How big is your challenge book?

Innovation is solving a problem. So problems are the sources for new ideas. Becoming more sensitive to the inconveniences, whether it is yours or your customers’ and identifying the right problem is an important step in innovation.

**Challenges and innovation:** Ratan Tata was once asked, ‘What does it take for industrial operations like Tata Motors to innovate in a knowledge era?’ He replied, ‘If there are challenges and if those challenges are difficult, then some interesting, innovative solutions will come. If you don’t have those challenges, the tendency is to go on to say that whatever will happen, will take place in small deltas.’

A place where an organisation lists its problems is called a challenge book.

**Create a challenge book:** Vinay Dabolkar and Rishikesha Krishnan in their book, ‘8 Steps to Innovation,’ cite two typical examples for creating a challenge book. Vineet Nayar, the CEO of HCL Technologies realised that there was a need of a forum where employees’ questions could be collected and answered. An online forum of a social networking group was developed, where questions and answers were open to all the employees.

When the U & I portal was launched, it got flooded with queries, not all of which could be answered by Vineet and his team. However, people started discussing how to solve these problems in corridors and during coffee breaks. The portal raised the problem consciousness of the entire organization.

Seeing how powerful this forum is, Vineet added another section to the portal called ‘My Problems’ in which he posted issues that were bothering him and sought ideas and answers from his colleagues across the company. The portal showed the advantages of bringing out problems in the open and inviting suggestions. It also showed how individuals across the organization can even help in solving CEO’s problems.

For a technology company, social networking site was easy. Kiran Bedi, when she was IG Prisons, during the rounds, she would take notes on things that could be improved in the jail. Actions were initiated from these observations and followed up. Then her realization that complaints could come directly from the inmates themselves led to the idea of a mobile petition box that was carried to the inmates in their barracks. Gradually, the staff joined in voicing their grievances thro’ the petition box.

*The happiest person is the person who thinks the most interesting thoughts – William Lyon Phelps*
Realise the necessity: A challenge book reflects curiosity and curiosity is the mother of innovation. Sometimes curiosity is triggered by necessity. Increasing energy costs, necessitates one to look for alternate sources. Depleting stock of cheese in Station C, necessitated Sniff and Scurry to search for new Cheese. *(Who moved my Cheese?)* Curiosity also comes from asking new questions that are not driven by necessity. An i-pad was not a necessity, as smart phones and laptops were already in vogue. An in between product like i-pad came thro’ questioning. An organization should see the desires of its employees, customers and stakeholders being reflected in the challenge book.

Curiosity: Vinay Dabolkar and Rishikesha Krishnan found three templates that dominate the curiosity world: pain, wave and waste.

Feel the Pain: In the early vacuum cleaners, the filter bags get choked more often and required cleaning very frequently. James Dyson felt the difficulty (pain) of the customers and took it as a potential source of opportunity and put a cyclone separator and came with the idea of bag (filter) free vacuum cleaner. Ratan Tata felt the pain of the whole family consisting of husband, wife and two children travelling precariously in a scooter and the challenge emerged to develop a safe and economical vehicle.

For eliminating the pain points customer complaints are one major source for ideas. Proctor and Gamble initiated ‘immersive research,’ and under which launched two programmes: ‘Living It’ and ‘Working It.’ ‘Living It’ involved employees spending several days with consumers, say in a lower-middle-class household. They would participate in some of the family activities, such as eating a meal together or shopping in a store. They would observe what the family members bought and how various brands fitted into their social context. This close look at a family led to unique insights, way beyond what conventional market research can generate. ‘Working It’ involved spending time behind the counter selling the product to consumers. The employees would observe what type of consumers were buying the company’s products, who was buying the competitors’ products, and get a glimpse into how they might be making these decisions.

By spending time in lower-income Mexican households, P&G executives realized how difficult the six step hand wash rinse cycle was and came up a three step process.

While Future group sends its teams to visit homes of all classes of consumers, Hindustan Unilever created a phone booth called ‘Voices from the street.’ The manager listens to consumers request, suggestion and anger. In Sony employees are required to work in sales, service or customer support before they could work in R&D.

Sense the Wave: Venture capitalists keep track of the underlying trends in an economy and backing companies that address these trends. While CTO’s in IT companies spot and track trends relevant to the business and selectively invest in building technology platforms, Biocon people keep watching ‘stem cells’ technology and see how it is progressing. The different types of waves are related to technology (like internet and cloud computing.)

*It is by sitting down to write every morning that he becomes a writer. Those who do not do this remain amateurs – Gerald Brenan*
demographics (every year so many million people are entering the middle class segment) and investment from government (money allocated for infrastructure development for the next five years) and regulatory approvals (deregulation of the education sector in India.)

Sensing waves involves tracking changes in technology, demographics, consumer behavior, and usage patterns, and regulation.

See the Waste: ‘Put off the fans and lights (now monitors also!) when not in use,’ is a common display we see in offices. Sensors identify the presence of human beings and goes ‘off or on’ accordingly. When the same product is available next door why buy it from a faraway place and pay the transport cost?

Problems are easier to solve if they are clearly visible to everyone. Toyota factories are laid out carefully and kept absolutely spic-and-span so that problems are easily visible, and the cause can be fixed immediately.

In the early days, a single (silicon) wafer is cut apart into tiny pieces and then wired them together. Someone asked, ‘Why cut the wafer in the first place?’ Explorations and experimentation on this question led to the invention of Integrated Circuits or what are called ICs.

Waste is all around us, and we can see it if we are more sensitive to our surroundings.

Innovation becomes more effective when innovation efforts are focused on solving the right problems.

---

**Ideas by SRI AUROBINDO** (Reproduced from CS 12, June 1997)

How blind is the man who fancies and plans a matter in all true forms and angles and when he cannot prove completely with superficial measurements and word proofs, believes that his idea and his imagination were empty objects! But if he contemplates with sincerity and meditates upon these happenings, he will understand with conviction that his idea is as much a reality as is the bird of the sky, but it is not yet crystallized, and that the idea is a segment of knowledge that cannot be proved with figures and words, for it is too high and too spacious to be imprisoned at the moment; too deeply embedded in the spiritual to submit yet to the real.

Every beauty and greatness in this world is created by a single thought or emotion. Everything we see today, made by past generations, was, before its appearance, a thought in the mind of man or an impulse in the heart of a woman. Revolutions that shed so much blood and turned men’s minds towards liberty were the idea of one man who lived in the midst of thousands of men. The devastating wars which destroyed empires were a thought that existed in the mind of an individual. The supreme teachings that changed the course of humanity were the ideas of a man whose genius separates him from his environment. A single thought built the pyramids, founded the glory of Islam, and caused the burning of the library of Alexandria.

---

**Think-Up Games - 13 / 95**

1. List out 10 things that bosses should avoid. (Rest assured that when I publish the list, I will not put your name)
2. In our custom, mostly the girl moves to husband’s house after marriage. Suppose if it is reversed, what would be the consequences? (SEND THE LIST TO ME FOR SHARING WITH OTHERS)
Letters

Niraj Srivastava, Lakhimpur-Khiri: CS gives me inspiration, learning, energy and enthusiasm.

Anju Wagale, Aurangabad: Your way of explaining is really unique. I have heard about ‘being in the present’ on several occasions, but only after reading (CS 94) I could get the real spirit of the phrase. Not only that, even I understand where from stress originates – thinking about the past or worrying about the future.

S Sankaran, USA: Perused your impressive recent bulletin. Here the current topic is to reduce the vast gulf in inequality of income. In USA top 1% earn 22% of the total population. In USA during 1960s a CEO was earning about 20-25 times more than the lowest paid employee. Presently few CEOs earn about 1100-1200 times more than the lowest paid staff. In India just 3% of population only pay income tax. Also that 3% earn almost 85% of total income. And so on.

DISCUSSIONS

Additional Competition CS 94 / Crossing the River (originally from CS 29)
(Contributed by A Ilango, Bengaluru)
Four men A,B,C and D are on one side of a river and need to cross over. They have only one row boat and the boat can carry a maximum of two passengers at a time. The boat can be rowed by only one person and each of them take varying times for a one way trip. A takes 10 minutes, B takes 5 minutes, C takes 2 minutes and D takes 1 minute. When two people are in the boat, it should be rowed by the person taking a longer time. What is the shortest rowing time required for all the four to cross over?
(HINT: It is less than 19 minutes)
Solution : Crossing the River
First C&D cross the river. Time taken is 2 minutes. C remains there and D returns. Time taken is 1 minute. (Total time 2+1 minutes) Next A & B cross the river. Time taken is 10 minutes (Total time 2+1+10 minutes.) A and B remain there and C returns. Time taken is 2 minutes (Total time 2+1+10+2 minutes.) Finally C & D cross the river. Time taken is 2 minutes. Total time is 2+1+10+2+2=17 minutes.


Discussions Competition 94

Think of an area of manufacturing, where same materials are used, say, steel for cars or wheat flour for roti. In a paper, at the top of the page, note down the area. Below it put four circles. In the first circle put the material you are familiar with say, water. In the other circles put different materials like wood, rice and cloth.

Now think of the positive effect of making the product from the materials. Don’t think about the implications and practicalities. Suppose we make the car out of water, it would be very easy to park anywhere – doesn’t matter how it would work.

Send your ideas to me for sharing with others.

You might find it difficult to start with. After all, a car made from water is ludicrous. Yet all creative ideas sound crazy to start with. You often need a change of view point and a refinement of the idea before it becomes useful. The trouble is, we tend to squash them too early. This enforced positiveness will help to restrain our natural tendencies.

A lot of people are afraid to say what they want. That’s why they don’t get what they want. - Madonna
**Competition 95 - Speak metaphorically**

Use a newspaper to generate a list of five items. They could be people, places, events, objects – anything, as long as the five are quite different. Now spend a minute on each item, jotting down a series of metaphors with short reasons attached. For example, one of the items in today’s news is “(New building for) Stock market.” You might think that stock market is

- **Suspense** – because it may go up or down
- **Flood** – so much money is in circulation
- **Lightning** – suddenly prices change etc.

**Clue:** If you have problems getting started, think of the key attributes of whatever you are trying to create a metaphor for, then think of other things with similar attributes.

Send me the list for sharing with others

---

**To do list for a New Year (CS 52)**

* Smile More
* Listen more intently
* Tell people that you love them
* Watch a child discover something new
* Don’t look for someone else to blame when you are unhappy
* Be free with compliments
* Encourage someone that is having a difficult day
* Read more
* Call old friends and catch up on their lives
* Do something totally silly and out of character every so often
* Be less critical of others
* Be generous not only with money but with time
* Volunteer for a good cause
* Be responsible for all your actions
* Don’t fall for peer pressure
* Pray more and Worry less
* Be quick to forgive others and learn to forgive yourself
* Whatever you do give it your best shot
* Make room for new friends
* Live your life this year in a way you can look back on fondly and without regrets
* Bury prejudices
* Accept yourself for who you are and don't try to be someone somebody else wants you to be
* Treat yourself to something either very expensive or very fattening
* Occasionally consider failures as learning opportunities
* Challenge your body and your brain
* Accept help
* Look at the big picture and don't sweat the small stuff
* Enjoy what you like about someone instead of trying to change what you don’t
* Watch the sunsets, just as no two sunsets are alike so are you a unique and beautiful creation!

---

**Letters**

**Subroto Ghoshal**, Mumbai: Enjoyed going through the case studies. I wonder whether you have ever considered making the CS available to the IITs and IIMs?

**Ankita Shinde**, Pune: I liked your article ‘Most Innovative Companies’ in CS 94, and also the quotes at the bottom of every page of the CS are really motivating.

**Santosh Kumar**, Mumbai: Very valuable information about the practices of the innovative companies. The competition and the ‘Think-up games’ really keep ones brains kindled.

---

**The only way to make a man trustworthy is to trust him – Henry L. Stimson**
1. Suppose you become a superman. How will you use this power to make India a honest country?
2. Suppose suddenly the process of ageing stops for everyone. What would be the consequences?

SEND YOUR RESPONSES TO ME

CONGRATULATIONS! Muralimanohar Iyer, Bengaluru:

If ageing stops, there will be a direct impact on World's population.

- More resources - food, water, housing will be needed.
- All countries will become populous like India.
- On the positive side, with this change there will also be new innovations.
- More investments will be made on Mars mission or finding habitat on other planets.
- Young farmers will be sent to Mars to start agriculture.
- Then top builders from Earth will travel to setup Villa projects in Mars.
- Then travel companies will setup their business to transport people to Mars.
- Meanwhile on the earth, only public transport will be the means to travel.
- Cost of owning a vehicle will become unaffordable. Taxes levied on personal vehicles will be beyond reach.
- There will be a wide choice for selectors to form an Indian Cricket team of 11 players. Tendulkar, Gavaskar, Kapil Dev, Vishwanath will still be available for selection.
- Tendulkar's son will compete with his father to join the Indian cricket team.
- People will have to book darshan in Tirupati 12 years in advance.
- Chennai city will extend till Hosur and Bangalore till Mysore and beyond.
- Technology to recycle wastes will improve.
- People will have an automatic device fit along their body to recycle water instantly as it comes out, while there will be no space for sewage water treatment plant.
- People will be confused about their age. The moment aging process stops, some old people who have already crossed 80 or 90 and got stuck there, would be wondering what's next for them in life?
- Baba Ramdev will come up with new innovations to draw energy from sun to power the body cells. This will reduce the consumption of food as we will start preparing food directly in the body from solar energy.
- People maintaining graveyards will be happy because there will be lesser need of space there.
- Pharma companies will be disappointed because their anti-aging products will not sell anymore.
- Wars will be fought not for wealth, but for water and food.
- To conclude, there will be a chaos in the World if aging stops. While the future would look dark, there are some positives to it too.
- Mankind has seen most of the innovations during crisis period. For example, the World has seen most of the key innovations during World Wars. Stopping of Aging process could bring in new innovations to the World like World War period.

Winning is not everything. **Wanting** to is – **Catfish Hunter**

Dr N ANNAMALAI

Mobile: 09444269395  annamalai.n@vsnl.com  /  www.creativitysphere.com