



# INSIGHT

No 4/09

## OBDUCAT 20 YEARS!

OBDUCAT CELEBRATES ITS ANNIVERSARY  
– BY LOOKING FORWARDS

## INTERVIEW WITH LARS TILLY

INSIGHT SITS DOWN WITH OBDUCAT'S NEW CEO

## NIL GOES TO RUSSIA

WITH TWO R&D ORDERS, RUSSIA OPENS UP A  
NEW MARKET FOR OBDUCAT

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## OBDUCAT ENTERS ITS THIRD DECADE WITHOUT SLOWING DOWN

Obducat InSight pondered the idea of making an anniversary issue, wholly devoted to looking back at passed achievements. Then again, Obducat has always been about the exact opposite – looking ahead. Therefore we celebrate by writing about two major and very recent events, both interesting promises of things to come.

Just in the last month, Obducat received two separate R&D orders from Russia. Both are from highly respected research facilities, one in Moscow and the other in Novosibirsk. The orders represent the opening of a completely new market for Obducat's NIL technology, a market that holds exceptional potential. The InSight article tells about when a delegation from Rusnano, the Russian investment company for nanotech development, visited Obducat's headquarters in early December.

Obducat InSight's second spread is devoted to an interview with Lars Tilly, Obducat's appointed CEO. He joins the company officially at the beginning of February, and comes most recently from a position as Head of Research at Ericsson. With him, he brings experience that is tailored for Obducat's purposes, as a company with an R&D history heading into an industrial future.

” THE OPENING OF A COMPLETELY NEW MARKET FOR OBDUCAT'S NIL TECHNOLOGY.

# RUSNANO ON A STRATEGIC VISIT

A delegation from the Russian investment company for nanotechnology development, RUSNANO, recently visited OBUDUCAT in Malmö – with the aim to close new strategic partnerships. The head of Rusnano, Anatolij Chubais, is a former high profiled politician. He showed sincere interest in Obducat's commercial success.



One of the most important moments in Obducat's history. That is how Rusnano's visit was described by Patrik Lundström, former CEO of Obducat, just minutes before he welcomed the Russian delegation at the Malmö premises end of November.

The importance was stressed by the fact that Rusnano's CEO, Anatolij Chubais, took time to come along on the trip to Sweden. He is a very well known personality in Russia and was previously the minister in charge of deregulation and privatisation. Sitting president Medvedev made him responsible for the nanotechnology sector in Russia and he also recently led a committee for the deregulation of the Russian power sector. It is hoped that the nano sector will bring a prosperous future to Russia who has been lacking behind in technology

development for many decades. A fast track is made possible through investment in existing companies willing to bring nanotechnology production into Russia.

"Our aim is to build a nanoindustry in Russia and we now look at projects that are able to develop through our investments", Chubais said during the visit at Obducat and stressed that Rusnano only is interested in long-term partnerships.

Rusnano has a budget of about 6 billion dollars the next coming years to spend on nanotechnology investments such as company shares or financing development projects. With one requirement: all Rusnano-financed projects have to be placed in Russia. The aim is to have built a nanotechnology industry with a turnover of 10 billion dollars by the year 2015.

## UNIQUE TECHNIQUE

Rusnano was invited to a two-day study tour in Sweden by the Royal Swedish Academy of Engineering Science. Obducat was one of the obvious choices on the list of companies that the Russian investment company was able to visit. Obducat has been in contact with Rusnano previously when recent deals in Russia were sealed. The Obducat products sold to research institutes in Moscow and Novosibirsk were financed by Rusnano.

Also Obducat board member and chief executive director of the Öresund University, Lars Montelius, met with Rusnano in October this year, giving a picture of the nanotechnology cluster evolving in the Öresund region. "Rusnano already knew about Obducat and realised before the visit that the company's technique is unique", he says.

Lars Montelius is also leading a large EU-financed inter-regional project called "Nano Connect Scandinavia" and points out that a closer cooperation with Russia could become very important to the development of nanotechnology companies such as Obducat.

"Russia wants to build production capacity in their country in order to get access to the latest technology and create job opportunities. They are prepared to share costs up to 49 percent, which is a big advantage for companies looking for new production sites. Labour cost is not a problem, since nanotechnology production is highly industrialised", Lars Montelius explains.

Nanotechnology is a priority for Russia, being convinced that it is the technique of the future for many different



types of products. In the short term, Russia wants to be able to use nanotechnology in order to become more energy efficient. Rusnano has already invested in companies working with for instance solar panels and LED.

"Rusnano indicated that Obducat technique could be useful for these companies", Lars Montelius points out.

## DETAILED QUESTIONS

Rusnano's programme in Sweden was intense. After a day in Stockholm, half of the delegation travelled to Gothenburg and the other half to Lund and Malmö. The nanometer consortium at Lund University, Ideon Science Park, The Lund University innovation process and the planned research centre ESS was in focus during the first part of the day, making clear that the Öresund region in the future could become a cluster for nanotechnology development. Lars Montelius followed Rusnano during the entire program.

"I was impressed how well prepared the delegation was. They knew a lot already and asked quite detailed technical and business questions. They were very open and we developed a lot of confidence in each other", Lars Montelius comments.

The delegation was welcomed by Obducat Chairman Henri Bergstrand and former CEO Patrik Lundström who gave an initial presentation of the company. Focus was on nanoimprint lithography's commercial potential, which was made even more obvious during a tour in Obducat's laboratory area where products could be demonstrated live. According to Lars Montelius, "Rusnano clearly realised that no one else besides Obducat has come this far with nanoimprint lithography". Anatolij Chubais himself stated that Swedish nanotech industry and research is highly interesting to Russian development plans. He was however also open about

problems investors might face in Russia, such as lack of democracy.

"When we started with deregulation and privatisation in Russia we had two goals. Firstly to transform the economy. Secondly to build a democracy. We achieved the first goal, but unfortunately not the other", he told the Swedish business paper Dagens Industri while visiting Obducat.

Even though the time schedule was tight, Rusnano took time to get to know Obducat thoroughly during the two-hour visit. A private conversation with Obducat management and board concluded the stay. "The visit went very well and may be of great importance for Obducat's future position in Russia", Lars Montelius concludes.

## THIS IS RUSNANO

RUSNANO was established in 2007 for the purpose of supporting the development of the Russian nanotechnology-based industry towards the global market, and the establishment of partnerships with leading nanotechnology centres in the world.

Source: IVA fact sheet, "Nanotechnology for growth"

**OBUDUCAT'S RECENT MARKET SUCCESS IN RUSSIA**

During autumn, Obducat received two orders from Russia. Both from highly respected research facilities in Novosibirsk and Moscow. In October Obducat also spoke and exhibited at ICME, the International Conference on Micro and Nanoelectronic, in Moscow.

Source: Articles Dagens Industri, 25 November 2009



# INTERVIEW WITH LARS TILLY, APPOINTED CEO OF OB DucAT

Lars Tilly has been appointed new CEO at Obducat, following Patrik Lundström's decision to leave his position. Lars Tilly holds a Ph.D in semiconductor physics and is currently Head of Research at Ericsson in Lund. With considerable experience from the semiconductor sector, as well as extensive experience from R&D processes from one of the leading technology companies in the world, Lars Tilly will be a valuable asset to Obducat. While waiting for Lars to officially take his new position on February 1, 2010, Obducat InSight took the opportunity to exchange a few words.

CONGRATULATIONS ON YOUR NEW JOB! HOW DOES IT FEEL?

It feels very good. I feel excited and honoured.

WHAT IS YOUR VIEW OF OB DucAT TODAY?

It is a company with a cutting edge technology resulting from long term cooperation with the world-class research in the Lund/Malmö region carried out in the field of nanotechnology and nanoimprint technology. Obducat is now in a very interesting phase with products mature enough to effectively compete on the market for nanoimprint production tooling. This is very well illustrated by the fact that Obducat is the only company in the field whose production tools have been part of customers volume production resulting in components found in commercially available consumer electronic products. The wide spread of applications and technology areas accessible by Obducats current and potential customers is a great strength for the company and assures a robust market platform.

IN YOUR OPINION, WHAT STRENGTHS WILL YOU BRING INTO THE COMPANY?

My experiences are from large technology driven companies like Ericsson, also focusing mainly on business-to-business sales like Obducat. In larger companies well-established procedures and ways of working is governing the operations, for good and for bad. I will bring with me a toolbox for, technology management, project management, product portfolio definition etc. that I will apply where appropriate, without sacrificing the flexibility in operation that is one of the strengths of Obducat.

YOU COME MOST RECENTLY FROM A POSITION AS HEAD OF RESEARCH AT ERICSSON IN LUND. WHAT DO YOU THINK WILL BE THE BIGGEST DIFFERENCES IN TERMS OF JOB DESCRIPTION?

I don't think the difference will be that big. The most significant differences will probably be the ability to act with flexibility and without lengthy decision paths and the possibility of overview and one team spirit of Obducat.

OB DucAT IS IN THE LAST STAGES OF COMPLETING AN EXTENSIVE TRANSITION FROM R&D-BASED BUSINESS TO BEING AN INDUSTRIAL SUPPLIER. HAS THIS INFLUENCED YOUR DECISION TO SAY YES TO THIS JOB OFFER?

Yes, of course, it's a great opportunity and a challenge. By taking advantage of Obducats market position it will be possible to grow the company at least as fast as the current market expansion in e.g. LED technology and data storage; an outlook difficult to resist.

THE COMPANY IS CURRENTLY CELEBRATING ITS TWENTIETH ANNIVERSARY. WHAT ARE YOUR PREDICTIONS FOR THE COMING TWENTY?

As the demand for smaller and smaller line width continues to increase for semiconductor processing and related businesses, the need for a disruptive technology shift in lithography for pattern generation will grow. Nanoimprint technology will provide one of the most obvious choices as a solution also for mainstream semiconductor processing. There are remaining substantial technology challenges to be solved in order to address the volume production of semiconductor components, here Obducats long history of research & development in the field is a great asset.

By building strength from the early adoption markets it will be possible for Obducat to address the huge lithography segment of the semiconductor processing tooling industry when the shift from optical lithography to nanoimprint technology takes place. According to the ITRS, (International Technology Roadmap for Semiconductors) this will occur around year 2014 when the market requirement for lithography line width goes below 22 nm. At that time Obducat will be one of the main players defining this transition. Since the lithography step is the common denominator in all semiconductor processing the market size in terms of volume and revenue is immense.

” WHEN THE MARKET REQUIREMENT FOR LITHOGRAPHY LINE WIDTH GOES BELOW 22 NM, OB DucAT WILL BE ONE OF THE MAIN PLAYERS DEFINING THIS TRANSITION.



# FROM FIRST CONTACT TO DELIVERY

Since the financial crisis' stranglehold on the market has softened somewhat, orders and customers are starting to find their way back to Obducat. The customer map is as diverse as ever. To give an inkling, some of Obducat's most recent orders will be shipped off to Japan, Poland, Taiwan and Russia. But the time it takes from initial contact to delivery is decided by many factors, and may seem lengthy to the layman's eye. Obducat InSight asked Fredric Håkansson, Obducat's Head of Marketing and Sales why that is.



## PLEASE EXPLAIN WHAT HAPPENS AFTER A POTENTIAL CUSTOMER HAS CONTACTED OB Ducat.

It is nearly impossible to generalise this process, but the sales cycle can be divided into four phases.

- Initial contact in order to understand the customer's inquiry and need for Obducat's Lithography solution.
- Proof of solution:
  - Obducat provides samples and basic equipment demo to prove its technology
  - The customer might have very specific requirements, which in some cases result in a joint-development project, including stamp manufacturing and process optimisation.
- Conclusion of system, process and material specification.
- Final offer, negotiation and PO (purchase order).

The sales cycle can be anything from a few to several months, depending on the complexity of the customer's request and

final application. Sometimes we're asked to do things that no one in the world has done before, which involves a lot of optimisation work prior to manufacture. But thanks to our patented technologies and skilled engineers, we keep providing our customers with products that enable success.

## THERE ARE SEVERAL ORDERS BEING PREPARED AT THE MOMENT. HOW COME INTEREST IS SURGING RIGHT NOW?

The interest has been huge throughout 2009, but now funds are being released again within the R&D environment. Obducat's strengthened its position providing excellent support for application and product optimisation.

## WHAT IN OB Ducat'S CALENDAR ARE YOU LOOKING MOST FORWARD TO IN 2010?

I'm certain that we'll have an exciting 2010 as a whole. The interest in Obducat's technologies and products is constantly increasing.

## SWEDEN

Head office  
Obducat AB (publ)  
Box 580 (Visitor's address:  
Geijersgatan 2 A)  
SE-201 25 Malmö  
Phone: +46 40 36 21 00  
Fax: +46 40 36 21 60

## U.K.

Obducat CamScan Ltd  
Pembroke Avenue,  
Waterbeach  
Cambridge CB5 9PY  
Phone: +44 1223 86 10 66  
Fax: +44 1223 86 10 77