Innovating in a Borderless World using Virtual Teams

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Abstract

Countries in the west have, over the decades, used innovation to grow and sustain their economies. This approach has resulted in technological advances, increases in standard of living and overall growth in different sectors of their economy.

Using the same pattern now emerging countries like China, India, South Korea, Brazil, and Russia are trying to collaborate across borders in a virtual world to innovate and grow their economies.

With product development in India, manufacturing in China and markets all over the globe it is necessary for the countries and companies to adopt virtual team approach to successfully develop and launch new products and technologies. They understand this approach of "innovate or suffocate" essentially indicating that their economies won't improve if they do not take the path of innovation.

The paper will present research showing how these countries are using this virtual team approach to collaborate in an increasingly borderless world across different time zones to develop and introduce new products and new services to raise their standard of living, and to bring prosperity to their people and their countries.

Keywords: Innovation, New Products, Virtual Teams, Emerging countries.

Introduction

All around the globe there is constant talk of innovation and innovation is indeed happening on a global basis without concern about the boundaries/borders or country lines. It indeed has become a borderless world where Innovation must reign supreme.

Everyone globally recognizes the fact that investment in research and development – by government or industry – contributes to innovation, employment and higher living standards. (1,2,3)

To expand the markets and to lower costs US firms started the trend of relocating manufacturing and services overseas, and R&D activities followed.

This outsourcing brings into focus the question as to how globalization of technology and increased research within emerging economies might influence innovation. Investing large sums in research assists, but does not guarantee innovation to flourish. Stagnation in innovation and new job creation could become a global problem. As innovation slows, the source for the next wave of good jobs remains unknown. (1)

In the global borderless world the work is being done in a virtual environment where the team members are located in different parts of the world and yet are interdependent upon each other for delivering the results.

Virtual teams represent a new form of organization that has the potential to restructure organization forms and dynamics. Due to its flexibility the idea of virtual teams is becoming more and more popular among organizations-large and small. (4,5,6)

Virtual teams, whose members are geographically dispersed, yet work on highly interdependent tasks present unusual challenges for the management, which can be broken down into six different steps (7)

1. Establish and maintain trust through the use of communication technology
2. Ensure that distributed diversity is understood and appreciated
3. Manage virtual work life cycle meetings
4. Monitor team progress using technology
5. Enhance visibility of virtual teams within the team and outside in the organization and
6. Enable individual members of the virtual team to benefit professionally.

Virtual Meetings

Preparing for the meeting

We must remember the fact in virtual meeting that the business conducted at it is real, and the importance of the results is real. This is a real meeting that happens to be taking place in a virtual environment. Also since there is no face-to-face contact, every interaction and every infraction is multiplied. (8) so while preparing for the meeting one must attend to these points:

a. What venue do we want to use (conference call, web-based meeting, teleconference, etc.)?
b. What technology do we need?
c. Are all the team members available to participate?
d. What time will the meeting be held keeping multiple time zones in mind?
e. In what language will the meeting be conducted?
f. How will questions be asked and answered during the meeting?
g. Have the materials been sent in advance. In many parts of the world the technology is not advanced, sometimes power is lost and the connections get broken. So having advanced copies of all materials is helpful.

During the Meeting

Try to call in or log on a few minutes early to ensure that the technology is properly set up and working and follow the agenda so everyone stays engaged. Also do the following:

- Be as precise as possible
- Give examples
- Verify your understanding
- Use slide number or page number for reference and to stay on the agendas if you are

using a previously sent presentation

Always keep in mind the fact that you will not have the benefit of seeing the attendees. If there are questions or concerns about an item, you will need to ask questions or create a process that gets to them without relying on facial expressions or body language.

Also make sure the mind of the attendees does not wander off while the physical body is present. Thus summarize often, ask questions and get everyone involved in the discussion. With cameras available for virtual meetings it is easy to address everyone even if it is one person at a time.

After the Meeting

Make sure the people who are supposed to follow up actually do so. That agreed upon documents are sent, actions are detailed and executed. Otherwise "out of sight, out of mind" will cause the project to come to a halt.

Developing Global New Products

Sand traps of new products

When we reach out to grasp new product opportunities, there are many obstacles in the way of successful product launch. These are like sand traps in a golf course. It is best to avoid them. But if you get trapped you can extricate yourself using the right tools. It is exactly the same with the new product launch. Most of the issues can be fixed. The trick is to recognize them at the right time and fix them. If it is not done then you run into the trap of dropping the new products into the holes never to re-emerge. (9)

New Product Criteria

Following criteria can be used while creating new products using virtual or co-located global teams (10).

1. Product Name:
2. Product Description: Briefly Describe (in 25 words or less) what the product is.
3. Product Origin: How did you come up with the idea?
4. Function: Describe your product's primary function as clearly as possible. What does it do? How does it do it?
5. Principle Applications: Describe the principle applications of this product.
6. Additional Applications: List any other applications of this product. (Where else can it be used?
7. Describe **"green and sustainable**" features and benefits of the product.
    a) Can your product be made from recycled raw materials?
    b) Can the finished product, its packaging, and other components be recycled or reused?
    c) How will your product benefit the environment?
    d) Will you product save energy/water?

8. Competitors: List your product's competitors by manufacturer, brand name, and model number.
9. Advantage: Describe how your product improves upon competitive products or technologies, and explain how your product is unique compared to the competition's product.
10. Launching: Briefly describe, "What will it take to launch the product.
11. Risk/Rewards: Briefly describe the risks and rewards of implementation and execution. (Production, marketing, sales challenges etc
12. Why is it important to have this product?
13. What benefits will it provide?
14. Feedback - from the market if any.
15. Why will this product be successful in the market?

Bottom of the Pyramid: Products for the poor

Innovations should also be focused on creating approached which empower the poor to increase their capacity to earn meaningful livelihoods. Increasing the size of their wallet and integrating them with the mainstream of products and services economy will ensure a secure and sustainable future for them. (11). For this type of products the innovators should consider the following points while thinking of new products.

a) Will the product be low cost enough to be affordable by very-low-income ($2 per day) people at the bottom of the pyramid?
b) How will the product reach them?
c) Will it be easy to use by semi-literate/semi-skilled end users?
d) Describe special features of the product that makes it suitable for this category.
e) Are there any shelf life and storage condition requirements? (For instance, some end users might be living in hot, humid, dusty conditions.)
f) In which countries would your product be the most useful? (USA, India, Brazil, African countries etc.)

Conclusions

It is possible to develop global products with technology from different parts of the world as can be seen from the following examples :(12)

1. LabNOW Blood Analyzer: Tiny Nano channels in a card filter white from red blood cells. When the card is popped into the analyzing machine, it can come up with a white-cell count in 10-15 minutes. This could be important for HIV/Aids treatment.
2. Samsung 8 GB Compact Flash Card: This flash memory card with 8GB capacity has lots of room for songs, photos and PowerPoint presentations. This chip represents continued evolution of the chip industry which has trying to shrink its circuits for decades.
3. GE Power Turbine: Turbines are the workhorses of the digital age. GE is exploring how Nano technology can help to ruggedize the turbine blades used to

spin the power plants. Using ceramic enriched with Nano scale particles, GE hopes to build more powerful turbines that operate at higher temperatures.

4. Hummer H2 Sport Utility Truck: made with about 7 pounds of Nano composite material, the cargo bed of Hummer's H2 SUT is lighter than older plastics and more scratch proof than older plastics. Besides the weight advantage, GM reports that Nano composite parts don't change shape when exposed to temperature changes.

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