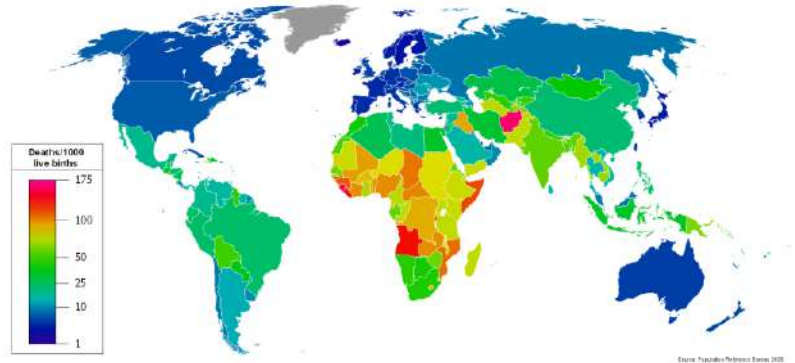


How Can Infant Healthcare be Made Affordable to the Developing World?

99% of the 4 million newborns who die every year do so in the developing world. The vast majority of these deaths are the result of **easily treatable diseases** such as infant respiratory distress or jaundice. The challenge and the tragedy lies in the fact that the countries that are most in need of life saving neonatal equipment are also the countries least able to afford it.



World Infant Mortality Rate

How can lifesaving equipment be made affordable to the billions of people who live in the developing world, especially when conditions in those countries are often far more challenging and necessitate specially designed equipment? This was the challenge facing the 22 participants on the 35th Global Leaders Programme (GLP) as they prepared to advise Medical Technology Transfer and Services (MTTS), a Vietnam-based manufacturer of low-cost medical equipment, on creating a sustainable business capable of operating without the support of donations.

Participants came from a multitude of countries, cultures, companies and organisations including BASF, ORIX, BSN, APG Asset Management, NEC, Origin Energy, Maybank, WISE, Becton Dickinson, Mother's Choice, Seven Bank, MasterCard, China Light & Power and the Hong Kong government. They would have to learn to communicate and work both with each other and in an unfamiliar country effectively enough to produce a useable output.



Medical staff testing MTTs' Firefly unit to treat jaundice

In the Classroom – An Analysis of Market Failure

Before travelling to Vietnam, the participants spent a rigorous first week in Hong Kong to familiarising themselves with the project and partners in Vietnam and learning to question assumptions and involve all members of any group they are leading in order to create the highest performance team possible. They were also led through dynamic discussions on some of the forces at work in both Vietnam and the world economy as a whole, in particular the ideas of market failure and the impact of globalisation. How it could be that the countries who most needed medical equipment were also the ones with the least access to it? And what were the implications of transferring technology which existed elsewhere into Vietnam and the rest of the developing world?

Prominent speakers provide different views on changing social contracts

Throughout, participants were reminded of the importance of having a wide breadth of knowledge to making informed decisions in a rapidly changing 21st century, something reinforced by the GLP speaker programme where participants have the opportunity to learn from and ask questions of industry leaders with decades of experience. Their real-life stories and lessons offer a very different perspective from traditional business school lectures as they share practical insights into what it takes to succeed at the highest level internationally and how they overcame the obstacles in their life and career to achieve their current success.



Anson Chan retired as the Chief Secretary for Administration of the Hong Kong Special Administrative Region (HKSAR) Government in 2001, after nearly forty years of service. As Chief Secretary, she headed the 190,000-strong civil service. She was the first woman and the first Chinese to hold the second-highest governmental position in Hong Kong. She is a recipient of the Grand Bauhinia Medal: the Hong Kong Special Administrative Region's highest honour.



Ronnie C. Chan is the Chairman of Hang Lung Group Limited and its subsidiary Hang Lung Properties Limited. Both are publicly listed companies in Hong Kong, dealing in real estate investment, development and management. In addition, Ronnie is actively involved with many non-profits, philanthropic endeavours, and educational organisations. He is a Co-Chair of the Asia Society and Chairman of its Hong Kong Center.



Zoher Abdoolcarim has been Asia Editor of TIME International since June 2008 and oversees TIME's award-winning Asia edition. Prior to this role, he was a senior editor at TIME Asia and Managing Editor of Asiaweek and an editor at Singapore-owned Asian Business. An ethnic Indian born and raised in Hong Kong, Zoher is a fluent Cantonese speaker. He graduated from the University of Wisconsin-Madison.

A project partner with a unique approach to healthcare in Vietnam

Medical Technology Transfer and Services (MTTS) is a Vietnamese medical equipment manufacturer set up in 2003 to address the glaring lack of medical equipment for newborn care, known as neonatal equipment, in most of the developing world.

MTTS' goal is to take modern medical technology and 'transfer' it to hospitals in the developing world by making it affordable, durable and easy-to-use.



Neonatal intensive care unit at the C hospital in Hanoi

Understanding the context in which the equipment would be used in is important given that many state-of-the-art machines from rich countries do not work in developing ones. Unreliable power supplies, lack of replacement parts and untrained staff can render expensive brand name equipment inoperative. In all of this they are supported by NGO East Meets West (EMW) and their worldwide **Breath of Life** programme for neonatal care. **Breath of Life (BoL)** provides custom-designed, low-cost equipment to hospitals and targeted training to medical personnel at no cost to save the lives of infants suffering from common newborn pathologies. BoL involves local health authorities to integrate these technologies into the larger health system.



Left and centre: Birthing facilities in many places in Vietnam are rudimentary at best and in rural areas trained staff are scarce, as most doctors and nurses prefer the higher wages and better conditions of city practices.

Right: A basic respiratory device used in health facilities in the rural areas

The Challenge: Closing the gap between need and demand

A year after the introduction of their equipment to Vietnam's National Hospital of Pediatrics (NHP), 24-hour infant mortality rates at the NHP had dropped from **30% to 10%**. By equipping **290 hospitals** throughout the country, MTTTS helped to reduce patient transfers by 83% and eliminate exchange transfusions entirely. As of today **54,000 newborns** are treated by MTTTS equipment annually.

But while MTTTS' track record was impressive, its accomplishments were largely the result of its partnership with East Meets West (EMW) who bought the majority of their machines.

However EMW, like most NGOs, relied on donor funding, and once Vietnam hit middle-income status in 2010, funding began to flow elsewhere. MTTTS' sales in Vietnam declined almost immediately - Continuous Positive Airway Pressure (CPAP) deliveries fell from 68 to 7 units from 2010 to 2012 and phototherapy deliveries from 58 to 10 over the same period.

Despite the quality of their equipment, MTTTS' future looked bleak unless they could somehow make up the shortfall on their own. The challenge for the participants, therefore, was to provide recommendations on how to leverage MTTTS' potential to expand its business into new markets and prevent future funding shifts from being similarly damaging.

Coming up with a solution would require that participants **build on the knowledge gained** and lessons learnt in the days prior, not just on Vietnam and the healthcare industry, but also empathy, **communicating with others and operating in an unfamiliar environment.**



The group discusses the business model with Chandran Nair (Founder and CEO, GIFT) and Prof. Hideaki Takahashi



MTTTS' overhead phototherapy unit used to treat infants with jaundice



Neonatal intensive care unit at the C hospital in Hanoi

A proposed business model: Expanding business opportunities abroad

After several days speaking with the management of EMW and MTTS alongside distributors, hospital administrators and the local community, the participants identified several key areas that were limiting MTTS' competitiveness and opportunities that it had not yet taken advantage of. Firstly, MTTS' low sales volume meant high production costs and low margins. There was also the lack of a commercial culture in the company, with MTTS' sole salesperson having been hired in 2014.



Participants speak with the management team and head doctors at Vietnam's national hospital for Pediatrics and Neonatal care

Finally, MTTS' location in Hanoi was less than ideal. Rent in downtown Hanoi was high even by international standards, but moving out of the city would limit MTTS' ability to attract the foreign design talent needed for R&D and who were unwilling to reside in the countryside. Also, shipping parts in and finished equipment out was extremely expensive, in part because Vietnam's main port was located at the other end of the country, in Ho Chi Minh city.

The participants' proposal to MTTS was therefore to build on its existing but small presence in neighbouring countries and **expand and focus their operations outside of Vietnam**, starting with the 600 million population of ASEAN and eventually moving into the rest of Asia and Africa. The economies of scale that would arise from the far larger market (US\$30 million versus US\$2.5 million) would lower MTTS' cost of production and increase sales to the point where they would be able to hire and train a larger sales force.



At a meeting with leaders of the Dong Song district women's group to discuss their healthcare needs

The Opportunity: Sharing it with a wider audience

Were MTTs to **move their base of production to the Philippines**, where both rent and shipping would be cheaper and a larger pool of technical talent would be available, they could further reduce costs and invest in human capital. And by **identifying strategic partners** in different industries, MTTs could expand its product portfolio, benefit from low-cost purchasing deals and distribute its products in markets it has no physical presence in. If MTTs were to secure the necessary financing to implement these changes within the next year, it could very well increase its sales to US\$30 million by 2019.



Participants present their recommendations at a forum attended by industry representatives and investors

The participants presented their findings at a final forum attended by over 70 interested parties including senior leadership from NEC, Draeger Medical and East Meets West and representatives from the finance, medical and NGO sectors such as ORIX, Becton Dickinson, TC Capital, Siemens, LGT Venture Philanthropy, and Save the Children. Also in attendance was the Chairman of the Vietnam Medical Equipment Association whose interest in MTTs, whose existence he had not been aware of, was both a sign of the work that still needed to be done to promote their work but also the opportunity that existed for very significant future growth and social returns.



GLP participants, the GIFT team and community representatives outside the town hall in the Dong Son district