Hackathon as a Means to Reduce Our Environmental Impact

Hackathons have arrived in Singapore and they are being put to good use.

The upcoming "Clean and Green Hackathon" is being organised by the National Environment Agency (NEA) in partnership with Newton Circus "to create solutions that safeguard the environment and conserve precious resources".

The previous Hackathon, also organised by Newton Circus through its UP Singapore initiative, took place in January this year carrying the theme "Reducing Our Environmental Impact". Organised in partnership with NUS Entrepreneurship Centre and Earth Hour, games and apps were being developed to highlight energy efficiency.

So what is a Hackathon? Also known as a hack day, hackfest or codefest, it is an event in which computer programmers and others in the field of software development, as well as graphic designers, interface designers and project managers collaborate intensively on software projects.

Moving eco-actions beyond an hour with mobile applications

The January Hackathon produced ideas and applications which were creative and practical, encouraging greater public participation in energy saving and public events like Earth Hour.

At the launch, Andy Ridley, CEO and co-founder of Earth Hour, explained that the 'I Will If You Will' campaign was a means to encourage positive action for the environment beyond an hour every year. The premise is simple - someone makes a promise to do something if a certain number of people commit to take an on-going action for the environment, beyond Earth Hour.

What came out of the Hackathon was a winning idea. Called '5 Degrees', it involved a mobile app game of environmentally friendly activities. Based on the 'I Will If You Will' campaign, users send pre-defined challenges to their friends through mobile devices and social media, which are measurable in categories such as energy and water efficiency.

For example, putting at stake a population of pandas under the threat of global warming, users will attempt to alleviate their condition by completing eco-friendly challenges with friends. This visualisation of completed challenges makes the user interface more engaging and enables users to see their progress.


Figure 1: Andy Ridley, CEO Earth Hour, addressing the participants

Leveraging on the social and viral dynamics of the users, the app is able to extend its reach to those previously unaware of the Earth Hour campaign. The accessibility and interactivity of the app should also attract new users keen on making a difference in their environmental impact.

Upon completion of a challenge, verifiable through photo evidence and peer-verification, users will receive points that unlock new challenges. Coupled with continuous challenges and counter-challenges from social networks, this app provides longevity of use.

By completing challenges after challenges aimed at increasing energy efficiency over an extended period of time, users eventually cultivate the habit of efficient energy use. The app provides a platform to effectively affect a wide segment of the public in making a significant reduction in their environmental impact.

Besides enhancing any environmental campaign, other ideas raised in the competitive atmosphere of the Hackathon are aimed at increasing energy efficiency.
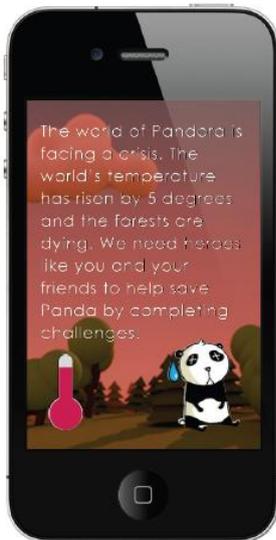
Figure 2: Winning idea - 5 Degrees

'Aircon+3' is an air conditioning management system that monitors energy use, monetary savings, building temperature and user feedback. Another was 'eSave', an energy monitoring and user collaboration portal.

By bringing together thinkers and solvers from a multitude of disciplines - sustainability experts, programmers, web designers, marketers - the Hackathon succeeded in introducing a wide range of solutions for some of the challenges faced today from global warming. Many of the ideas generated also involved community engagement as a way to induce behaviour change and extend their reach to a wider audience.

Over 120 people attended the January Hackathon, totalling over 2000 hours of voluntary work.

Hothouse of ideas for a cleaner and greener Singapore

For the "Clean and Green Hackathon", starting Friday 26 April and running through to Sunday 28 April, participants will be armed with many interesting datasets and will work together to create solutions that safeguard the environment and conserve precious resources. Open to amateurs and professionals, students and working adults, they can join developers, environmental activists, creative and concerned citizens, to build solutions that will empower the public to safeguard and nurture Singapore's environment.

In addition, the scope of the "Data Sandbox" has been extended to include data from the NEA and other agencies. Using the data sandbox available, participants will also be challenged to test out latest technology to help individuals and businesses optimise energy usage, and tackle environmental challenges with creative solutions.

Participants will also be given the opportunity to utilise the impressive technology on offer from Samsung, Amazon Web Services (AWS), and SAP, including SAP HANA One (an in-memory computing platform, hosted on AWS's public cloud) and SAP Visual Intelligence, a powerful query and visualisation tool.

The Clean & Green Hackathon is designed to engage communities in Singapore to co-create solutions towards the challenge of resource conservation and protecting the environment.

Additional Note: UP Singapore is a ground-up innovation platform which makes creative use of technology and data to improve our urban environments. UP Singapore seeks to achieve high levels of diverse and active community participation and foster strong collaboration between different community, government, corporate and NGO groups. It is managed by Newton Circus.

Source: www.upsingapore.com and www.cgs.sg/hackathon

The article is contributed by Ken Hickson, Chairman and CEO of Sustain Ability Showcase (SASA) and editor of *abc carbon express*, who attended the Hackathon **Reducing Our Environmental Impact** on 25 - 27 January 2013