An Invention Lab Proposal

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Rationale

Unemployment and lack of investment opportunities are the underlying reasons for the economic and social crisis around the world. Fundamental inventions can create a large number of jobs and lay the foundation for secondary innovations and new business opportunities.

Fundamental inventions are difficult for people to understand by their nature, and inventors are not good talkers. The conventional project evaluation method generally will reject these inventions, while billions of dollars are wasted on the wrong projects by governments, organizations, and corporations.

The proposed invention lab will 1) switch from project evaluation to selection of inventors like Edison, Bell and Tesla, and 2) create an organization structure conducive to the creation and commercialization of fundamental inventions. It is a platform for inventors to work with entrepreneurs, investors, and corporations.

People and Organization

Lab managers, 1 to 2. Administration, deal making and execution.
Inventors, 1 to 10. Invention and prototype development.
Visiting inventors, 0 to 2. Identified and sponsored by the inventors.
Supporting staff, ~20. Administrative and technical support.
Project staff, 10 to 100. Development of prototypes and startup companies.
Inventors will receive only a living allowance and their compensations will be tied to the outcome of their inventions.

Funding

$25 million per year for 10 years, or a total funding of $250 million.
For each inventor, on average $2.5 million per year.

Performance evaluation

After 10 years, the performance of the lab will be measured in 3 aspects:
1) Major inventions that will create a large number of jobs.
2) Major corporations derived from the inventions.
3) Financial success of some inventors.

Potential supporters

1) Governments.
2) Charity organizations.
3) Large investors.

May 6, 2014
Last updated November 6, 2015

Random Notes

1. Why do we need invention labs?
In the status quo, the pace of job creation from fundamental inventions cannot keep up with the pace of job destruction in other well-organized stages of the economy. This imbalance in the pipeline leads to significant unemployment and even social unrest. Invention labs dedicated to fundamental technologies are necessary to change the situation.

2. The invention lab as a nonprofit organization.
It is difficult to evaluate the profitability of a fundamental invention at its beginning. The time from conception to prototype is often unpredictable and may vary from 1 to 50 years. If we are only concerned with immediate profits, we do not have a good future. Somebody has to do the job. A nonprofit organization will provide inventors the uninterrupted time and adequate support to develop fundamental inventions.

3. Funding level.
Although $50 million can support a one-inventor lab for 10 years, the organization may be risky due to some inherent uncertainties of invention. With several inventors, the risk factors will be averaged out. The appropriate funding level will be from $150 million to $350 million for 10 years.

4. How many such organizations are needed in the world?
Four. In other words, $100 million per year, spent in the right way, will solve the issue of unemployment. This will create a favorable condition to address other major problems in the world, such as economic crises, pollutions, poverty, and world conflicts.

5. How to identify inventors?
Everybody can be an inventor, but here we are talking about inventors like Edison, Bell, and Tesla. Therefore, we separate the inventors from experts or specialists who also make inventions.
One difference is the capability to think differently, fundamentally, systemically, or outside the box. An inventor does not just invent a technology but also figures out the related system and business model. A scientist is more interested in the understanding of things, and a typical engineer's research is directly related to the task at hand. For example, Edison not just invented the light bulb, but also figured out the system and the electricity utility industry model.
An inventor usually does not stay in the field of his invention to become an expert.
An inventor is not a good talker.
Ultimately an inventor is identified by the success of his inventions. Meanwhile, the following clues may be helpful in identifying an inventor:
1) Thinking intuitively.

It is subconscious, as a whole, and not based on language or logic. It does not lie. It is like a background program running 24 hours a day, and informs the conscious mind of the end result at an awkward time. When presented in language, the idea may seem fragmented, or even wrong in some details (Resemblance to David Hilbert). Those are communication faults from the subconscious mind to the conscious mind.
2) Hands-on experience.
Experience gives the depth and relevance of knowledge.
3) Concentration and perseverance.
Concentration means working continuously for 48 hours or even longer. Perseverance means a sustained effort for a long time, say, 10 years or more.
The first and third factors are personality traits. The corresponding Myers-Briggs personality type will probably be INTP.

6. Invention stages.
1) Conception. Subconscious, life-time experience.
2) Conceptual prototype. Key concept verified. 1 to 50 years.
3) Technical prototype. Technical feasibility as a whole device or system. Typical cost $1 to 20 million, 2 to 3 years. Ready for some investors.
4) Commercial prototype. Ready for production. Suppliers, cost, and commercial feasibility. Ready for the general public.
5) Production and sale. Business model established.
Some stages may be skipped for a particular invention. An invention can be acquired by a corporation or spun off as a separate company.

7. Performance evaluation.
1) Major inventions. Money well spent for nonprofit purpose.
2) Major corporations created. Jobs created in R&D, manufacturing, marketing, sales, and services.
3) Financial success of some inventors. Fair to inventors. Attract more talents.

8. Reasons for supporting the invention lab.
Governments: Job creation, economic vitality, and social stability.
Charity organizations: Pay back previous inventions and spread seeds for future generations.
Major investors: Profit from late stage investment and secondary innovations.

9. Tao and Te.
In Tao Te Ching, Lao Tsu says that the function of Tao is in the creation stage and the function of Te is in the whole process from creation to growth. Tao is the road and Te is the driving skill. In business, we can think Tao is what to do and Te is the execution skill. The role of the inventor is to do the Tao part or to figure out what to do. Therefore, collaboration between an inventor and people with good execution skills will be fruitful (Edison and Insull, Edison and Ford).