

Norwegian Centres of Expertise



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NCE Systems Engineering

The Kongsberg cluster currently comprises over 110 knowledge based companies, several of which are world leaders in the demanding industries like subsea, maritime, automotive, aircraft, defence or aerospace industries. Many of the core companies grew out of civilian divisions of Kongsberg Våpenfabrikk (a weapon factory), which was restructured in 1987.

The Kongsberg cluster has generated new industry and value creation using brainpower, expertise and collaborative solutions. The cluster leads Norway in industrialising major technological innovations and has achieved a key position in global markets. Nevertheless, there is no guarantee that such growth will continue on its own in Kongsberg.

Background

During the past 20 years, the companies in the Kongsberg cluster have doubled their number of employees from around 4,500 to over 9,000, of whom approximately 5,000 work in the Kongsberg region. In the same time period, turnover has increased sevenfold, totalling approximately NOK 17 billion in 2005, of which exports comprise more than 60 % (2005 figures). The companies develop competitive products and industrial solutions in extremely demanding applications. R&D investment in Kongsberg totals approximately NOK 1.3 billion, or 10 % of all R&D investment in Norwegian industry.

The cluster has industrialised a range of technologies developed by the Norwegian University of Science and Technology (NTNU), the SINTEF Research Group, the Norwegian Defence Research Establishment (FFI) and other R&D institutions. Cluster companies include the Kongsberg Group, Kongsberg Automotive, FMC Technologies, Volvo Aero Norge, Dresser Rand, Esko Graphics, Kongsberg Devotek, Kongsberg Airport Systems and Argos Control. The companies have both national and international ownership, and are represented in more than 30 countries. Their international commercial networks will be utilised to internationalise new companies.

NCE Systems Engineering enjoys the endorsement of regional public innovation agencies, Buskerud County, the Kongsberg



region (which covers seven municipalities in Telemark and Buskerud counties in southeastern Norway), the municipalities, Buskerud University College in Kongsberg and the knowledge based companies that collaborate via the Kongsberg Chamber of Commerce and Kongsberg Innovation. These parties are all dedicated to enhancing the cluster's arenas for cooperation and strengthening the cluster's overall competitiveness. Representatives from industry, Buskerud University College and Kongsberg municipality have been given a seat on the NCE Systems Engineering board.

NCE IS A COOPERATIVE EFFORT BETWEEN:



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Measures and projects

Projects at NCE Systems Engineering are grouped around five main areas of activity:

Creating a foundation for industrial development

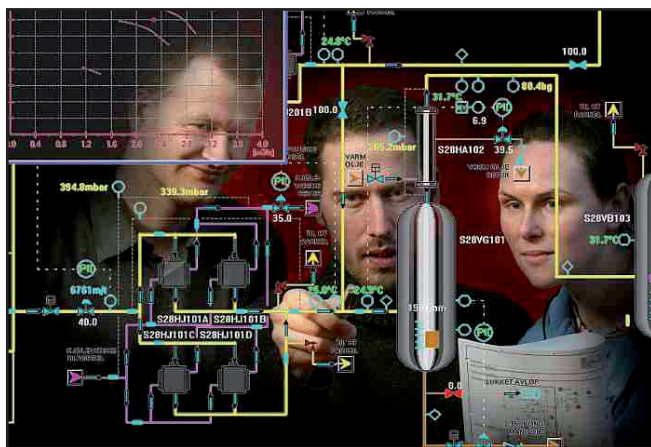
NCE Systems Engineering will study the growth dynamics of the cluster as a model for industrial development in Norway. By using a strategy and scenario process, businesses, academic institutions and the authorities can obtain a shared understanding and set common objectives regarding the appeal of the cluster and prerequisites for growth. Knowledge about how Norwegian expertise can successfully compete in the global arena will be shared and operationalised through development strategies for new and existing growth companies, and will be disseminated to other industrial and educational environments.

Knowledge development – Master's degree in Systems Engineering

A master's degree programme will be established at Buskerud University College in cooperation with a leading US university and the Norwegian industrial sector. This will be the first such programme in the Nordic countries. The programme will utilise, develop and disseminate the cluster's knowledge base over time. It will integrate knowledge about development-oriented cooperation between disciplines, companies, value chains and challenging customers. This knowledge will be used to develop new growth companies, as well as to create a primary marketing message targeting researchers, investors and knowledge workers. The objective is for the Kongsberg cluster, through the NCE initiative, to systematise learning and knowledge development in order to lay the foundation for continued growth within the cluster and the future establishment of new industry in Norway.

Collaborative projects

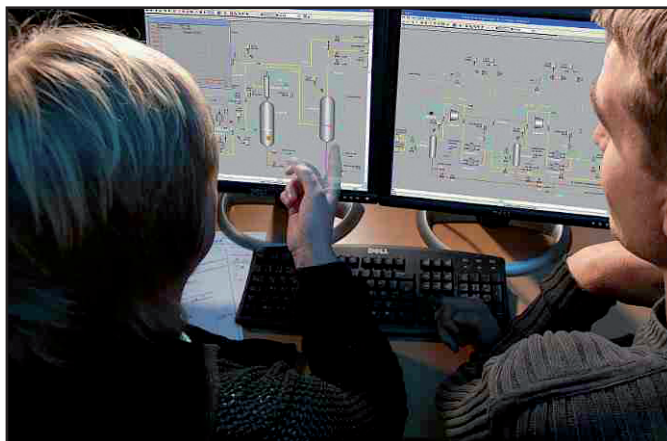
NCE Systems Engineering will promote increased cooperation between actors within the cluster and between the cluster and leading international R&D and knowledge environments.



Collaborative projects encompass technology development, R&D, knowledge development and exchange, supplier development, supplier cooperation, industrialisation and internationalisation.

New business development

NCE Systems Engineering will actively work to identify new areas of focus and potential business ideas, which it will help to develop. In the long-term, these efforts will give rise to new industrial locomotives that will initiate further development in the region.



Enhancing marketability

NCE Systems Engineering will work actively to enhance the ability of the cluster to attract investors and knowledge workers to and retain them in Kongsberg. Efforts include a wide-scale mobilisation of private and public sector service providers and increased focus on increased service level. The aim is to offer a complete range of services as well as to increase access to non-industrial jobs, i.e. jobs for the spouses and partners of those seeking employment in cluster companies. These activities will also market the cluster's competitive advantages in terms of technology, culture and natural surroundings, and will reinforce the branding process.

Strategy and objective

NCE Systems Engineering will help to secure a competitive growth framework for knowledge industry in the region. Its objectives are to establish one or two new industrial locomotives and an assortment of new growth companies, and to double the cluster's industrial turnover over the next ten years. The cluster's common objectives are to strengthen Norwegian technology companies that are not based on raw materials and to further develop the Kongsberg region's position as the country's most sought-after site for the international knowledge industry.

Photos: Tor Aas Haug, Mediafoto

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