regulatory process, while also achieving the image of a high-profile company. In particular, Beacon relies on a corporate policy of *social responsibility*, by promoting training programs to facilitate minority participation in construction trades and work. Beacon's *reputation* is further enhanced by the stable relationships with the local university, resulting in the hiring of graduates, the sponsorship of research projects, and the endowment of scholarship grants.

2. The construction market

In order to present the operational context of Beacon, this section outlines the various phases of the building value-chain, along with the challenges resulting from the recent evolution of the competitive environment. In essence, the building value chain can be described as a sequential process composed of multiple stages, namely *initiation*, *planning*, *design*, *construction*, *property management* and *maintenance*.

- The *initiation* phase is marked by the perception of a customer need or investment opportunity, and concludes with the expression of a project objective.
- The *planning* phase involves the formulation of a series of tasks for meeting the above objective, such as land acquisition, project scope definition, and project financing.
- The *design* phase involves the transformation of the project objective into a set of graphic representations and construction specifications.
- The *construction* phase involves the transformation of design plans into physical reality, leading to the edification of a new building, or the renovation of an existing one. After completion, the building delivers an output, namely a service to users, or a revenue stream to investors.
- The final phase of the value chain is intended to maximize the output delivered by the building. In particular, *property management* involves running operations to reap economic benefits out of the building, while *maintenance* consists in performing upkeep interventions to contain the functional obsolescence of the building.

In highly developed economies - the context of Beacon - the growing organizational, technical, and procedural *complexity* of the construction process requires a building company's active participation in *all* the phases of the value chain, from project initiation to property maintenance. In particular, the expanded scope of services requires the acquisition of novel capabilities, such as design engineering, technical capability, and service integration. Although providing value-added features, Beacon is essentially a *service-oriented company*, with a long way to go in the development of in-house design and technological competence. Furthermore, macro changes in the world economy in general, and in the construction industry in particular, are creating new opportunities and challenges for medium-sized building companies such as Beacon. These challenges include:

- In light of the economic downturn, the construction industry is changing substantially, with a steady decrease in the private demand, along with a marked reduction in the economic value of buildings. In Massachusetts, this period is the worst for house sales in the last 13 years, with the median selling price for a single house falling by 18.3 percent during the last month, on a year-to-year base. As the recession deepens, large customers try to reduce their portfolio of real-estate owned property, while financial institutions are likely to restrict lending for construction operations, since the perceived risk is high. Unavoidably, this scenario imposes Beacon's management to redefine its company positioning, for example by participating in competitive biddings issued by the federal government, while also looking for real estate speculations in foreign markets relatively unaffected by the recession.
- The developments in information and communication technology, internationalization of financial market, and global procurement of resources permits building companies to *operate internationally*. Because the market for construction-related services is no longer bounded geographically, competition and opportunities for new projects will increase both domestically and internationally. However, in order to successfully compete in the international arena, a building company requires organizational flexibility, sensitivity to cultural aspects, and a multinational workforce.
- The social concern for the natural environment requires the construction industry to embrace the paradigm of *ecological responsibility*, by reducing the building impact through sustainable architecture, construction, and maintenance. Although posing considerable challenges to company operations, *sustainable building* represents an emergent market, attracting investments among both public commissioners and private customers.

The above described situation seems to favor large and integrated multinational construction corporations. Alternatively, the above challenges can be addressed through the constitution of strategic alliances, mergers or acquisitions. Beacon's management considers the alliance option as particularly attractive, for offering the possibility to acquire complementary competences, without investing in specific assets.

3. A potential partner: Dioguardi

During a practitioner conference in Rome, Henry Irwig, Executive of Beacon Construction, had the occasion to meet with the President of Dioguardi International, a medium-sized construction companies with headquarters in Bari, Southern Italy. At present, the managing directors of the two companies are considering the constitution of a strategic alliance, in order to explore mutual interests in the construction industry. Besides presenting the potential to deliver synergic outcomes, such an alliance would not involve the risk of losing competitive terrain, since the companies operate in different markets, and are partly controlled by the same private-equity investors. Differently from Beacon, Dioguardi presents an *integrated design and engineering department*, with the potential to provide architectural designs, feasibility studies, and urban planning. In addition, Dioguardi conducts *research and development*, making extensive use of information technology for the purpose of improving organizational efficiency, while also extending its technological know-how. Similarly to Beacon,

Dioguardi engages in *project financing*, yet the company's diversification in real estate development is aimed at supporting the core business of *design and construction*.

4. Your assignment

In this case game, you should take the role of Beacon's senior managers, and make a decision about whether to partner with Dioguardi or not, by assessing the potential for the strategic alliance to create value. Since the mutual information base is admittedly insufficient for both sides, Dioguardi's management has invited you at the company headquarters in Bari, in order to exchange knowledge about the respective organizations. In preparation for the meeting with Dioguardi senior managers, you should first conduct an internal discussion of approximately **15 minutes**. In particular, you should perform the following tasks:

1. Make your company's (Beacon's) **main competences** explicit. Besides extracting relevant information from section 1, you can refer to the Appendix for an overview of selected projects (10 min.).
2. Conduct a tentative identification of your potential partner's (Dioguardi's) **main competences**, based on the limited information contained in section 3 (2-3 min.).


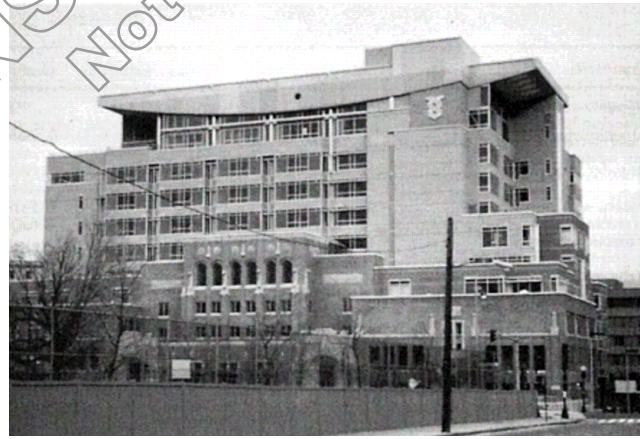

At the end of the internal discussion, you will meet with two Dioguardi senior managers.

Under the guidance of a moderator appointed by Dioguardi, you should engage in a 40 minutes conversation aimed to exchange information about organizational competences and, consequently, to identify joint innovation opportunities. Working in collaboration with Dioguardi's executives, you should thus perform the following tasks:

1. Identify **complementary competences**. At the outset, establish the building construction value chain. For each stage of the value chain, then discuss Beacon's and Dioguardi's main competences. Please notice that certain competences may span diverse stages of the building construction value chain. Finally, identify complementary competences, whose integration may lead to the achievement of synergistic outcomes (20 min.).
2. Explore **opportunities for joint innovation**. Building on the complementary competences identified in step 1, explore innovation opportunities to be carried out in the context of the prospective alliance. To this end, make explicit the market challenges and opportunities faced by your companies, by integrating information about the North American and Italian markets. Therefore, generate opportunities for joint innovation, by considering how complementary competences may be leveraged to successfully address each market challenge or opportunity (20 min.).

Towards the end of the joint meeting, you should be in a position to make an informed decision about the prospective alliance, based on the *competence complementarities* and *innovation opportunities* previously identified. **Working independently from Dioguardi's representatives**, please express your opinion about the value potential of the prospective alliance, and accordingly decide whether or not to go ahead with the collaboration.

5. Appendix

	<p>Hotel Project, Pennsylvania</p> <p>Project type: Renovation project Funding scheme: Project financing</p> <p>Main features: This <i>self-initiated project</i> involved the transformation of a Federal Reserve Bank into a luxury hotel. After project completion, Beacon engaged in <i>property management</i>, by renting the hotel to the Meridian Hotel Chain.</p>
	<p>Clinical Center and Beth Israel Hospital Project (Boston)</p> <p>Project type: Renovation project Fee-based consultancy for project management</p> <p>Main features: The project involved the building of medical facilities within a 12-story historical tower. Beacon acted as the <i>owner's representative</i>, and provided <i>management, administrative, and technical services</i> throughout the various phases of the project.</p>
	<p>Thayer Hall Project, Harvard University (Cambridge)</p> <p>Project type: Renovation project Funding scheme: negotiated contract (Beacon acted as general contractor with a guaranteed maximum price contract)</p> <p>Main features: Renovation of an 1870 Victorian-style dormitory requiring <i>extensive exterior and interior</i> interventions, e.g. restoration of brick façade, replacement of slate roof, repair of inner space, fit-out work.</p>
<p><i>No image (facility assessment study)</i></p>	<p>Facility Assessment, Massachusetts Institute of Technology</p> <p>Project type: facility assessment study Fee-based consulting project</p> <p>Main features: <i>Physical and functional assessment</i> of the building exteriors, <i>cost-benefit estimates</i> for alternative renovation options, <i>client recommendations</i> for project implementation.</p>

6. References

Pietroforte, R. (1996). *Building international construction alliances: successful partnering for construction firms*. Taylor & Francis, 128 pg.

The Boston Globe (2009). *Massachusetts Home Price Dropped by 18 percent*. March 24, 2009. Retrieved from http://www.boston.com/business/ticker/2009/03/mass_home_price_3.html?s_campaign=8315

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