

Germination: Early Stage Incubation

Eugene Wong

1. Introduction

The concept of incubation, as applied to business development, is widely used but means different things to different people. To avoid confusion and to emphasize that we are dealing with the earliest stage in the business development, I have coined the term “germination” to imply that we begin with only the seed of a business idea. In our context, *germination* means taking a scientific discovery or an invention and bringing it to a technology that can launch a significant new business. Germination represents an early stage technology development process that carries high risks, but, hopefully, also high returns. I wish to focus on the time of discovery when risks are too high to attract conventional funding, but the promises are too great to ignore. This is the point where public investment is called for. Without such investment, no significant industry could be launched.

In Taiwan, incubation usually means helping startup businesses, and incubators are often no more than benevolent landlords. This is certainly not enough for early stage technologies for which hands-on nurturing is required. But what kind of people would be capable of nurturing early stage development of a scientific discovery? At first glance, the qualifications required of such a person seem to be formidable. He or she would have to possess broad scientific knowledge and business skills, and would have to apply these to a process that is little tried and poorly defined. Few such people exist; and if they do, they already have better jobs and would be hard to recruit.

I think this dilemma is resolved by relying on process, not people. Before a “germinator” could be formed, the process of germination must be precisely defined. The purpose of this paper is to define such a process.

2. The Team

We begin by assembling a team with two subgroups: *discoverers* and *innovators*. The discoverers include the originator of the discovery or invention and his scientific colleagues. The innovators comprise a leader with some measure of experience and education in both technology and business and other more junior, and possibly part time, members interested in learning the germination process.

3. Endpoint

The team begins by conceptualizing the possible technologies into which the discovery might evolve, under optimistic scenarios. The exercise can be quite speculative, but we require that an optimistic, but plausible, scenario be articulated for each candidate endpoint. Once the team makes a tentative choice for the endpoint, it must draft a *development plan* and a *pro forma business plan*.

4. Development Plan

The optimistic scenario that accompanies the chosen endpoint consists of a sequence of tests, experiments and actions. The team crafts a development plan by specifying these steps and group them into a small number of tasks say 3 to 5. The amount of time and cost required for each task is then estimated. The steps, tasks, estimated time and cost then constitute a development plan.

5. Pro Forma Business Plan

The decision whether to undertake the germination process will be based on a *pro forma business plan* which is defined as the business plan one would write if the germination was completely successful. This would document the technology and the important development steps leading to it, the proprietary intellectual property position, the product or service that is to be offered, an analysis of the market, a projection of revenue growth and cash flow, and the proposed capital structure.

6. Investment Decision

Germination is an investment, and the body that makes the investment must have a mechanism to decide whether to invest on a case by case basis. In most cases the decision would be made by a board on the basis of a presentation by the team leaders, a review of the development plan and the pro forma business plan, consultation with outside experts if necessary. Once the board decides to proceed with germination, it must formalize its decision by offering the discoverer a “term sheet,” which specifies the amount of the investment and the capital structure. It would be a good practice to build into the capital structure strong incentives for the discoverer group to meet its schedule set forth in the development plan.

7. Execution

The development plan is made up of a series of actions grouped into principal tasks and each task has a schedule and a budget. In the ideal case each task is executed in time and within budget. But the ideal case is rare. What if a task misses its schedule, over-spends its budget, or simply fails all together. Any of these events would trigger a formal review. The guiding principle is to ask at that point: what is the new development from that point on? The new development plan is then reviewed and the term sheet is revised accordingly. It is quite possible that the germination process would be terminated at that point. One should not wait until all money is spent before deciding to abort if the development plan is unlikely to be completed.

8. Summary

Germination is a process that takes a promising technology and plans a startup business based on it. At the outset of the process, one specifies the target business, writes a

2008 Foresight Taiwan- Germination White Paper

development plan, and prepares in draft form a pro-forma business plan. The primary activities of germination represent the execution of the development plan. As execution proceeds, the business plan is revised correspondingly so that at the end of the process a full business plan is available for raising the capital needed to launch the business.