

# Small Ideas Big Change

‘On résiste à l’invasion des armées; on ne résiste pas à l’invasion des idées,’ wrote Victor Hugo. It translates to ‘One can resist the invasion of armies, but not the invasion of ideas.’ Little ideas have been the bedrocks of great achievements. This article is based on ideas given in project reports written by students in the course ‘Design for Sustainable Development’ offered at the Department of Chemical and Engineering Sciences, of Karlstad University, Sweden.



**E**VERY dog, they say, has his day. Likewise, good ideas, if doggedly held on to, often strike roots and grow into unassailable oaks. History has been full of such stories – in business, science, theatre, politics or everyday life.

In the course ‘Design for Sustainable Development’ offered at the Department of Chemical and Engineering Sciences,

of Karlstad University, Sweden, students were required to outline some design ideas for sustainable development – in the food and clothing sectors.

These two are undeniably human necessities, which if not understood as just ‘needs’ in the required amounts/quantities, tend to draw on unbelievably large volumes of resources (energy and materials), often wastefully. Of course, the students were Swedes and they

analysed the problem from a Swedish context (in general, a Western-world context, but more specifically, a Swedish one, as even in the western world, there are perceptible differences, if one may care to look closely!).

Modifications suggested had as their prime motive, the transition to greater sustainability. But, these ideas could well be the wellsprings of new ones in India, with suitable adaptations to fit well into our society/economy.



*Ideas could be the keys to success*



However, for any idea to 'be one whose time has come', it must have a strong potential to change the status quo, to alter existing attitudes and behavioural traits. For that matter, the idea itself could be a tool to promote awareness and provide knowledge and information. Where this has not been done before, or even if it has been done, has proved to be ineffective... we are talking here of power to change from bad to good, good to better and better to the best, over time.

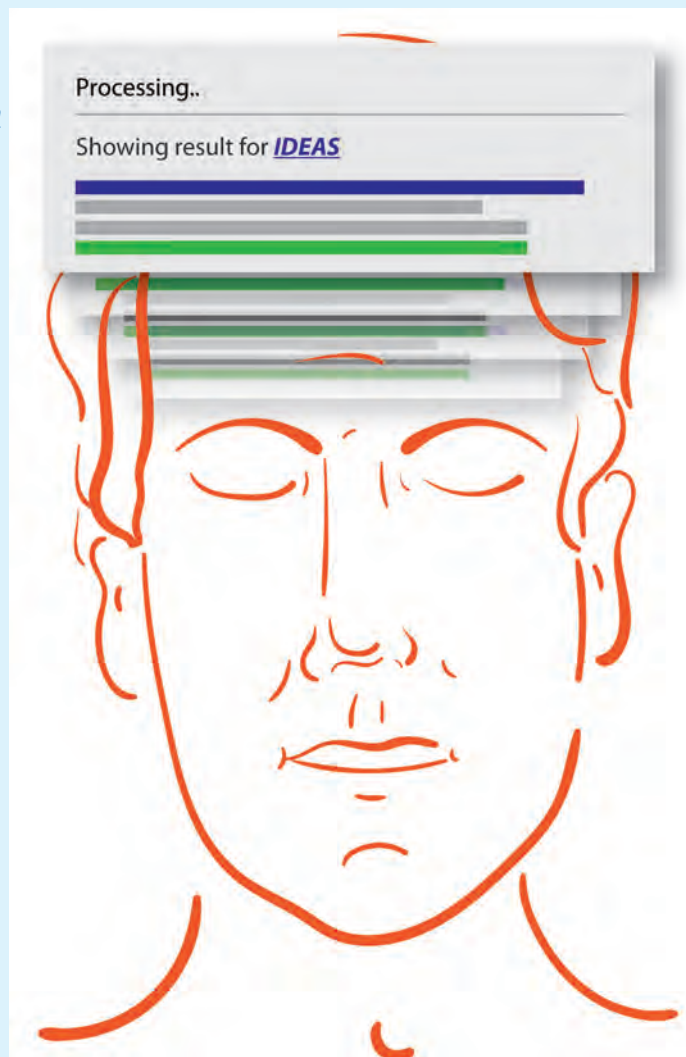
#### Reduction or Substitution?

Students are aware of the fact that progress or change happens in steps – one after the other – or with a certain element of complementarity. In other words, one cannot rely solely on substituting something with a 'greener' option. Much more of the 'greener' stuff would cause what is known as the rebound or recoil effect and actually increase the damage one is trying to curb!

So, environmental efficiency has to be complemented with sufficiency or optimisation of use by consumers. 'More from less' or 'selling services instead of products' are taught in business schools these days. These are, in one way or other, motivated by a need to improve resource efficiency, and decouple the GDP growth from resource consumption (energy and materials).

Moving over to providing information in a better way, a group of students suggested using biodegradable or reusable (second-sale to households) fluorescent-green hangers in apparel chains to distinguish between clothes that have a lower carbon footprint

*Ideas originate and this is often what one calls the 'Eureka' moment. But it is indeed difficult to see it being firmly entrenched. While the birth of a child may be a happy event in any household, the upbringing is challenging indeed as many parents would testify. So it is with ideas.*



than the others. This would attract the shopper's attention very easily, and any shopper who is a 'friend of the environment' would be motivated to purchase these apparels instead of ones he/she would otherwise purchase.

Of course, as most students have suggested, in this age of smartphones (and apps), it would not be difficult to have distinct scannable QR codes, which would tell the shopper more about what the 'environmental footprint' entails, and how it is calculated. At once, the shopper also knows that the green hanger which is used as a tool to attract attention is not at all carbon-intensive and could perhaps be donated to charity shops (like the Red Cross has in many cities of the world), to enhance the reusability and diversify

the benefits thereof...and this adds to the environmental-friendliness of the idea!

It is not just the hanger; the QR code could direct the shopper to a website which also encourages him/her to donate the apparel after a few years of use to charity shops of the type referred to. All shoppers do not base their purchases on the size of the environmental footprint per se...many of them, as gathered by some students from their surveys within Sweden, were primarily concerned about the presence of toxic and 'dermally-hostile' chemicals in the clothes; and it can be pointed out here that the use of chemicals with human toxicity potentials is also factored in when one calculates environmental footprints!



*Food and clothing are two undeniably human necessities, which if not understood as just 'needs' in the required amounts/quantities, tend to draw on unbelievably large volumes of resources (energy and materials), often wastefully.*

### **Food, far more complex than apparel?**

Clothes have longer lifetimes than foodstuffs! Food is purchased and consumed daily, often wasted (incinerated or composted in some parts of the world, and eaten from trash cans by stray animals in some others). A life-cycle of any foodstuff would also include the wastewater treatment plant in which faeces from toilets ends up in sewage and if treated can be handled in different ways in different parts of the world.

The life-cycles of foodstuffs admittedly are more complicated than those of apparel! The student reports focused on changing consumer behaviour in order to truncate the aggregated environmental impacts caused by the supply chains in the food and beverage sectors.

There was one idea which wonderfully combined several desirable end-goals and had a holistic view of sustainability. In a globalised world economy, where there is dependence established very quickly on foodstuffs imported from other countries/continents, competition from locally-produced foodstuffs can be introduced, by providing the necessary knowledge and incentives.

It is easier to monitor the environment-friendliness of locally produced foodstuffs vis-à-vis something you would import from a supplier thousands of kilometres away. A more reliable supply and also a steady source of income for small farmers in the vicinity of the demand-centres can at once be established. The small farmers could form cooperatives and design door-to-door delivery schedules, based on orders placed by the consumers over the Internet. What is more, if the cooperative could invest in one or two electric vehicles, the transport-related emissions would at once be reduced to almost nothing!

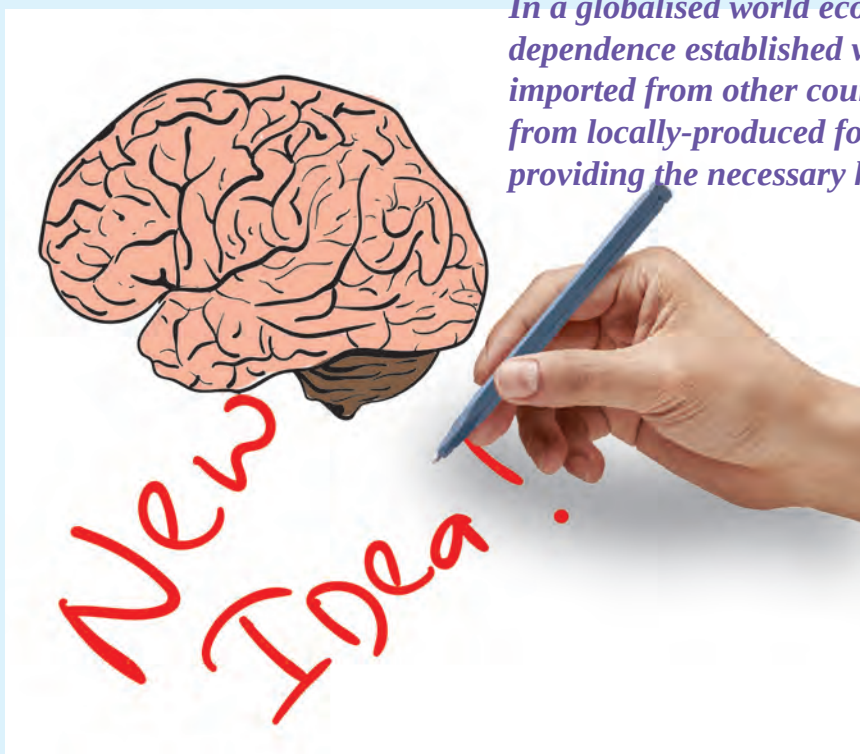
Of course, easier said than done. Consensual action is needed, and the municipalities need to be brought on board. Any animosity among the established supermarkets need to be handled as well.

An interesting addition to the menu of a hamburger chain, headquartered in Sweden, was spotted recently. The items on the menu also had their respective carbon footprints listed, in terms of 'xx kg CO<sub>2</sub>-eq per portion'. One finds that the vegetarian options have smaller footprints than the non-vegetarian ones. This is not a trend that has caught up with all the fast-food chains, however.

The author tried to contact the competitors in the business – McDonalds etc. – but did not elicit any response. Students, however, wanted to tide over this issue by providing information to consumers as third-party data providers. Of course, one would need a perfect analysis of all the foodstuffs sold at such fast food outlets and for that, of course, one would rely on the chains themselves to provide the raw data! This is difficult for sure. But an idea just needs the seeds to be sown first. The sapling may take time to emerge, but eventually, the seeds will sprout.

While this is about fast-food chains which of course form a key component of the retail food sector in India as well, there were other ideas centred on supermarket chains selling fruits, vegetables, beverages, etc.

We walk in to a grocery store and cannot really tell the difference between tomatoes from Spain and tomatoes from South Africa; or apples from New Zealand and apples from the USA. They of course do not look exactly the same. One would choose on the basis of the price at times, and on the basis of the 'exoticness' at other times. There also could be some irrational biases towards (or against) products



*In a globalised world economy, where there is dependence established very quickly on foodstuffs imported from other countries/continents, competition from locally-produced foodstuffs can be introduced, by providing the necessary knowledge and incentives.*

from certain countries or regions of the world.

How about this for an idea, as many students suggested? A large project can be instituted where one begins by analysing the products on the shelves of a given supermarket chain (the supplier-base would more or less remain fixed, over a reasonably long period of time, one assumes), for their environmental impacts – say just global warming impacts to begin with (this would be relatively easier than studying all the different types of impacts).

A scale can be designed – say from 1 to 10, with each value corresponding to a range of global warming impacts (say ‘1’ could be bright red, denoting the highest range of impacts, with ‘10’ being bright green and denoting the lowest range of environmental impacts). This scale can also have a lower least count, say 0.5 instead of 1! This would be a number inscribed within a circle of the representative colour (ranging from bright green to yellow to orange to bright red...). Again, most of us would have smartphones and can check what the figure and colour indicate, by accessing the database right there inside the supermarket!

Now, there is an issue here which would need to be resolved, as students rightly identified. If there is no uniformity and standardisation, different supermarket chains would hire different analysts and there would be conflicts in the minds of consumers if they discover that the values ascribed to the same foodstuff – say apples from Chile – in two different supermarket chains, differ by a great extent. Of course, this can still be possible if the Chilean apples come from two different orchards, one in the northern part of the country and the other far down closer to the southern tip of South America! But a standard database, with adequate information and reliable references, will enable one to tide over this impasse, which could just quash the idea, big-time, if not attended to.

The question, ‘How to make consumers go for the environment-friendlier purchases, even if they cost a little more?’ was deftly addressed by some students who advocated an ‘incentives-based approach’. Consumers, in Sweden for instance, can buy cards from different supermarkets, in which their purchases can be recorded. The history of purchases

can then be used by suitable software to accomplish a whole lot of things – to understand consumer behaviours over time; preferences and aversions, sudden changes in what they purchase, etc.

While the quanta of purchases is used to provide discounts from time to time on selected products, the ‘environmental-points’ can also be used in some cleverly-designed way to offer free gifts to shoppers when they reach different ‘environmental’ milestones. This can also be publicized to motivate other shoppers to toe the line. Gradually, as demand for the greener products rises, the supply of the ‘redder’ ones will diminish, or for that matter, it will make the upstream suppliers become more environment-conscious and strive to reduce their footprints.

Ideas originate and often this is what one calls the ‘Eureka’ moment. But it is indeed difficult to see it being firmly entrenched. While the birth of a child may be a happy event in any household, the upbringing is challenging indeed as many parents would testify. So it is with ideas.

*(The author likes to thank the following students, in alphabetical order of first names: Alexander E, Anton Z, Charlotta W, Christopher T, Daniel J, Ebba S, Elin B, Erik L, Frida L, Gustav G, Hampus H, Hampus N, Jacob L, Jalil N, Janna D, Jenny A, Johan E, Johan O, Lisa R, Marcus L, Markus I, Oksana L, Oscar S, Patrik S, Sebastien R, Tim S, Tommy L, Victor M, Wille B, Mathias T. Thanks also to Senior Lecturer Helen Williams and Assoc. Prof. Fredrik Wikström for the opportunity to be part of this course)*

Dr. G. Venkatesh is Senior Lecturer, Department of Chemical and Engineering Sciences, Faculty of Health, Science and Engineering, Karlstad University, Karlstad, Sweden. India address: S/o Shri C.R. Govindarajan, 1:4/F-8/Aishwarya Coop Hsg Society, Sector 7, Sanpada, Navi Mumbai-400705, Maharashtra. E-mail: venkatesh.govindarajan@kau.se