

SWEDEN

Lagom: All in moderation

Lagom is a Swedish concept that roughly translates to "just the right amount" or "balance." It reflects a cultural emphasis on moderation and avoiding extremes in all aspects of life.

Perhaps, Sweden's testing and quality engineering (QE) landscape is the perfect reflection of this philosophy.

Ikea, Volvo, Spotify, Skype, H&M - this seemingly quiet country has shaped several iconic brands and championed revolutionary technologies. However, over the last few years, it had to weather its share of COVID-19-related challenges like most other regions.

What was noteworthy though, is how the onset of the pandemic drove transformative tech initiatives in Quality Engineering and Testing (QE&T) and QE across industries in this Nordic nation.

Trends driving Quality Engineering and Testing

The general mood in Sweden regarding quality engineering and testing is traditional but evolving.

In the past year, there was a lot of focus on eliminating legacy systems and modernizing existing ERP (Enterprise Resource Planning) platforms. We see this trend continuing. Quality engineering and testing have come to be integral, ensuring the reliability and functionality of these new digital solutions.

The change is especially notable in the manufacturing and defense sectors this year. Sweden is renowned for its strong presence in the manufacturing sector. Testing methodologies are being actively integrated within manufacturing processes to reduce time-to-market and deliver high-quality end products.

Around this period, we saw a fierce campaign to invest more in the defense sector following the Russia-Ukraine war/ escalating global tensions. This has added to the weightage given to quality engineering and testing, not only in traditional defense materials but also in various government agencies that support national defense efforts.

Supplementary factors such as rising interest rates, inflation, and increasing labor costs have also contributed to an increased focus on testing efforts. These economic pressures have forced organizations to optimize processes, including quality engineering and testing, to maintain cost efficiency.

While time-to-market, cost optimization, and quality control (in that order) are the drivers to create robust testing ecosystems, we see more organizations moving towards Agile and DevOps practices to improve efficiency parallelly. This includes automating testing processes to streamline workflows and ensure faster releases.

But while automation in testing is a priority in other regions, Sweden appears to lag in this area. There could be a few reasons behind this. One possible reason is a decentralized testing landscape where smaller supporting teams handle specific aspects of testing, including tools, methods, and licenses rather than having one centralized team.

As a result of this, testing is owned and conducted by individual business units. While initiatives to automate testing exist, they might often depend on the presence of strong/influential individuals within teams who can champion automation efforts. This dependence, however, could prevent seamless integrations of end-to-end automation.

Another reason could be the mixed use of open-source and commercial tools. It might seem that commercial tools can help integrate better testing infrastructures, but the latter often requires additional support to maximize organizational efficiency.

Increased security regulations and a high dependency on production data instead of data masking or synthetic data – especially in critical sectors like energy and government — could also be contributing reasons.

Having said that, we are witnessing market leaders like Ericsson and Volvo pioneering disruptive trends like 'Figital Integrations.' Integrated technologies such as 5G and connected vehicles are on the rise. The scope of testing in this ecosystem is evolving, with a growing recognition of the complexities of testing systems that combine software and hardware, as well as end-to-end flows.

Looking ahead, there is anticipation of more transformation projects entering the ERP space in the coming years, necessitating readiness in terms of solutions and skills.

We also see sustainability and green engineering as a significant area of opportunity that needs to be further explored for QE & T.

Sweden is poised to welcome many changes, but for now, seeking 'lagom' and going slow and steady seems to be the way to go.

What about new tech?

Artificial Intelligence (AI) and Machine Learning (ML) – two terms that have been the latest buzzwords in the tech landscape also seem to have received cautious responses in Sweden.

Very few clients seem to have explored AI in the testing space, and we predict organizations will take a few more years to warm up to these concepts.

We also see organizations grappling with the adoption of emerging technologies such as blockchain, 3D printing, and quantum computing. The historical tendency to embrace recent technologies swiftly has faced challenges due to security regulations and global conflicts. Consequently, companies have become more cautious about utilizing concepts like cloud and the metaverse.

Survey Watch	
79%	Respondents said they are using AI to achieve higher productivity in their organizations
74%	Organizations are using automation for risk reduction
52%	Respondents said 'lack of tools' holds back teams when it comes to automation



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