

Integrated management of quality, digitalization and innovation

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Today there is a strong focus on digitalization and innovation. Companies all around the world are investing a lot of money and time in IT. It is often claimed that a high level of digitalization is very important to stay successful in the future. New technology and IT-applications is believed to create innovation and new ways to work smarter. Automatization, robotization and artificial intelligence (AI) is according to many researchers going to do more and more of the work human beings are doing today. Digitalization is a way to develop a business towards higher value creation and efficiency. Quality management is another way. An important question is what the links are between digitalization, innovation and quality management.

This presentation will focus on this question and has the purpose to give better understanding for how quality, innovation and digitalization could work together and improve customer satisfaction and business results. A number of examples of successful digitalization and innovation with focus on quality, customer value and effectiveness will also be given.

Successful digitalization starts with understanding of the customer. When the needs and expectations of the customers are known it is possible to develop IT-solutions that creates customer value and support the organization in meeting those. Understanding customer needs and expectation is about deliver quality. An area there a lot of knowledge, methodology and tools exist that could be used to develop customer focused and successful digitalization.

Digitalization, IT-development and use of new technology have the purpose to improve the business. Business development and management of continuous improvement needs a systematic and fact based working methodology. The PDCA and the DMAIC models are two well-known examples of this. Problem solving and root cause analysis is needed to secure good solutions and results. Not using this knowledge in digitalization will create a big risk for less successful IT-projects and –investments.

Digitalization and use of new technology will in itself affect quality. New opportunities will appear to develop work, processes and products in a better way. Internet of things and AI creates new future opportunities to learn, control and build in quality in products. Digitalization and IT must be a knowledge area that is part of quality development. Another effect on quality from digitalization through intensive use of internet and social media is that customers get much more and better information about quality of products delivered. This has the effect that the demands become higher, the competition situation tougher and costs for bad quality higher. This makes the needs of failure free processes and good quality high in a digitalized world.

Increased vulnerability, sensitivity and new risks could be effects of new technology. IT solutions have to be upgradeable, maintainable and possible to continuously improve and develop. Agility is of big importance and will probably be more and more difficult to keep as customer demands, technology development and global competition change faster and faster. The scope of IT investments rapidly increases something that creates risks for companies being locked in wrong technology in the future. To avoid such problems good understanding for customer needs and their future development becomes very critical

Innovation and creativity is central in future success. Innovation could be created in different ways. Innovation is partly based on break through thinking, creativity and out of the box thinking. To manage innovation creation of a creative environment is important. But innovation has also a lot to do with problem solving, process development and continuous improvement. To be successful in the future knowledge from those different areas has to be melted together. Critical to success in managing digitalization, innovation and quality is also a strong focus on the human side of improvement. Knowledge in management of change, psychology and behavior science is then needed.