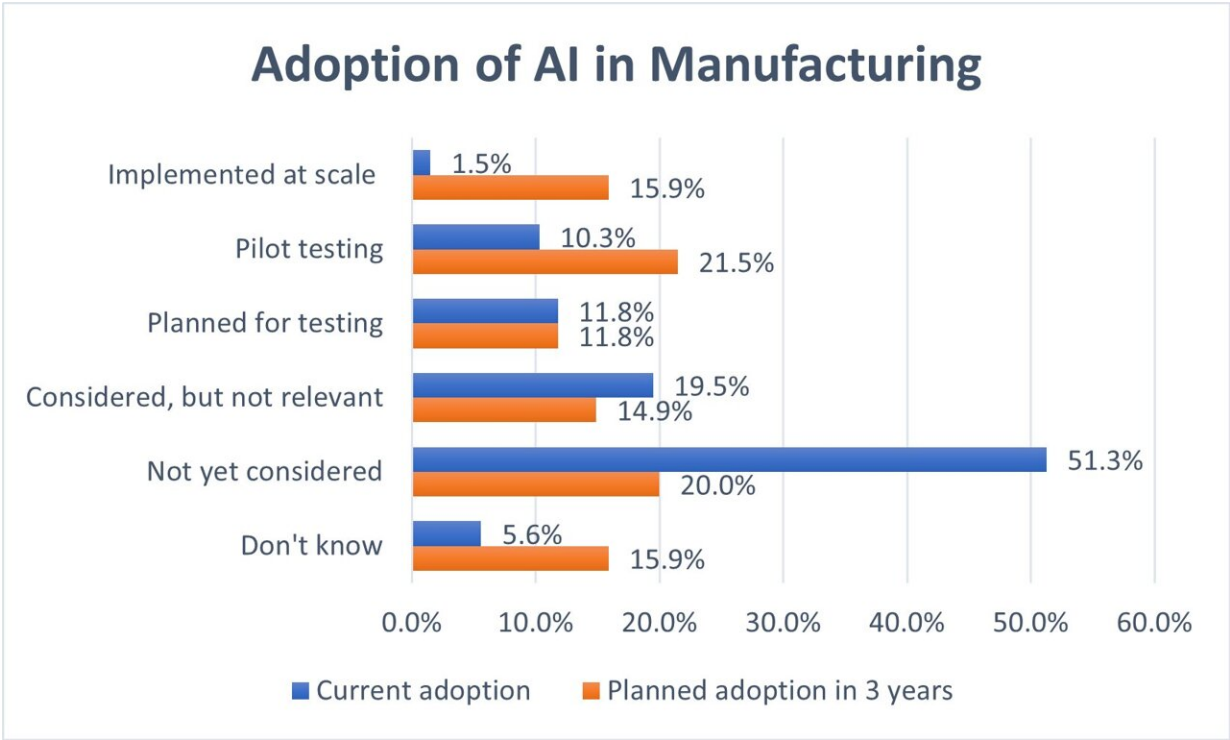


AI reality lags the hype in Swiss tech industries

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Adaption of AI in Manufacturing. Credit: ETH Zurich

Artificial Intelligence (AI) has found its way into everyday operations in various industries. The pharmaceutical industry uses AI to discover new drugs, the consumer goods industry uses it for quality control, and in the office sector generative AI co-pilots are redefining many work processes. But how widely do Swiss tech companies use AI and in which

areas is it being deployed?

AI is important, but so far adoption has been slow

"Overall, the adoption of AI in the Swiss tech industries is not advanced," says Torbjørn Netland, Professor of Production and Operations Management at ETH Zurich. Netland draws this conclusion from a [survey](#) conducted by his Chair in collaboration with Swissmem and Next Industries, in which more than 200 Swiss tech companies took part. The survey sends a mixed message: AI is important, but so far its adoption has been slow, in fact hardly implemented beyond initial pilot tests.

In terms of manufacturing-related applications, half of the companies responded that they have not yet considered the use of AI, and a further fifth has considered the use of AI but found it not relevant enough to pursue it further. 10% are currently conducting pilot tests and another 12% are planning tests. Only few companies have indicated scaled use of AI in manufacturing.

Ambitious plans for the near future

"If you take a closer look at the responding companies, you realize that it is particularly the small and financially constrained companies that have not yet addressed the issue," says Netland. This finding is underpinned by the responses to the question of how companies expect AI to be implemented in manufacturing in three years' time. While many companies have ambitious plans overall—16% expect to implement AI at scale and another 22% to conduct pilot tests—the less profitable ones show less ambition.

The picture looks brighter in other areas of application. In R&D (research and development) the share of companies that are already

in the phase of pilot testing is twice as large as for manufacturing, at 22%. About one-third of the companies plan to adopt AI applications at scale in R&D over the next three years. The figures for sales and marketing are similar, as are those for customer service and tech support.

"Reasons for the broader adoption in office functions may be more readily available data compared to manufacturing and the potential for utilizing generative AI like ChatGPT or Microsoft Copilot," explains Netland.

Sobering results considering the AI hype

The [results of the survey](#) contrast other reports that suggest a much higher implementation of AI in the tech industry. "These reports are often written by organizations with vested interests in showing AI implementation, such as consulting companies, IT companies, or AI vendors," says Netland.

He suggests many other studies have serious sample bias issues. For example, when consulting firms survey their clients or when AI conferences interview participants. He firmly believes that the ETH survey better reflects the actual situation: reality is lagging the hype.

Nevertheless, Netland believes the Swiss tech industry is keeping pace with international competitors. "If we repeated our survey with a representative European sample, the results would likely be aligned with ours, probably show even less experimentation and implementation," Netland says.

The Swiss tech industry is known as a frontrunner in technology and manufacturing. It is also known for its innovation capabilities,

excellent education system, and relatively [good access](#) to AI talent. Although, the lack of access to AI-related competences is currently seen as the most important barrier for advancing AI usage in Switzerland's tech industry.

Two-thirds of the companies answer that they have either "not at all" or only "to a limited extent" access to in-house AI skills or AI talent at universities. "To deliver on this potential without falling behind other countries, the skill and training gap in Switzerland concerning AI needs to be closed," says Netland.

At the same time, he is convinced that other nations are not ahead. Dr. Oliver von Dzengelevski, who coordinated the survey project, adds that if industry and academia manage to collaborate effectively in closing the skills gap, know-how in the use of AI in manufacturing could in the future turn from an obstacle into a locational advantage for Swiss manufacturers.

Efficiency improvement most important driver

There is another reason why the two believe that Swiss companies are on par internationally. Swiss manufacturers are pragmatic and smart; they don't jump on the bandwagon just to be part of the hype.

In the survey only a fifth of companies indicated that their AI adoption is driven to a large or very large extent by current trends in the industry. Efficiency improvement emerged as the most important driver. Furthermore, his statement is backed by the fact that most of those who implement and use AI report to be satisfied with the results.

In his experience, he stresses the productivity improvement that AI

can bring to organizations in Switzerland and abroad. "There is no doubt that it can be a game changer." Yet, to this day, most companies are not yet AI-ready. For example, they lack the data governance or IT infrastructure needed to release the potential of AI.

"The good news for them is that their competitors aren't ready either," Netland says. "The question is, for how long?"

Recommendation: create a coherent AI strategy

What do the experts advise companies that want to implement AI to do? "In view of the low adoption rates, and the barriers to and challenges of AI adoption, managers should consider formulating a coherent AI strategy for their [company](#)—aligned with their goals for digital transformation," the report outlines. This is significant in that only one in four companies stated in the survey that they had an AI strategy in place.

The experts also advise companies to invest in in-house AI talent. Furthermore, they suggest that companies keep a realistic view of AI adoption and what it can bring. "Start with asking the question, 'what problem are we trying to solve?'," advises Netland.

Finally, what pitfalls should companies avoid at all costs?

"Overreliance and AI distrust," Netland says. According to Netland, overreliance means implementing AI and letting it run the show. This would not only risk reducing workers' knowledge, but also harbors the risk of succumbing to AI "hallucinations" and errors.

Distrust of AI, on the other hand, stifles attempts to explore AI and leaves its full potential on the table. "As for most things in life

there is a golden middle way, and Swiss companies are often good at finding it," says Netland.

More information: The state of AI in the Swiss tech industry: Results from a survey by ETH Zurich in cooperation with Swissmem and Next Industries, *ETH Zurich* (2024). [DOI: 10.3929/ethz-b-000678173](https://doi.org/10.3929/ethz-b-000678173)

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