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KEEPING IT SIMPLE: THE NEXT TECHNOLOGY REVOLUTION

Keeping it simple: The next technology revolution

By [Dr. Nicola Davies \(https://www.extremetech.com/author/ndavies\)](https://www.extremetech.com/author/ndavies) on June 12, 2015 at 12:30 pm

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It often seems like technology is getting more advanced and more complicated. However, as highlighted at the Thinking Digital conference, held 19-23 May 2015 in Newcastle, UK, the technology that has had the most profound effects are the most simple ones — such as same-language subtitles for learning languages, or solar suitcases giving Kenyan maternity wards [electricity \(http://www.extremetech.com/tag/electricity\)](http://www.extremetech.com/tag/electricity). How can you innovate simple technological solutions for the most profound and lasting effects?

When Lightning Strikes

The inspiration behind everyday inventions such as the microwave oven, penicillin, and Teflon cropped up altogether unintentionally. People tend to associate research and development activities with scientists garbed in long white coats, brooding over samples in a controlled environment with the gentle noise of machines in the background. While this may be a typical scenario, this isn't always the case. You can do brilliant work in your own garden shed or have your "Eureka moment" while you are drifting off to sleep at night. You never know when you may be hit by a stroke of genius.

The Reluctant Innovator Phenomenon

Despite the several billions spent every year on R&D for creating technological innovations that dramatically change the way we work and perceive the world around us, many of these discoveries (including a portion of the ICT4D advancements) occur by chance. Many of the individuals who have pioneered such advancements didn't intentionally set out to create anything, yet their work has historic implications. Seemingly without even trying, they have been instrumental in creating a better environment for us all. Welcome to the world of the "reluctant innovator."

Take, for instance, Brij Kothari. One night in 1996 he and a couple of friends were watching a DVD of Pedro Almodóvar's *Women on the Verge of a Nervous Breakdown*. The audio was in Spanish and the subtitles were in English. As he was studying Spanish at the time, it occurred to him that it would be better if the subtitles were in Spanish. Out of the blue, a thought popped into his head: how easy would it be to promote literacy in a Bollywood-crazy nation like India if its movies were subtitled in Hindi? And thus was born same-dialect subtitling (SLS).

Bollywood Lessons



Today, thanks to Kothari's association with [Planet Read \(http://www.planetread.org/\)](http://www.planetread.org/), a not-for-profit organization dedicated to reading and literacy development around the world, several million schoolchildren have learned and are continuing to learn fundamental literacy simply by watching their favorite movies and TV serials. Not a bad achievement for hanging out in front of the DVD player on a Saturday night.

A Pioneer 'Waiting to Happen'

Laura Stachel's company, [WE CARE Solar \(http://wecaresolar.org/\)](http://wecaresolar.org/), creates versatile [solar \(http://www.extremetech.com/tag/solar-power\)](http://www.extremetech.com/tag/solar-power) energy lighting units for maternity wards in developing nations. When Stachel first landed in Nigeria she knew that she wanted to try and solve a lesser-known problem. What struck her almost immediately was that a basic lack of electricity was a main contributor to an unnecessarily large number of mother and child mortalities in Nigerian maternity wards.

Maternal death rates in Nigeria are among the highest in the world, with a proportion of 11 maternal deaths for every 1,000 live births. To solve this problem, Stachel came up with a plan to construct and dispense solar energy based units. This idea was the genesis of WE CARE Solar. Stachel says, "As an American doctor, it was inconceivable [to me] that a hospital could function without reliable electricity. The lack of lighting for a caesarean section was a problem I had never imagined."

<http://www.extremetech.com/wp-content/uploads/2015/06/SS-with-65watt-PowerUp-panel2-touched-up1.jpg>

Stachel had never consciously planned to create a company that manufactures portable solar kits. She certainly hadn't ever thought of being a solar pioneer. However, after identifying an issue, she felt compelled to solve the problem. As a result, the solar powered suitcase came into being, the use of which can potentially save the lives of both mothers and infants.

The Paradigm of the Hesitant Pioneer

Ken Banks, founder of [kiwanja.net](http://www.kiwanja.net) and the creator of [FrontlineSMS \(http://www.frontlinesms.com/\)](http://www.frontlinesms.com/), considers himself a hesitant pioneer. On a 2004 trip to Kruger National Park in South Africa, he wanted to communicate with his friends. Mobile telephony was in its infancy there and he was prevented from sending text messages due to the area being too remote and lacking any connectivity.



A couple of months later while drinking a beer and watching Match of the Day, he had an idea. The outcome was FrontlineSMS. All you have to do is download it from the internet to your laptop, connect it to your mobile phone, and voila: You can text from anywhere in the world as long as the strength of your mobile phone service is at least one bar. You don't need the Internet to use it.

Today, non-profit organizations in over 170 countries use FrontlineSMS services to reach remote locations all over the world.

Be an Open, Observant, Accidental Genius

These illustrations of simple technological solutions go to show that innovative developments are brought to fruition not just by "traditional" innovators/technologists, but also by individuals who, when faced with a problem, choose to take up the challenge and find a workable solution. This has been the message at various conferences worldwide: Technological innovations aren't always the result of scientific acumen or spending innumerable hours brainstorming about technicalities and their complexities.

Innovations come about when missing blocks of a puzzle are identified and a possible solution found by those who are observant and have the zeal to work out solutions and create working models. Just as Kothari and Stachel came up with simple and yet outstanding innovations which hugely benefit the masses, the potential exists for anyone who is observant, tenacious, and perseverant to achieve something remarkable as well.

There are countless examples of such innovations worldwide and the recent upsurge in technological innovation only goes to show that simpler, cleaner, more dependable technology is the order of the day. As Partha Dasgupta, an employee at a software engineering office at Arizona State University, insightfully reminds us, "Good inventions are often born out of need. Great ones are accidental."

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vfxant • 2 years ago

A good article, made better by an excellent writing skill-set. I do my best not to be a grammar-nazi, but when you read an article that carries a nice cadence uninterrupted by bad proofing... well, it makes one realize just how infrequent that trait has become these days.

Kudos.

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In the other end is IoT creators, with devices that no one need, and another hole for personal privacy and big brother.

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John TROLLey problem Bash5 • 2 years ago

Not to be pessimistic or diminishing individuals accomplishment but ... some of these inventions SLS(same langauge subtitles) require a lot of organizations and government agencies to get involved for a good roll out. Making the KISS principle label dubious. The complex coordination asked from all involved stakeholders is in stark contrast to the mythical lone wolf visionary inventor concept. (Face it, mainstream science is mostly done by organisations having money and means to do research. Including corporations, academia and government. The eccentric, wacky hermit inventor is basically a myth. There is almost none one person endeavour in science possible, save from a few very rare exceptions! Rare exceptions!

Not to mention all these inventors inventions who have patents basically call for government protection of their invention, which involves the government. Not exactly a small organization in any country.

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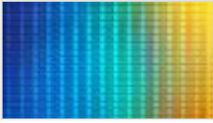
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