

Silverlake: Setting New Standards for Software

Malaysia-based Silverlake is mixing cutting-edge mathematical theory with high-level financial systems. As a result, it is raising the standards for corporate software products.

According to Goh Peng Ooi, Executive Chairman of the Silverlake group, the applications of advanced scientific principles to economic theory is a difficult match. “Economics is about people, but science is really just about itself,” says Goh. He and a group of pioneering global thinkers have developed a digital economic solution based on category theory.

“The mass of people won’t understand category theory,” says Goh. “They are probably familiar with logic theory and with making decisions using that, but really, logic is a kind of language that gives too many possible answers,” he says.

Silverlake currently draws on the unique strengths of category theory to produce large-scale core banking systems for clients across the Asia Pacific region. As a solutions and services provider, it boasts over 100 global and local clients that include 40% of the top 20 largest banks in Southeast Asia. So it seems that Goh’s unique approach is pushing the right buttons with many customers.

Accurate Prediction

“What we are looking for is accuracy in prediction. This allows us to get scientific or economic gains,” says Goh. “It’s important to remember that math

isn’t just a theory of numbers. It’s part of the family of languages, just one form of delivery that allows us to establish values, measurements, money and more. We couldn’t do without it.”

Goh, an ex-IBM staffer with a keen interest in nuclear physics, is fascinated by the way math can help organizations apply precise theory to the way they do business. But he largely disagrees with the way classical education encourages mathematicians to accept the standard theories rather than



GOH PENG OOI
Executive Chairman, Silverlake group

thinking “off the wall” to come up with new ways to build systems—which is exactly how he devised Silverlake’s core banking software.

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—Goh Peng Ooi, Executive Chairman, Silverlake group

Silverlake recognizes that as the digital economy expands and changes the way the world is doing business, the demands on the software it uses are changing, too. However, Goh asserts that category theory is the perfect vehicle for handling impossible complexities that today’s business analysts have to handle in today’s market. While he says there are relatively few people—and maybe even fewer businesses—who understand category theory, Goh is resolute about its capabilities.

“Humans are still having difficulty expressing themselves properly, but

Silverlake has been supplying highly respected integrated banking solutions since 1989, but its genesis was unusual. “I was working at IBM and wanted to show off to my boss,” says Founder and Executive Chairman Goh Peng Ooi. “My boss really liked what I had done, but said I still had to work on it within the IBM company structure, 7-day weeks and 16-hour days.” That’s not how Goh or how his co-quants wanted to work. They preferred working in bursts of inspiration to develop the theory. “We were 24-hour no-sleep geeks fuelled by Coke and pizzas,” he says, “so we developed the product outside IBM instead.”



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category theory is another way we can help with that. We have absolute confidence [in the product]; that's why we are in Forbes magazine," he smiles. Indeed, Silverlake is listed in the Forbes *Asia Best Under A Billion* list this year; but that accolade alone speaks volumes for the quality of Goh's product.

Goh adds that it is easy to stick to the less-precise logic and language levels that are commonly used in business software, and to miss out on the super-accurate predictive capability of category theory. Goh says the extra complexity is worth it. "Our track record speaks for itself," he says. "We build the software then let the market decide. Category theory is just another tool, but it predicts much, much better than other tools. It is all about the predictive power of symmetry."

Part of Silverlake's special value offering is also in its people. It still has the same core team that started

the company in 1989, connected by a virtual network spanning continents to make sure the smartest people currently available are working on the product. Silverlake also works closely with local education institutions through sponsorships, internships and on-the-job training to create better opportunities for the current generation of students in Malaysia as well as other countries in which it operates.

Receptive Malaysians

The company has stayed in Malaysia partly, says Goh, because of the people. "Malaysians are very receptive people; they are easy to teach and guide," he says. This can be a double-edged sword though; the company is emphatic that it wants people who can think outside the box, people who can accept new ideas. "And sometime the bright people think they know better and want to fight our ideas," notes Goh.

Even though finding the right caliber of people who can think the way the company wants can be challenging, the organization has nonetheless expanded significantly. It now has more than 80 units with a network of over 4,000 people across Asia Pacific, the Middle East, Europe and the U.S., and is actively looking for future growth, says Goh.

"Earlier this year we decided on a change in direction, and now we are more actively looking for partners to work with," he says. Potential growth markets include aviation, tourism, education, health, government and logistics—and of course mobile systems. "Consumers have changed the way they want to bank," says Goh, explaining how people increasingly are turning to mobile solutions.

Goh admits that the output of even the most sophisticated system is dependent on the quantity and quality of the input data, but explains that this is relatively easy to verify with today's wholesale suppliers like Google and other specialist data warehouses. "Getting the basic data used to be hard," he says. "But today, knowledge is cheap."

Today, Silverlake is proud to offer a tried-and-tested product and a well-honed software development process—but the company is not resting on its laurels. Rather, it is poised for the next stage of growth—and it knows how it will get there. "A business has to predict, not think. Science is about maximum perfection. And economic methods are about predicting what will happen with the least imperfection," says Goh. ■



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Silverlake offers smart category theory-based software systems that maximize the output of a business, regardless of sector. According to Founder and Executive Chairman Goh Peng Ooi, being able to predict what customers want, or what business outcome is likely under a given set of circumstances, is critical. "Category theory is about offering the minimum imperfection in a prediction point. And the better you can predict, the more money you can make," he says.