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WEBORGANIC: CREATING A BLUE OCEAN FOR A SOCIAL CAUSE

The cover picture on Mr Erwin Huang's Facebook page was a cartoon version of him in an ancient Chinese costume, wielding a sword against the Under Secretary for Education of Hong Kong. Not that Huang had anything personal against the said official; the drawing only captured Huang's recent role in an education movement in the city—to promote e-learning adoption in schools. All the while, Huang carried out this mission as the chief executive officer of WebOrganic, a social enterprise distributing electronic devices and internet services to underprivileged students with an aim to bridge the digital gap. In its first year of operation, which commenced in July 2011, WebOrganic had served more than 7,000 low-income families, and had expanded from being a technology distributor to becoming a provider of a full-fledged online learning service. From providing technical support to parents and students to tailoring e-learning solutions to selected schools, WebOrganic had created a unique value proposition in the market.

In the past few months, Huang had been advising schools and the government about ways to adopt e-learning, a topic that could entail a sea change in the industry and could cast a ripple effect on other sectors, such as the e-textbook market. For WebOrganic, Huang planned to expand its product offerings to include tablet computers in the new school year as he introduced a comprehensive programme to guide schools to deploy e-learning. With the launch of the iPad to students and a hastening pace in e-learning adoption across the board, how far could he drive the movement while he rode the waves and created a blue ocean in the emerging e-learning market?

The Beginning

WebOrganic was born out of the need to give underprivileged students equal access to e-learning opportunities. In Hong Kong, about 75.8% of households had personal computers at home.[1] This high rate placed the city amongst the most technologically infiltrated places in

[1] The Government of the Hong Kong Special Administrative Region, http://gia.info.gov.hk/general/200912/21/P200912210117_0117_60347.pdf (accessed 23 June 2012).

Penny Lau prepared this case under the supervision of Dr Julie Hung-Hsua Yu for class discussion. Students from the CUHK Business School—Beatrice Cheng, Raymond Ho, Jeff Ng and Taylor Ng—also contributed to this case study. This case is not intended to show effective or ineffective handling of decision or business processes.

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the world, yet also kept those without a computer on the far side of the digital gap. For families with a monthly income of less than HK$10,000[2] (or 27% of all households[3] [see **Exhibit 1**]), only 34.4% had personal computers and internet services, sharply lower than the 96.7% ownership and service subscription rate for families with incomes of more than HK$50,000.[4] The local government had called for digital inclusion with a goal of making information technology accessible and affordable to all citizens.

In 2010, the Hong Kong government announced a five-year internet learning support programme called "I Learn at Home" to facilitate the adoption of e-learning among students from low-income families. The government called for bids from companies interested in implementing the programme, and WebOrganic was among the five service providers in the run-up to winning the bid. Eventually, two were picked—WebOrganic and Net-Com rock n' roll—and each was given funding of HK$100 million over the five years, including an initial sum of HK$40 million in the first financial year.[5] WebOrganic, run by the Hong Kong Council of Social Service ("HKCSS"), catered to students living in 10 districts in the central and western parts of the city, while Net-Com rock n' roll, run by eInclusion Foundation Ltd, served the remaining eight districts. The two companies were required to offer internet access services, affordable computer equipment, advisory services, and computer training for students and parents. The programme, targeted to benefit 522,000 students, was expected to benefit 85% of the families who previously had no internet access.[6]

"I Learn at Home" was launched alongside a HK$280-million care subsidy scheme that provided subsidies to students[7] for computer purchases and broadband services. Under the scheme, the government disbursed a full subsidy of $1,300 or a half subsidy of $650 to students of families who received student financial assistance or social security assistance.[8] The first batch of student subsidies became available in August 2011 for parents to purchase devices and service plans for the new school year.

WebOrganic was officially announced to the public on 29 June 2011. Ms Christine Fang, chief executive of HKCSS, said WebOrganic's guiding principle was "to provide equal opportunities for all". By offering the same device across income groups, the company aimed to level the playing field and eliminate heavy labels of poverty that often came with the lack of technological gadgets. WebOrganic's goal was to provide the highest quality and value-for-money equipment and services to students in need.[9]

Most of WebOrganic's products were sold from September until the end of the year, with some additional holiday sales during Christmas and Chinese New Year. It also set up the WebOrganic Fund, which received donations from institutions and companies, including

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[2] *Since the mid-1980s, the value of the Hong Kong dollar had been pegged at HK$7.8 = US$1 through the currency board system. However, the market rate exchange to the US dollar fluctuated marginally.*

[3] *The Government of the Hong Kong Special Administrative Region, Census and Statistics Department, http://www.gov.hk/en/about/abouthk/factsheets/docs/population.pdf (accessed 25 June 2012).*

[4] SCED's Speech at Hong Kong International Computer Conference 2010 Opening Ceremony, http://www.info.gov.hk/gia/general/201009/28/P201009280090.htm (accessed 23 June 2012).

[5] The Government of the Hong Kong Special Administrative Region, Office of the Government Chief Information Officer, http://www.ogcio.gov.hk/en/news_and_publications/press_releases/2011/11/pr_20111109.htm (accessed 15 August 2012).

[6] The Government of the Hong Kong Special Administrative Region, http://www.info.gov.hk/gia/general/201106/27/P201106270123.htm (accessed 17 July 2012).

[7] Wong, T. (2010) "Facilitate Internet Learning for Needy Students", http://rigf.asia/images/docs/prez/TonyWong-APrIGF-Roundtable-20100615.pdf (accessed 17 July 2012).

[8] For details, see programme's website: http://www.gov.hk/en/theme/ilearnathome/programme/ (accessed 22 June 2012).

[9] Hong Kong Council of Social Service (2011) "HKCSS Launches WebOrganic Service Brand: WebOrganic Supports Learning through the Internet for 150,000 students from Low-Income Families", http://www.hkcss.org.hk/cm/cc/press/detail.asp?id=506 (accessed 7 June 2012).

Google Inc and Lenovo. Money was given to students who were ineligible for government subsidies, yet could not pay for computer and internet services on their own.

The Driving Force Behind WebOrganic

> *By delivering good technology and good accessibilities to these people, they have a choice, they have hope and they have opportunities, and that's our goal.*
>
> – Erwin Huang[10]

WebOrganic had its roots back in 2009, when Huang participated in a television reality series in which he was asked to live among the poor in the most destitute district in Hong Kong. He came out feeling strongly about the importance of bridging the digital gap and initiated a pilot project that became the model for WebOrganic. In a city that ranked third highest in the world in home optic-fibre coverage,[11] not having a computer or laptop easily put a child in a disadvantaged position. From homework to class projects, students frequently used computers to compose and create written work and presentations. Those without computers could only go to libraries or community centres to finish their homework, which meant standing in line to use computers for a limited time only and taking longer to complete assignments.

The pilot project, called Netbook Inclusion for Children Empowerment, gave underprivileged students access to computers and the internet. The project initially served 50 students in a single district and was later expanded to 200 students the following year. Its success was recognised by HKCSS, a non-profit body overseeing more than 400 social service groups in Hong Kong and later the parent organisation of WebOrganic.

Pulling up Huang's resume, one saw an entrepreneur of diverse pursuits. He was deputy chairman of a listed Hong Kong jewellery retailer for seven years, worked for Apple Inc when it first entered China, set up his own company in Silicon Valley and was advisor to many start-ups in various industries. By foregoing a higher-paying day job, Huang's involvement in WebOrganic was his way of paying his social duties. WebOrganic, however, was not just about offering a social service. Similar to working in the corporate world, Huang worked with top companies, dealt with the media and pursued new opportunities. All of this made running WebOrganic a true entrepreneurial endeavour.

WebOrganic's Mission: Hope, Chance and Choice

> *In five years, I want to get into any classroom in any school in Hong Kong, and find any underprivileged students and help them bridge that digital gap.*
>
> – Erwin Huang[12]

On the back of Huang's name card was drawn the company logo, a sprouting bean; below it, three words were printed in white: Hope. Chance. Choice. Huang believed his company offered students hope and a chance to achieve whatever they chose to undertake. WebOrganic's Chinese characters for "organic" could also be interpreted as "have a device". The tagline of WebOrganic was "With a device, you can gain access to the internet. With access, you have a chance." By offering students the exact same computers and internet

[10] Interview with Erwin Huang on 24 May 2012.
[11] Fiber to the Home Council (16 February 2012) "Canada Joins Global Ranking of FTTH Countries", http://www.ftthcouncil.org/en/newsroom/2012/02/16/canada-joins-global-ranking-of-ftth-countries (accessed 19 June 2012).
[12] Interview with Erwin Huang on 24 May 2012.

access, WebOrganic aligned all students, rich and poor, to the same starting point in learning, thereby eliminating any labelling effect and cross-generational poverty trap. Its target was to serve 150,000 students over five years. By the end of May 2012, it had reached out to nearly 24,000 students and had sold more than 2,400 computers [see **Exhibits 2, 3 and 4**].

In Huang's view, WebOrganic was focused on using good business practices to deliver a social goal, so profit was not the only or most important bottom line or concern. Value and quality were paramount to its products. Huang wanted to offer exceptional value at discounted prices, a testament not only to WebOrganic's ability to deliver, but also to its social mission to level the playing field. WebOrganic partnered with top suppliers such as Lenovo and Microsoft to deliver the latest products to students at reasonable prices, aiming to provide "the highest quality and value-for-money equipment and services to needy students".

Social Enterprises in Hong Kong

In Hong Kong, social enterprises slowly gained momentum in the early 2000s and had burgeoned since 2005. In 2006, the local government began to actively promote social enterprises in Hong Kong through education, funding and collaborative platforms for social entrepreneurs. A social enterprise in Hong Kong could apply for start-up capital from four government sources, each of which targeted a particular area, namely poverty prevention and alleviation, employment of people with disabilities, community inclusion, and preservation of historic buildings.[13] Besides government support, social entrepreneurs in Hong Kong had developed among themselves a support system comprising industry associations and regular summits. Despite the resources available to them, less than 30% of the social enterprises in Hong Kong had proven to be profitable between 2007 and 2009. During that time, about 63% of the social enterprises received government subsidies, and half of those were in the red, much higher than the 21% among those that did not receive subsidies.[14]

The Computer Retail Market

WebOrganic was serving the poor cohort, a group that had not been fully exploited and was overlooked or ignored by most electronics retailers. Locals who could afford to buy the latest models usually purchased them from chain or individual retail stores, or even directly from the manufacturers. For example, Lenovo's latest notebook, IdeaPad U300s Ultrabook, was selling for HK$13,998 at a major electronics retail store, higher than the monthly income of at least 27% of households in Hong Kong.[15] On the contrary, those who could not afford to buy a new computer often had to resort to purchasing recycled or outdated computers at second-hand stores. These computers were usually slower, were often incompatible with newer versions of software and crashed easily. The drawbacks of using these computers did not stop at the practical level. Users were often stigmatised as being only able to afford second-hand products. Among students and even more so for teenagers, this labelling effect could have a lasting negative psychological impact.

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[13] The Government of the Hong Kong Special Administrative Region, http://www.social-enterprises.gov.hk/en/support/funds.html (accessed 18 July 2012).

[14] 明報（２０１０年３月２日）"社企不足三成賺錢 16%倒閉"，http://life.mingpao.com/cfm/reports3.cfm?File=20100302/rptaa02c/ghb1.txt（于２０１２年７月２２日登陸）。[Ming Pao Daily News (2 March 2010) "Less than 30% Social Enterprise Makes Profits, 16% Closes", http://life.mingpao.com/cfm/reports3.cfm?File=20100302/rptaa02c/ghb1.txt (accessed 22 July 2012).]

[15] *For details, see Broadway's website: http://www.broadway.com.hk/taxonomy/term/103%2C72 (accessed 23 June 2012); The Government of the Hong Kong Special Administrative Region, Census and Statistics Department, http://www.gov.hk/en/about/abouthk/factsheets/docs/population.pdf (accessed 25 June 2012).*

WebOrganic was created within a market that many perceived to be small and unprofitable, but Huang saw huge potential and believed he could use technology and value-added services to take advantage of market opportunities. With help from the government, WebOrganic was given access to a student market that was not easily accessible to most retailers. He reckoned that even if WebOrganic could capture only 30% of that segment, it would easily become the biggest electronics distributor to students in Hong Kong.

WebOrganic in Action

Trumping Market Prices

> *We do not compete on price; in fact, we set the price so low that we don't think others can compete.*
>
> – Erwin Huang[16]

In line with WebOrganic's mission to offer the best products, Huang chose Lenovo's line of ThinkPad notebooks, one of the most longstanding notebook brands on the market. For the 2011–12 school year, the company offered three models of notebooks [see **Exhibit 5**], all of them the latest models priced at around half the original retail price. WebOrganic managed to keep prices low by negotiating with Lenovo Group's upstream suppliers, Microsoft Corp and Intel Corp, to work out better deals for each other. Huang had developed good relations with Microsoft from his years working as a publishing software developer. Microsoft and Intel were also willing to give the special offer because of the company's clear social mission and large purchase orders. On top of this, parents had the option to pay in annual instalments over three years. For a single computer, the annual payment was between HK$750 and HK$1,150. At this price, even families in the lowest household income cohort of HK$4,000 could buy computers for their children.[17]

For internet services, WebOrganic partnered with PCCW Ltd, the biggest telecom service provider in Hong Kong, to offer home broadband services, and with CSL Ltd, a major telecom provider, for mobile internet services. Mobile broadband services were offered at HK$1,200 per year and home broadband services cost HK$950 per year, both about half of the market price. WebOrganic also sold packages: students could pay HK$1,550 per year for a computer with home broadband service, or HK$2,350 per year for a computer with mobile broadband. If eligible students made use of the full or half subsidy granted each year, parents would be chipping in as little as HK$21 a month to pay for a child's access to online learning for the whole year.

Though Huang had not intended to compete on price, WebOrganic's price offering beat out most competitors. At around the same time the company launched its offer, another major internet service provider, Hong Kong Broadband Network, introduced a HK$158 monthly plan for home broadband services, which, when added up for the whole year, was more expensive than WebOrganic's annual package plan that included both a computer and internet services.

[16] Interview with Erwin Huang on 8 June 2012.

[17] *The Government of the Hong Kong Special Administrative Region, Census and Statistics Department, http://www.gov.hk/en/about/abouthk/factsheets/docs/population.pdf (accessed 25 June 2012).*

Not Your Average Commodity Seller

It's not just the device. It's [about] everything on top of the device.

– Erwin Huang[18]

Huang believed that one of the traps of being a commodity seller was that it constrained one to compete solely on price. But he did not want to become complacent about winning the pricing war. The computer and the internet services were only the basis of WebOrganic's offerings. He wanted to create a service package that would both allow and enhance the e-learning experience.

He came up with a service support system to ensure that students used the device optimally. Through partnerships with 11 social service organisations, WebOrganic was able to offer support to students and parents at 14 conveniently located service centres, versus eight service centres for Net-Com rock n' roll [see **Exhibit 6**]. WebOrganic delegated the centre's staff to assist students in using the devices. The staff, in effect acting as first-line technical support, had to receive training from Lenovo and Microsoft. The service centres were located in residential neighbourhoods and stayed open until at least 9.00pm or 10.00pm every day. In return, the centres received some money for sparing the human resources to look after WebOrganic-related support. The community centres also organised training workshops for students and parents, and provided support for all minor technological hiccups. For more complicated fixes, WebOrganic collected the computers and sent them back to the suppliers. When the centres were closed, WebOrganic operated a hotline service to answer questions regarding the programme or the use of its devices.

To enhance the learning experience, WebOrganic teamed up students with university student volunteers in a big brothers/sisters programme. Throughout the 13-week programme, the pair talked online and met once every three weeks. This programme had more than 500 university students participating and it formed part of the social service learning experience within the university curriculum. The university students were also required to pay for their own mentor training.

Becoming an E-learning Activist

At the end of March 2012, WebOrganic had sold more than 1,500 internet packages and 2,200 computers, and had served more than 7,000 families. Despite its initial success, WebOrganic did not stop there. Huang wanted to expand the company's role in helping schools embrace the e-learning experience. In April 2012, WebOrganic announced a set of new initiatives that helped schools implement e-learning [see **Exhibit 7**]. The plans included expanding existing services (eg, developing 10 extra support centres), enriching its content support (eg, offering language-learning software to ethnic minorities), and introducing a comprehensive programme designed for schools to deploy one-on-one computing in the classroom.

The E-learning Market

The development of Hong Kong's e-learning market was still in its infancy and lagged behind other major Asian nations, such as Singapore and South Korea. In 2005, South Korea had an estimated investment of US$51.4 million in the e-learning industry, followed by US$36.9 million in China and US$27.6 million in Singapore, while Hong Kong placed fifth with

[18] Interview with Erwin Huang on 8 June 2012.

US$14.5 million.[19] The primary and secondary student population in Singapore was only about 60% that of Hong Kong's, but its investment in e-learning was almost double.

The Hong Kong government first addressed the topic of e-learning in 2005, when it promised to promote a wider adoption of e-learning in society.[20] Yet the issue was left hanging with sporadic actions. In October 2008, in response to escalating textbook prices, a working group was commissioned to write a report on e-learning resources, which was released a year later.[21] In early 2011, the Education Bureau hastened actions and selected 61 schools to participate in an e-learning pilot scheme.[22] These schools served as test beds for any e-learning adoption, but no blueprint regarding the progress was laid out.

E-learning encompassed three major areas: content, technological gadgets and services. In Hong Kong, the biggest obstacle had been to provide the basic infrastructure for e-learning. About 75% of schools did not have Wi-Fi internet installed or the proper equipment in place to implement e-learning. For the remaining schools that possessed adequate wireless connections, 70% could only support 10 computers at a time.[23] Many schools lacked the money or incentive to pursue e-learning, partly due to the lack of incentives from educators and resistance from parents, and partly because the government had not rolled out any concrete goals to enforce e-learning adoption.

The digital divide among schools also reflected the growing poverty gap in the city. A majority of the schools with one-on-one computing, or around 17% of all schools,[24] were international or private schools that usually had access to more financial resources. As those schools moved faster in the development of e-learning, public schools were left further behind. Either their infrastructure was not ready or their students simply could not afford to buy computers. Resistance from parents, who were asked to pay for computers and software, also hindered the process.

Once schools made the shift in hardware, digital learning content was a concern that came to the fore. Though learning software was available, curriculum-based e-content to be used as core teaching material was almost nonexistent. Hong Kong's pre-tertiary education system was comprised of six years of primary school and six years of secondary school education. This amounted to 12 years of education materials that could potentially benefit 758,169 students.[25] The traditional textbook market was worth about HK$1.5 billion.[26]

But progress was underway. In June 2012, the government's plan to invest HK$50 million to promote the electronic book market was approved. The Education Bureau offered to subsidise content developers for half of their research and development fees, or up to HK$4 million per

[19] Bashar, M. I. and Khan, H. (April 2007) "E-Learning in Singapore: A Brief Assessment", http://www.u21global.edu.sg/PartnerAdmin/ViewContent?module=DOCUMENTLIBRARY&oid=157381 (accessed 8 July 2012).
[20] The Government of the Hong Kong Special Administrative Region, http://www.policyaddress.gov.hk/2005/eng/pdf/agenda1.pdf (accessed 8 July 2012).
[21] The Government of the Hong Kong Special Administrative Region, Education Bureau, http://www.edb.gov.hk/FileManager/EN/Content_689/wg%20final%20report.pdf (accessed 8 July 2012).
[22] The Government of the Hong Kong Special Administrative Region, http://www.info.gov.hk/gia/general/201101/03/P201012310128.htm (accessed 8 July 2012).
[23] Fan, F. (22 May 2012) "School System Ill Equipped for E-Learning", *China Daily*, http://www.chinadailyapac.com/article/school-system-ill-equipped-e-learning (accessed 15 June 2012).
[24] Ibid.
[25] The Government of the Hong Kong Special Administrative Region, Education Bureau, http://www.edb.gov.hk/index.aspx?langno=2&nodeid=1039 and http://www.edb.gov.hk/index.aspx?langno=2&nodeid=1038 (accessed 10 July 2012).
[26] Chan, C. (10 May 2012) "Textbook Pricing Talks Torn Apart", *The Standard*, http://www.thestandard.com.hk/news_detail.asp?pp_cat=30&art_id=122272&sid=36340440&con_type=1 (accessed 22 June 2012).

e-textbook, and planned for the resources to be launched in the 2014–15 academic year. With the inviting support, schools became more responsive to changes. About 41% of schools said they wanted to implement e-learning within two years.[27]

Nurturing an Ecosystem

> *WebOrganic is establishing an e-learning ecosystem. . . . By persuading teachers to understand the value of e-learning, we are able to pass on the message of equality and opportunity, as well as healthy physical and moral use of the internet.*
>
> -Erwin Huang[28]

Huang believed that when technology and devices became available, together with support from the government, schools would be more receptive to e-learning. He wanted to advance that development. WebOrganic's products were already creating opportunities for underprivileged students to participate in e-learning, but his company was not limited to only supplying the hardware and support services. He hoped to take a more proactive role in shaping the discussion and providing concrete support.

In October 2011, two months after WebOrganic started selling packages to students, it chose 50 schools and offered them special or free offers on a variety of e-learning enhancement tools. These schools, known as Seed Schools, were introduced to software and hardware providers sponsoring the products or services. They received all the support, ranging from cloud computing to broadband support, needed to implement e-learning [see **Exhibit 8**]. In return, the schools were required to adopt e-learning in at least one of their year groups and share their experiences in training or workshops organised by WebOrganic. Five of them were chosen as ambassadors to promote e-learning adoption.

Aside from running WebOrganic, Huang was also chairman of eLearning Consortium, an industry group supported by the government, service providers, educators and publishers. The Consortium organised workshops and conferences for people in the industry to share ideas. The group had been active in conducting surveys and bringing awareness to the lack of infrastructure and resources for e-learning adoption in Hong Kong schools. Its media exposure had helped WebOrganic promote its products and mission.

Riding on two fronts, Huang was pushing the e-learning movement in full force. From March 2012 and into the summer, he had been visiting schools, talking to school principals and attending meetings of parent-teacher associations. He tried everything possible to convince them to take the first step in e-learning, as most schools finalised their plans for the coming school year.

Repackaging the iPad as a Learning Tool

When the time came to decide on new computer models for the second year, Huang wanted a device that would be the next commoditised item and a product to which he could add value in an educational context. Huang eyed opportunities in the growing use of the iPad, Apple Inc's tablet computer. Coincidentally, in January 2012, Apple announced its foray into the educational e-book market. In Thailand, where the government had announced a one-tablet-per-child policy, Apple lent iPads to students in 20 schools in order to test the effectiveness of

[27] Fan, F. (22 May 2012) "School System Ill Equipped for E-learning", *China Daily*, http://www.chinadailyapac.com/article/school-system-ill-equipped-e-learning (accessed 15 June 2012).
[28] For details, see WebOrganic's website: http://www.weborganic.hk/EN/node/40.

e-learning.[29] The tech giant also added an educational book section with the launch of its iBooks2, an application for electronic books, and introduced iBooks Author, software that allowed teachers and publishers to write and design their own electronic textbooks. In conjunction with Apple's global initiative, Huang was prepared to offer the iPad during the 2012–13 school year.

> *We want to ensure that our iPads are not the same iPads you buy from Broadway (an electronics retailer).*
>
> – Erwin Huang[30]

One day after Apple launched its third-generation iPad in March, WebOrganic announced the inclusion of iPads in its product offerings. In the quintessential WebOrganic way, Huang planned to create value for teachers and students as they used their new iPads for teaching and learning.

Tree School Programme: Moving on to One-on-One Computing

Huang put forward a proposal with Apple to co-develop a comprehensive programme that would support implementation of one-on-one computing in classrooms; the resulting product was a total-solutions programme called the Tree School Programme. It was a subscription service offered to schools that encompassed every facet of e-learning. For infrastructure support, WebOrganic liaised with network and service providers for participants, called Tree Schools, and even provided technical support in some cases. WebOrganic helped schools to install internet services, e-mail systems and learning management systems. WebOrganic also installed in all the iPads a parental control system and a cloud-based account management system for educators and parents to monitor student use. Teachers could also download learning materials for all students using imaging technology.

As part of the learning experience, WebOrganic conducted open-box sessions with students to teach them how to use the tablets before sending them off for the holidays. The purpose was to have students return in the new school year, already familiar with their new learning tools and ready to fully exploit their e-learning devices. The tablets also had a locate-and-lockdown function in which users could track down a tablet and lock it if it were lost or stolen.

Every school progressed at different levels in terms of infrastructure and software. Huang encouraged schools to adopt the inclusion step by step to ease the transition for both students and teachers. He advised them to first use e-learning in one or two classrooms in each school year, probably in one or two subjects, before extending to other levels and subjects, and eventually the entire student body. To ensure that schools benefited fully from its services, WebOrganic went the extra mile to lobby for schools that lacked funding or those that encountered resistance from parents and/or teachers. Attending parent-teacher association meetings became one of Huang's major engagements during those months.

To address the content side of e-learning, WebOrganic created a virtual bookstore for students using its tablets. Huang spoke to education publishers about putting their educational content onto the iPads, and three major textbook publishers in Hong Kong—Pearson Education, Oxford University Press and The Commercial Press—became its first partners. But this was only the first step. Huang understood that e-learning materials were not merely translations of traditional textbooks into a digital format. The materials should take advantage of the flexibility and interactivity of the digital format, and should encompass learning of all sorts,

[29] Bangkok Post (22 June 2012) "Apple to Let Students Test iPad Tablets", http://www.bangkokpost.com/business/telecom/299161/apple-to-let-students-test-ipad-tablets (accessed 18 July 2012).
[30] Interview with Erwin Huang on 8 June 2012.

from academic subjects to music and the arts. Huang saw this as a new market opportunity with huge growth potential, and started working with publishers to develop curriculum-based digital content, a category in high demand.

Beyond the Underprivileged Group

WebOrganic was founded on an initial focus to serve underprivileged students, a neglected group in the Hong Kong education system, but as the company expanded into a more ambitious role, Huang wanted to include all Hong Kong students in his movement. He decided to sell the WebOrganic iPads through schools and, therefore, to students from all socio-economic backgrounds. Once a school joined the Tree School Programme, all students, rich and poor, purchased the WebOrganic iPads. While the underprivileged still purchased the tablets at a sharply reduced price, average students who could afford to buy an iPad bought them at a moderately discounted price. Under WebOrganic's financing scheme, underprivileged students, before subsidies, only paid HK$1,900 a year for a bundled package of home broadband services and a 16GB iPad 2.

Under the "I Learn at Home" programme, WebOrganic's jurisdiction only included the western and central parts of Hong Kong, meaning that the company did not have access to eastern district schools. While not able to sell directly to underprivileged students there, Huang planned to sell iPads to schools in the region at the price he offered to average students, and let them lease to students who were eligible for subsidies. In this way, his scheme reached all students in Hong Kong.

Huang also used the WebOrganic iPads to benefit children of ethnic minorities, who accounted for about 3% of all students in Hong Kong. Most of them spoke the local dialect, Cantonese, but many fell behind in reading and comprehension, which therefore hindered their learning capabilities. Prices of language-learning software in the market were high, and many of these minority students came from less well-off backgrounds. Huang, who had served as a mentor to a Southeast Asian student and had seen the struggle first-hand, thought he could address the issue through WebOrganic's initiative. He partnered with a publisher to install its Cantonese-learning software onto WebOrganic iPads, and offered it for free for the first year. WebOrganic, with its extensive student reach, ended up being a distribution channel for the publisher, whose target market was small and scattered. At the same time, the bulk purchase enabled a cheaper price that benefited most students. If the model proved viable, Huang planned to extend it to students with special educational needs, such as the visually impaired and physically handicapped students.

Sustainability: The Mission-Business Reinforcement

> *I've never seen a system that actually works that way, that supposedly, if we run efficiently, then we can run forever, [there would be no] need for other future subsidy, and the cash will be flowing.*
>
> – Erwin Huang[31]

WebOrganic's model ran contrary to the typical welfare organisation in which the government subsidised more when the number of its beneficiaries increased. In fact, after a year in operation, Huang was optimistic that the company could remain financially sustainable after its first five years of funding. His logic was that as long as eligible students received government grants and purchased computers from WebOrganic, it would diversify to

[31] Interview with Erwin Huang on 24 May 2012.

serve students who could afford the devices, so that money would flow in to sustain the business.

Huang saw it this way: when the average students purchased from WebOrganic, they helped the company gain scale, and since the payments were invested back into WebOrganic, the richer students were essentially subsidising the poorer students' purchases by paying and by helping to build scale. The scale the company accumulated ended up benefiting both student groups. Bulk orders made through schools also potentially strengthened WebOrganic's role as a distributor. Huang envisioned creating a distribution layer that would merge technology, people, software and training altogether, and would be delivered in a packaged solution. If the company successfully took hold of that distribution market, it could grow in size and power and further drive WebOrganic's social mission.

WebOrganic used its resources from being a product distributor and a service provider, and expanded into what was required to become an all-round e-learning facilitator. While a majority of the Seed/Tree School Programme—the computers, the support and technical services, the hotline service, the sales and support staff—had been in place, WebOrganic was able to build on that and its existing partnerships with service providers to create new value. For example, it developed the content management system on iPads with Apple, and the tech company also offered training to teachers as part of the Tree School Programme. The special offers in the Seed School Programme were also a result of WebOrganic leveraging its existing relationships with service/infrastructure partners. Further building on this network of resources, the company forayed into the digital content realm, which could be another potential revenue source.

Huang also experimented with other sources of revenue. Knowing that students were the most accident-prone users when it came to handling a computer, Huang developed a tablet replacement programme. If parents paid a small fee to WebOrganic, they were guaranteed a new tablet no matter how their devices were damaged. The scheme covered the computers that were dropped, exposed to water or broken under circumstances that the normal warranty did not cover. This potentially generated a healthy income source, as the actual number of computers replaced tended to be a small proportion of all those sold.

On the cost side, Huang tried to save every penny he could. He maintained a lean corporate structure that kept unnecessary expenses at bay. The company only had 13 permanent staff on payroll. It relied on staff and volunteers at community service centres to provide support services. Given its order size and social objectives, suppliers were willing to offer WebOrganic cheaper deals, and it maintained that advantage as its customer base grew.

Managing Partnerships with a Social Edge

Huang managed WebOrganic like a commercial entity. From coordinating suppliers to serving customers, shipping products and training staff, managing inventories and points of sales, the social enterprise had the whole commercial spectrum in place. But what separated it from other commercial operations was that it always had a social edge, giving WebOrganic a distinct advantage when it came to brokering attractive deals with major international corporations like Lenovo and Apple. It was the social angle that allowed it to bring all the parties together in a mutually beneficial way.

> *This is not a complete business deal. I need to appeal to your ethical sense; and that's not CSR [corporate social responsibility] or charity because if that's the case, they could shift focus or agenda every year.*
>
> – Erwin Huang[32]

The fact that WebOrganic targeted an untouched market—the poor—gave it a leg up when bargaining with vendors. While the group with disposable income was readily accessible through retail stores or direct selling, the potential poor customer group, oftentimes very large, was hard to locate. Companies often lacked the incentive to target these customers, as they were expected to yield low returns in terms of sales and purchase size. With WebOrganic and the government subsidies, these customers not only became available, but the larger sales volume also made up for the smaller orders. To these companies, WebOrganic also offered a chance to reach out to a young customer group that could potentially develop into long-term users. For example, Apple was at that time trying to tap into the education market, and WebOrganic provided that much-needed segment. On the other hand, WebOrganic ensured that its vendors would maintain a positive gross profit, a way to make their participation more akin to a real business deal than a token of corporate social responsibility.

In the Tree School Programme, WebOrganic took up the role of a mediator, consultant and distributor. WebOrganic tended to all aspects of e-learning adoption and guided the schools along the way. By engaging schools and helping them grow, the company fostered a close partnership that yielded future collaborations and business opportunities. The schools would hopefully come to WebOrganic for advice when it came to deciding on e-learning materials and service providers, or even expand their order size as they became better equipped for e-learning.

WebOrganic also cultivated win-win relationships with service centres and university volunteers. Huang saved immensely on human resource costs by banking on the centres' staff to provide services, and the centres, at the same time, welcomed the added function because of its ability to increase the flow of visitors. At zero financial cost, Huang brought in university students to provide the extra service support. By providing service, the volunteers fulfilled their service requirements and gained social experience, while providing the extra support WebOrganic needed.

Shaping the Bigger Picture

Over the previous year, WebOrganic's social mission had transitioned from just levelling the playing field to promoting e-learning opportunities for all. The company had also gone from selling devices and services to collaborating with schools and corporations to promote e-learning [see **Exhibit 9**]. In the months leading up to the summer holidays, Huang devoted his time and energy to speaking with teachers and parents about adopting e-learning. With the government's HK$50 million injection into the e-books market on the way, teachers and parents realised the need to pick up the pace, as more schools raced into an e-learning mode.

Yet, Huang still met resistance in all forms: principals who blamed the slow progress on insufficient funds, teachers who said time was wasted in setting up the computer in a 35-minute class, and parents who were reluctant to invest extra money in devices and software. All of them were interlinked in a chain of influences. Teachers, for one, were unmotivated to make the change unless the principal called for a plan of action. In schools where a group of teachers actually took the initiative to draft an e-learning plan, funds might not be available.

[32] Interview with Erwin Huang on 24 May 2012.

In situations where both the schools and teachers were willingly leading the charge, parents often complained about the high price of a tablet or computer. Parents were furious when a primary school required each student to purchase an iPad, saying that it cost three times as much as buying schoolbooks for the year.[33]

Teachers were pivotal in implementing change. If they did not embrace it, it would be useless even if each student brought a tablet to class. Huang figured if he could marshal five to eight teachers in a group of 60 teaching staff to start believing in and working on e-learning, he could generate enough momentum to trigger large-scale e-learning adoption in a given school.

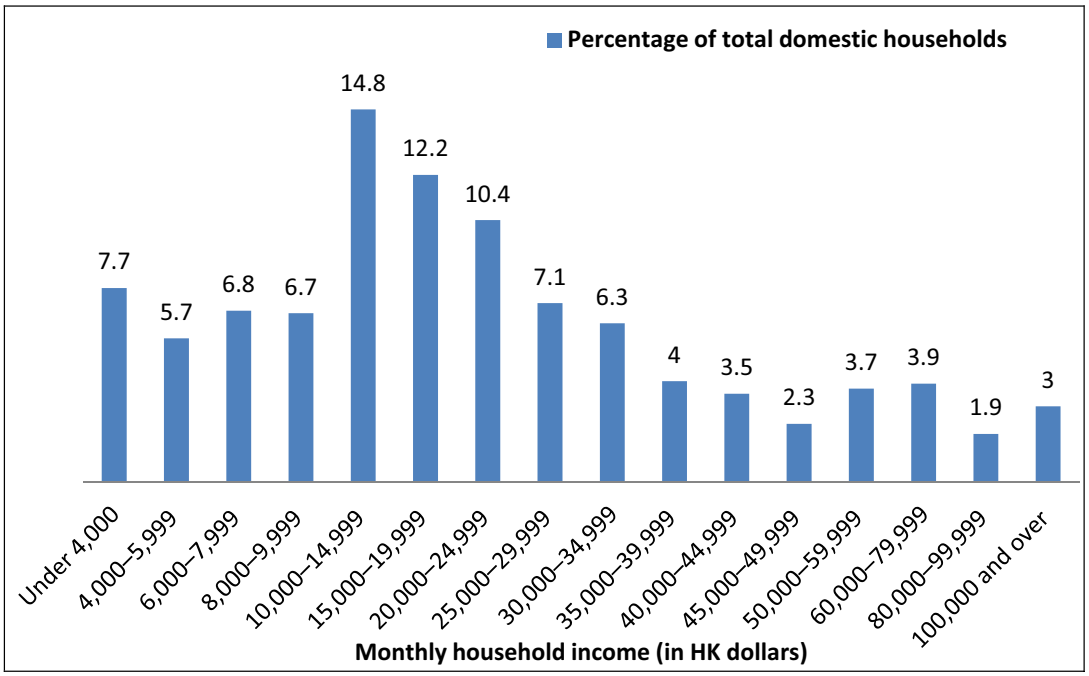
Running on a Changing Landscape

On a Saturday morning in June, Huang was standing in front of a room packed full of educators, service providers and parents. They were in a symposium discussing mobile learning as the next big thing, debating parental control of online duration at home and sharing successful examples of e-learning adoption in classrooms. This vibrant discussion could not have taken place a year before, when e-learning was not even on the table in most schools, or even three or four months before, when only a small proportion of schools were considering one-on-one computing. Now, the momentum was gathering and change was happening. Huang expected WebOrganic to need two full school cycles to smooth out its operations. A million things ran through his head daily. Exciting things were planned ahead for WebOrganic: iPads would be offered for sale, beginning in August, and more community centres and Seed Schools would partner with WebOrganic.

At the same time, he needed to talk to more schools and teachers. Huang was trying to break the inertia by changing the sentiment around it, instead of confronting the opposition head-on. He was hoping the Tree School Programme would do the trick. He believed that if one-third of Hong Kong schools adopted the programme, sentiment would change and the tides would turn. It should take one to two years, he thought, or so he hoped.

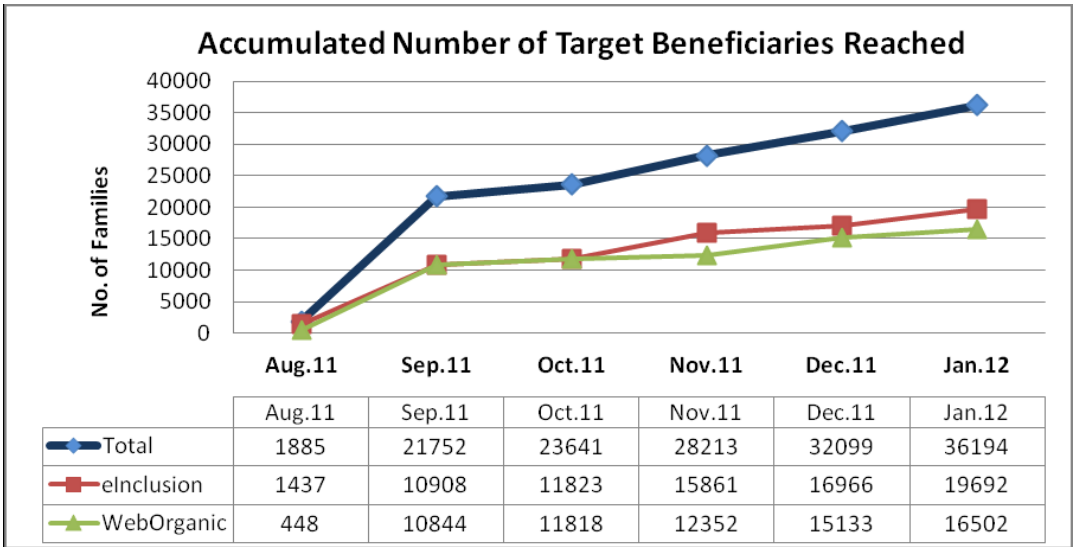
[33] 明報（２０１２年6月２５日）”小學要全班學生買 iPad 捱轟”，http://hk.news.yahoo.com/小學要全級學生買 ipad 捱轟-書價 3 倍-拒買可租每年 2000 元-211623855.html（于２０１２年7月１０日登陆）。[Ming Pao Daily News (25 June 2012) “Primary School Blasted for Forcing on Students iPad Purchase”, http://hk.news.yahoo.com/小學要全級學生買 ipad 捱轟-書價 3 倍-拒買可租每年 2000 元-211623855.html (accessed 10 July 2012).]

EXHIBIT 1: HONG KONG'S HOUSEHOLD INCOME DISTRIBUTION (2010)



Source: The Government of the Hong Kong Special Administrative Region, Census and Statistics Department, http://www.gov.hk/en/about/abouthk/factsheets/docs/population.pdf (accessed 25 June 2012).

EXHIBIT 2: THE CUSTOMER REACH OF "I LEARN AT HOME" (AUGUST 2011-JANUARY 2012)



	Aug.11	Sep.11	Oct.11	Nov.11	Dec.11	Jan.12
Total	1885	21752	23641	28213	32099	36194
eInclusion	1437	10908	11823	15861	16966	19692
WebOrganic	448	10844	11818	12352	15133	16502

Source: Office of the Government Chief Information Officer, Commerce and Economic Development Bureau, http://www.digital21.gov.hk/eng/D21SAC/attachments/D21SAC_paper_3-2012.pdf **(accessed 11 August 2012).**

EXHIBIT 3: PERFORMANCE AS AT 31 JANUARY 2012

Performance Metrics	WebOrganic	Net-Com rock n' roll
Target beneficiaries reached	16,502	19,692
Target beneficiaries served once	4,957	3,357
Target beneficiaries served thrice	1,998	337
Conversion of non-user to user of internet access at home	77.94%	59.25%
Training session conducted for parents and/or students	350	214

Source: Office of the Government Chief Information Officer, Commerce and Economic Development Bureau, http://www.digital21.gov.hk/eng/D21SAC/attachments/D21SAC_paper_3-2012.pdf **(accessed 11 August 2012).**

EXHIBIT 4: WEBORGANIC'S CUSTOMER REACH

	End-December 2011	End-March 2012	End-May 2012
Enrolments	15,133	23,929	23,943
Families Served	3,630	7,278	7,901
Parents Trained	1,502	2,131	2,171
Students Trained	1,424	2,294	3,282
Computers Sold	1,939	2,289	2,407
Internet Access Packages Sold	1,221	1,503	1,627

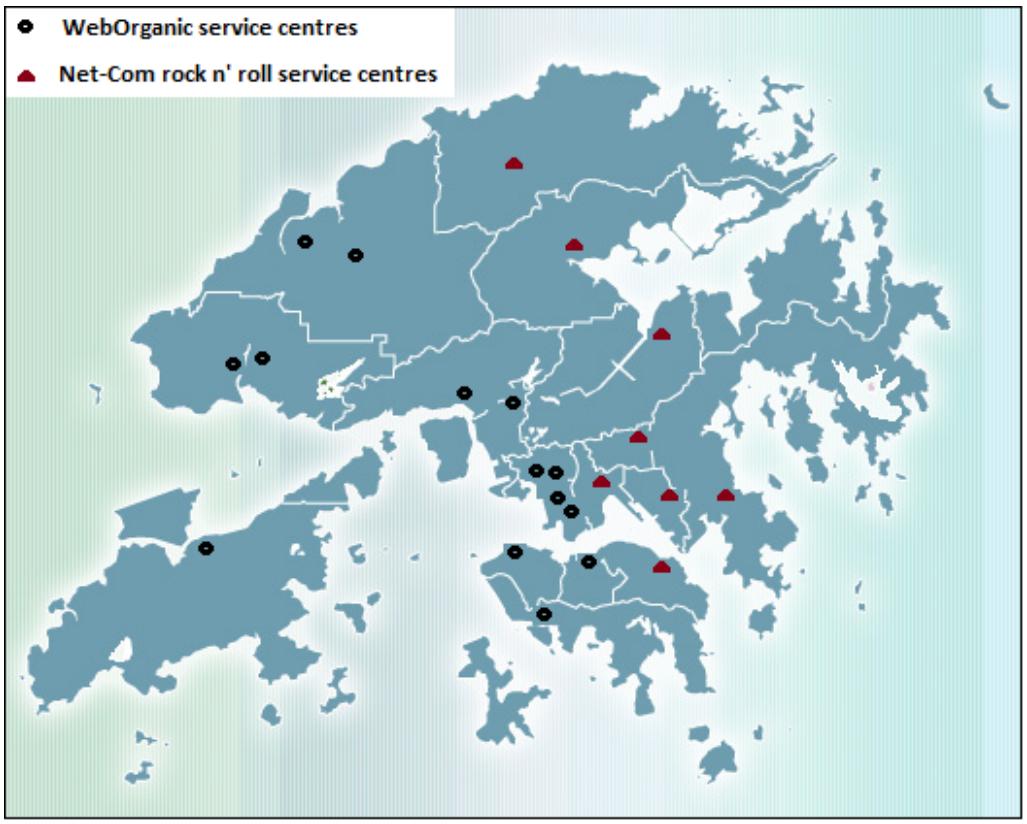
Source: For details, see programme's website: http://www.gov.hk/en/theme/ilearnathome/news/ **(accessed 13 February 2012, 20 May 2012 and 22 July 2012).**

EXHIBIT 5: WEBORGANIC'S PRODUCTS AND SERVICES PRICE LIST

Category	Offering	Price
Packages	Lenovo ThinkPad X121e Laptop, 3.6 Mbps Mobile Broadband Service, Microsoft Windows 7	HK$2,350 × 3 Years
	Lenovo IdeaPad S100 Notebook, 6Mbps Home Broadband Service, Microsoft Windows 7	HK$1,550 × 3 Years
	Lenovo ThinkCentre M71e Desktop (no display screen), 6Mbps Home Broadband Service, Microsoft Windows 7	HK$1,550 × 3 Years
Computers	Lenovo ThinkPad X121e (AMD processor), Microsoft Windows 7	HK$1,050 × 3 Years
	Lenovo ThinkPad X121e (Intel processor), Microsoft Windows 7	HK$1,150 × 3 Years
	Lenovo IdeaPad S100, Microsoft Windows 7	HK$750 × 3 Years
	Lenovo ThinkCentre M71e (no screen display), Microsoft Windows 7	HK$750 × 3 Years
Internet Services	3.6Mbps Mobile Broadband Service	HK$1,200/year
	6Mbps Home Broadband Service	HK$950/year

Source: For details, see WebOrganic's website: http://www.weborganic.hk/EN/node/21 **(accessed 12 July 2012).**

EXHIBIT 6: GEOGRAPHIC DISTRIBUTION OF THE TWO DISTRIBUTORS' SERVICE CENTRES



Sources: For details, see District Council's website: http://www.districtcouncils.gov.hk/ **(accessed 22 July 2012); WebOrganic's website:** http://www.weborganic.hk/EN/node/14 **(accessed 22 July 2012); Net-Com rock n' roll's website:** http://www.e-i.hk/page.aspx?corpname=ei&i=434#04 **(accessed 9 August 2012).**

EXHIBIT 7: WEBORGANIC'S NEW INITIATIVES (APRIL 2012)

Extend its reach by developing 10 more regional support centres
Help ethnic minorities with language support and services, including providing non-Chinese language workshops to introduce them to e-learning
Provide funding and support to families that are not eligible for government allowances, enabling them to enjoy the same equipment as other students in their daily academic life
Launch the Tree School Programme to deliver one-on-one computing and tablet offerings
Strengthen services, including the mentorship programme, support hotlines and referral services
Strengthen services for families with special needs, such as internet addiction or cyber bullying

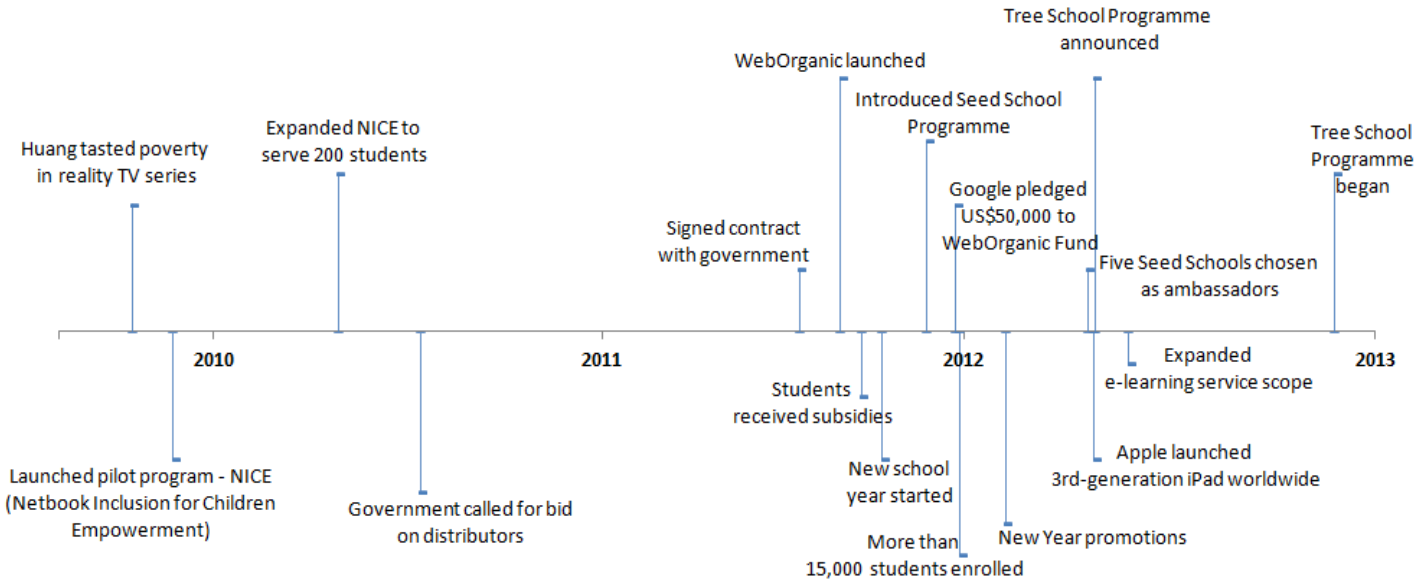
Source: For details, see WebOrganic's website: http://www.weborganic.hk/EN/node/6 **(accessed 15 August 2012).**

EXHIBIT 8: SPECIAL OFFERS FOR SEED SCHOOLS

Products/Services	Providers	Offers
Computers	Computer Providers	Special offer
Cloud Computing System	Computer Software Providers	Free
Software on Education Content	Education Content Providers	Free
Network Infrastructure	Network System Providers	Special offers to a limited number of schools
Mobile Broadband	Mobile Broadband Service Providers	Special offer

Source: For details, see WebOrganic's website: http://www.weborganic.hk/EN/node/40 **(accessed 22 July 2012).**

EXHIBIT 9: WEBORGANIC'S TIMELINE OF EVENTS



Sources: Interview with Erwin Huang on 8 June 2012; WebOrganic's website: www.weborganic.hk; Office of the Government Chief Information Officer, Commerce and Economic Development Bureau (June 2011), http://www.legco.gov.hk/yr10-11/english/panels/itb/papers/itb0607cb1-2374-1-e.pdf (accessed 1 August 2012).