

DSPE AND LIS JOIN FORCES

DSPE supports the nationwide expansion of the Leidse instrumentmakers School (LiS) to strengthen the pipeline of precision manufacturing professionals in the Netherlands. By connecting LiS's long-standing craftsmanship standards with DSPE's professional community of engineers, scientists, companies and technical specialists, the two organisations aim to reinforce a skills base essential to the Dutch high-tech industry. The LiS expansion is supported by funding from the national Beethoven programme.

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The Netherlands wants to remain at the forefront of technological innovation. That requires research, knowledge, capital and advanced equipment, but ultimately also people who can turn an idea into something that actually works. Instrument makers, precision technicians, CNC specialists, assembly experts and practical problem-solvers form the connection between design and reality.

For the Dutch precision-engineering community, developing these professionals is therefore not merely an educational challenge. It is an ecosystem challenge. Maintaining a leading position in fields such as semiconductor technology, medical technology, photonics, aerospace and scientific instrumentation depends on the ability to keep manufacturing knowledge and practical craftsmanship close to research, engineering and product development.

Craftsmanship as part of the innovation ecosystem

This is precisely where DSPE and LiS meet. DSPE has been bringing together the Dutch precision-engineering community since 1954. Its members range from scientists and engineers to craftsmen, working in organisations ranging from universities and multinationals to specialist SMEs and workshops. Through its events, education programmes, professional networks and the *Mikroniek* magazine, DSPE stimulates the exchange of knowledge across disciplines and organisations.

LiS (Figure 1) focuses on another essential part of that same ecosystem: the professionals who understand materials, tolerances, machining, measurement, assembly and manufacturability, and who are able to solve technical problems at the workbench. The school for secondary vocational education, located in Leiden (NL), has trained instrument makers since 1901. Its national expansion aims to make that expertise and quality standard available to a much larger group of students and professionals. LiS intends to do this in close cooperation with industry and regional vocational schools in high-tech regions throughout the Netherlands.

“The strength of the Dutch high-tech industry has never been based on engineering knowledge alone. It comes from the interaction between people who research and design, people who manufacture, people who measure and people who understand how to make a concept work in practice. If we want to preserve that strength, precision craftsmanship needs to be treated as a strategic capability of our ecosystem. The LiS initiative is therefore important for the entire precision-engineering community,” says Hans Krikhaar, president of DSPE (Figure 2).

Manufacturing excellence and talent

DSPE argues that Europe's manufacturing capabilities and competencies need to remain close to its innovation base, particularly at a time when geopolitical tensions and

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Leidse instrumentmakers School. (Photos courtesy of LiS and Hielco Kuipers)

disruptions in international supply chains have exposed the vulnerabilities created by moving manufacturing capacity abroad. LiS's nationwide expansion is part of the response: increasing the number of precision manufacturing specialists while safeguarding the craftsmanship standards for which the school is known.

That relationship between engineering excellence and manufacturing excellence is central to DSPE. An advanced system can only perform as designed when its components can be manufactured, measured, assembled and improved to the required level of precision. For that reason, developing craftsmanship cannot begin only when a vacancy appears. It requires a continuous chain connecting young people, vocational education, experienced professionals, companies, engineering organisations and knowledge institutions.

Shared standard for precision craftsmanship

As LiS expands nationally in close collaboration with other educational institutes, maintaining quality is just as important as increasing capacity. The ambition is not simply to train more people, but to ensure that the core principles of precision craftsmanship remain recognisable across regions, companies and schooling.

The relationship between DSPE and LiS has a longer history. DSPE has for years included the LiS Academy Summer School on the manufacturability of metal precision components within its professional-development ecosystem, while DSPE itself operates educational pathways and certification programmes for precision professionals.

This creates the opportunity to connect vocational craftsmanship and the continuing development of engineers and other technical professionals more closely. The same manufacturing knowledge that helps a student become a skilled instrument maker can help an engineer understand what can actually be produced. Conversely, developments in engineering and industry can feed back into the skills that future precision professionals need to acquire.

"The nationwide expansion can only succeed if education and industry treat precision craftsmanship as a shared responsibility," says Stef Vink, director of LiS (Figure 3). "DSPE represents precisely the community in which design, engineering, manufacturing and metrology come together. By connecting that network with the LiS standard, we can make sure that we do not merely train more people, but develop the craftsmanship that future technology actually requires."

National network around precision engineering

LiS is building a national network in which vocational schools, technical companies and regional high-tech ecosystems jointly invest in precision craftsmanship. The school aims to expand its expertise beyond Leiden and substantially increase the

national capacity for training precision professionals. This is supported by the Beethoven programme, which is aimed at strengthening the position of the Dutch semiconductor industry and ASML in particular.

Industry partners have a crucial role in that model. They provide real-life technical challenges, modern production environments and direct insight into rapidly changing technologies and skills requirements. Regional vocational schools make the expertise accessible to talent throughout the Netherlands. LiS contributes its specialist educational knowledge and craftsmanship standard.

DSPE adds another layer: the national professional community that connects disciplines, generations and organisations. DSPE explicitly describes knowledge sharing and professional contact as core elements of its mission, while its conferences and networks are designed to accelerate learning across company and disciplinary boundaries.

The need for such connections is increasing. As machines become more sophisticated and tolerances become tighter, the distance between engineering and manufacturing should become smaller rather than larger. Engineers need a deeper understanding of manufacturability, while manufacturing specialists increasingly work with advanced digital tools, measurement systems, automation and complex materials. A strong precision-engineering ecosystem therefore needs both.

The joint ambition is clear: to interest more people in precision engineering, develop them according to a high professional standard and create sustainable career pathways throughout the Dutch high-tech manufacturing industry. By supporting the national expansion of LiS, DSPE is investing not only in education, but in the knowledge, craftsmanship and manufacturing capability on which the Netherlands' future technological position depends.



DSPE president Hans Krikhaar: "The LiS initiative is important for the entire precision-engineering community." (Photo courtesy of Fontys)



LiS director Stef Vink: "By connecting the DSPE network with the LiS standard, we can develop the craftsmanship that future technology actually requires." (Photo courtesy of Pieter Sterrenburg)