

## French robotics make their mark

**An exhibition dedicated to robots at the Musée des Arts et Métiers and two awards for French manufacturers are both putting robotics – a relatively unknown sector in France – centre stage this month.**

Around the world, the emerging market for service robotics is showing exceptionally strong growth, in spite of the economic crisis. Turnover in Europe has reached \$5 billion, representing 33% of the world total. France has recorded a turnover of \$600 million, or 12% of the European market.

According to an estimate from the French Inter-ministerial Centre for Forecasting and Anticipating Economic Change (*Pôle interministériel de prospective et d'anticipation des mutations économiques* – PIPAME), which is responsible for analysing developments amongst the key economic players and sectors, the market for robotics in personal and professional services is set to double between 2010 and 2015. From 2015 onwards, the world market is expected to be worth \$8 billion for robotics for personal services and \$18 billion for professional services.



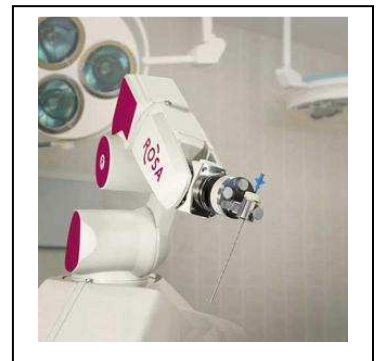
Two big names in France have each just been awarded an accolade for their innovative work. Bertin Nahum, head of the company Medtech, which amongst other things markets the surgical assistance robot Rosa (RObotized Stereotactic Assistant) was awarded 4th place in the rankings produced by the Canadian science magazine *Discovery Series*. And the designers of Nao, an autonomous, programmable humanoid robot developed by the French company Aldebaran Robotics, was the winner of one of the prizes awarded by the Hall of Fame of the University of Pittsburgh.

Although the United States and Japan lead the market, French expertise has also earned a place for itself. First, there is Medtech, a company based in Montpellier, founded 10 years ago and chaired by Bertin Nahum, a Frenchman originally from Benin. His company employs around 20 people and specialises in the design of surgical assistance robots.

Its boss has been passionate about medical robotics since he studied engineering at the French National Institute of Applied Sciences in Lyon. In the Canadian magazine's latest ranking, he came just below Steve Jobs (Apple) and Mark Zuckerberg (Facebook). Amongst other things, the accolade rewards the revolutionary aspect of both the man and his projects.

### Rosa's appeal for neurosurgeons

The Rosa robot has been the primary driver of the company's success. Following on from Brigit, which was designed for orthopaedic surgery, Rosa helps to perform operations with unparalleled precision. The high-tech device was designed to increase the safety of using surgical instruments in the field of neurosurgery.



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“With Rosa, neurosurgeons have a complete view of their patient’s brain in 3D, the area they need to work on and the path they need to take to get there,” according to Medtech’s boss. The company’s teams have worked directly with experts from the medical field to develop these cutting-edge technologies.

Around 15 French, European and American hospitals are already using the robot. And the Medtech team is working flat out to develop new applications for Rosa. In total, it aims to install around 30 robots over the next two years and to achieve a turnover of €4 million. Since October 2011, its teams have been working on a new project aimed at spinal surgery.



The group recently received an injection of capital from the investment fund Newfund. The aim was twofold: firstly, to continue Medtech’s commercial development and secondly, to accelerate the creation of a distribution network, particularly in the North American market.

### **2,600 Nao robots in 45 countries**

Another robot developed in France has established itself in the robotics market. Nao, from the company Aldebaran Robotics, has just received the prize for best robot of the year for education, awarded by the University of Pittsburgh. Its originality lies in its ability to recognise faces, read a newspaper and register a response. The group hopes it will make an ideal companion for patients suffering from Alzheimer’s or for children in hospital.

The French company has sold Nao robots to 45 countries. A total of 2,600 have been produced since 2008. “An unparalleled number for a humanoid,” according to Petra Koudelkova Delimoges, who is responsible for partnerships and institutional relations. 85% of sales are exports. Nao has proved particularly popular in foreign universities: Aldebaran Robotics has sold over 200 of them to laboratories in Harvard and Stanford in the United States and to several Chinese and French universities. The little humanoid has even won over the Japanese, who are renowned for their own excellence in this field.

The group is also banking on Roméo, a robot companion aimed at both elderly people and children. With a budget of €10 million, it should be capable, amongst other things, of opening doors and finding keys. After three years of research and development, an initial prototype has just been presented.

Almost 100 French companies specialise in designing and manufacturing service robots. The French authorities are planning to create a specific fund to support their development, involving professionals in the sector, and to develop synergies between key players in the research field and in industry.



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