Delcam Asian Technical Summit 2015 Special Report:

Reaching New Horizons

The annual Delcam Asian Technical Summit gives people from different industries a platform to interact and learn. What was covered in this year's edition and what can be expected for the future of the dynamic manufacturing scene? **Michelle Cheong** reports.

The first Delcam Asian Technical Summit (ATS) held following the acquisition by Autodesk, the 2015 edition took place in Bengalaru, India, from August 3-5 at the Ritz Carlton Hotel.

Held every year in a different Asian country, the ATS is one that unites people from different cross-sections—customers, manufacturers and media alike—and gives them a common platform to interact and share knowledge, as well as to keep themselves updated with the company's latest enhancements and products.

This year's edition was opened by Peter Dickin, marketing manager at Delcam, who gave an overview of the ATS programme and spoke of the company's global reach and involvement in various industries such as medical, aerospace, robotics and heavy machining among others.

Ian Felton, the British Deputy High Commissioner, Bengalaru, followed after and talked about India's plans to strengthen further its niche and upcoming industry sectors such as IT, aerospace, manufacturing and life sciences. He also mentioned the importance of manufacturing and design and emphasised the 'Make in India' programme that the government has launched to attract foreign investors and build up the country's manufacturing industry.

At the ATS, selected customers are asked prior to the event to give presentations on how they have been successful with the company's products. This year was no exception. Customers from various industries such as orthose manufacturer Optimised Ortho, watch manufacturer Titan, and engineers from Shree Engineers spoke to the 50-delegate strong crowd over the two-day event.

From Delcam, Peter Dickin, business development manager James Slater, and the recently appointed vice president Pete Baxter were among those who gave insightful presentations on product enhancements, and types and trends in manufacturing.

For example, Mr Dickins gave a presentation on possibilities that manufacturers could achieve by combining additive with conventional subtractive production technologies.

Mr Baxter spoke of the future of manufacturing things, where he talked about the current trends of production technologies and likely shift in manufacturing in the foreseeable future. Companies, he said, would move from producing in bulk—the current practice of many manufacturers today—to producing at the point of demand due to a movement towards domestic manufacturing. This would be a lower-waste and lower-cost production method that would be more sustainable in the long run.

India has been a growing market for the manufacturing industry, and Vineet Seth, managing director for South Asia and Middle East, Delcam, expects it to offer still a larger potential for growth.

With its huge population and the consequent high demand for products for domestic consumption, he sees a vast scope for exports and believes that India can become a future manufacturing destination.

The Future Of Manufacturing

Like all industries, the manufacturing industry has been steadily advancing through the years. What has been improved, what is still lacking, and what can be expected for the future of manufacturing? **Michelle Cheong** talks to Pete Baxter, vice president, and Vineet Seth, managing director, South Asia and Middle East, Delcam, to find out more.

With regards to Delcam, how has manufacturing technology improved?

Vineet: This year we have launched enhanced versions of our CAM software to help our users better. These include functionality enhancements, user functions, and new strategies for manufacturing.

For example, some new functions we provide on our CAM software include innovative strategies to increase the rate of cutting, and produce a better finish while ensuring the overall product quality is maintained.

For our scanning and data capture options, I think we were previously limited by the number of points or scanning capability we provided before, so we have improved on that. In our ArtCAM, we have also made it easier for people to convert their thoughts and ideas into some artistic form. These improvements would go a long way for the metalworking industry or the people on the design side of that because they would be able to produce designs within an even shorter time period.

Our inspection software also has added routines for a more thorough inspection and can now take points on touch as well as non-touch light-based sources.

As for our machine tools, they are becoming

more rugged and versatile to suit user needs. Some have become larger or smaller, depending on the ideal user requirements, and others now cater to a larger number of axes for easier and more flexible use.

Basically, our improvements have aimed to increase the efficiency of manufacturing by helping machines cut things faster, easier, quicker, and with more profitability.

Pete: I think that is a very important point for the industry; manufacturing technology should be able to deal with high degrees of complexity and produce physically accurate and high quality parts and components in an efficient way. In comparing two similar software, which one customers would choose would depend on how quickly you can produce the part.

For our company, that is what we have built our reputation on over the years and is something that continues to be enhanced.

What is still lacking for manufacturing technology?

Vineet: We do not live in an ideal world just yet. The most versatile forming tools are our two hands with their n number of axes. They are not like conventional tools that are constrained by three or five axes. Unfortunately, they cannot process hard metal.

With the current tools, improvements made are trying to bridge the gap between what is possible with machine tools, and what was not possible with them before. The ultimate aim would be developing machine tools with a level of versatility that can be reached by our hands.

How will manufacturing progress from here on?

Vineet: India will be one market in which manufacturing will grow quite substantially from where it is today. Although the last 15 to 18 years has seen good growth, it is going to be much faster and much more aggressive going forward due to shifts in the community. Also, there are more people in the country who believe that India should be made a manufacturing destination rather than just for IT that it has been known for.

There is a lot of scope for domestic consumption in India. First there a lot of people, so likewise there is a lot there needs to be produced just for these people. Then of course there is the vast scope for exports, so I truly believe that as a manufacturing destination, India offers a larger potential that you already see.

Pete: I think the manufacturing process is going to change as there is an emergence of new methods of production, such as 3D additive printing. With these, generative designs can now be used to optimise the design of individual components to make them most efficient, most cost-effective, or have a higher strength-to-weight ratio.

Some may be concerned that with 3D printing taking off, there might be negative impacts on manufacturers who use conventional processes. I do not think so. I think the methods of production are just changing in the same way they have 10, 20, 50 or even 100 years ago. 3D printing is just the latest innovation, the latest change and that as one new method comes along, the resources get redeployed doing something else.

I think it would also be highly unlikely that 3D additive printing by itself is going to be the solution to every problem of making things. It has been well proven that milling and other subtractive approaches—the more traditional approaches—are the right processes now to manufacture certain things or products. 3D printing is also only in its infancy; there is still a long way to go.

For the future of manufacturing, I believe that we are going to see a move towards local-based manufacturing that is probably less labour-intensive, and things would be produced at the point of demand rather than being produced at high volumes at very low costs.

Since these new methods of production result in little waste and pollution, if production is closer to the source of demand, manufacturers would thus be able to benefit as production would have lower costs while allowing high degrees of sustainability.

As players in the industry, I think one of our roles is to educate the industry on what the potential of these new emerging technologies can do, and deliver them in a way that allows them to take advantage of it without creating a large amount of risk to their business. So it would always be about evolving a customer from a current work process to a newer, more efficient work process.