

Barriers to digitalization, report summary

Executive summary of KPMG report to the Norwegian
Ministry of Local Government and Modernisation

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On the assignment from the Ministry of Local Government and Modernisation, KPMG has undertaken a mapping and analysis of barriers for digitalization among Norwegian companies

- The analysis is focused on the barriers for digitalization in the private sector, including what the barriers are, their importance, and which types of companies experience the most difficulties
- The analysis is based on a survey among Norwegian businesses, inputs from industry organizations and existing KPMG knowledge and experience

The companies in the survey believe they are quite digitalized, but see significant opportunities in increased digitalization

- Almost half of the companies rank themselves with a high or very high degree of digitalization
 - Mid-sized companies, as well as companies within sectors like media, communication & ICT, state the highest degree of digitalization, while companies in building & construction rank themselves as the least digitalized
- The companies strongly believe that an increased degree of digitalization will result in increased profitability, driven mainly by reducing costs, but also through growing revenue

The survey results show that certain areas are more challenging than others, but the different barriers affect, and depend on, each other

- Barriers for digitalization can be linked to a number of areas, including employee and company level issues, the industries the companies operate in, and the surrounding national or international environment
- Barriers at different levels and areas affect and intensify other barriers
 - These interdependencies call for a holistic approach in the work of reducing barriers for digitalization

Standardization issues is perceived as the most important barrier for digitalization

- The respondents rank lack of standardization issues as the most important barrier, including both the lack of standards, and the use of too many different standards
 - Lack of standardization brings on challenges related to interaction (interoperability), both through technical connections, definitions as the basis for exchanging information (semantics) and functional interaction
 - The standardization challenges increase with systems and process complexity. There are clear correlations between high ranking of business process complexity and high ranking of standardization as a barrier
- The respondents emphasize that difficulties in integration and communication between systems leads to increased costs and additional work when implementing digital solutions

Lack of competence is a barrier that touches upon all parts of the companies' digitalization work

- One out of three companies experience lack of competence as an important barrier
- Lack of competence can be linked to all elements in digitalization, from the identification of opportunities to the procurement and implementation of, as well as running and using, the digital solutions
 - Lack of competence may lead to digitalization not being carried out, lack of focus on business needs in the choice of solutions, and lack of realization of benefits from digitalization

Digitalization is not prioritized high enough by employees or by management

- Employees that do not prioritize spending time and resources on digital solutions is perceived as the most important internal barrier for digitalization
- The respondents also believe that focus on IT in the companies' management processes is too low
 - Strong parallels can be drawn between employees' lack of prioritization and the focus and prioritization within management

In general there are few laws and regulations that hinder digitalization

- Laws and regulations are not ranked amongst the most important barriers to digitalization, however some laws are perceived as barriers
 - Our analysis supports this, showing that a few legal barriers do exist

Several areas related to technology are perceived as important barriers for digitalization

- Technology as an overall area is perceived as a less important barrier, with few of the respondents believing their own technical infrastructure is a barrier
- However, several areas related to technology are considered as key
 - Difficulties in establishing digital interactions between parties, due to standardization and collaboration challenges, as well as systems suppliers that develop closed systems, stand out as central challenges
 - This is supported by the identified issues related to standardization, and the companies experience that all types of interactions are more challenging externally than internally

Financial barriers are viewed as less important – but financial matters do affect the companies' degree of investment in digital solutions

- The majority of respondents rank the lack of ability to finance digitalization projects with low relevance
- However, we have received feedback that uncertainties regarding the calculation and extraction of profits from digitalization projects results in many projects not being undertaken
- Furthermore, network effects from digitalization that do not necessarily fall to the individual companies may lead to underinvestment in digital solutions

Companies experience the public sector itself as an important barrier for digitalization

- The respondents believe that the barriers related to the public sector are significantly larger than barriers related to customers, suppliers and employees
- The barriers are tied to varying degrees of digitalization in public entities and political indecisiveness, in addition to general frustration related to extensive reporting and bureaucracy
 - Political indecisiveness relates to specific cases where the decision making on important issues is perceived to have taken to long (related to smart meter deployment, access to public map data, and digital property registration)
- A possible explanation of the frustration towards the public sector relates to the private sector experiencing that digitalization is imposed on them on conditions that are not necessarily suitable

The perceived significance of various barriers vary between company characteristics – some based on industry and some based on size

- The larger companies consistently experience more and larger barriers for digitalization than smaller companies, except for financial issues
- Companies with 50 to 249 employees experience lack of capital as a more important barrier than others, and companies with less than 20 employees experience that costs of digitalization exceed the benefits to a larger degree than other companies
- The industry categories agriculture, forestry & aquaculture as well as building & construction are the least digitalized and experience the largest challenges within culture and competence
- Companies within financial services experience more regulatory barriers than companies in other industries, and find standardization towards suppliers a more important barrier

KPMG suggests five measures that should be undertaken in order to facilitate a larger degree of digitalization

- Strengthening the work with standardization, focusing on improving interoperability and exchanging information
- Targeted measures to increase digital competence
- Adjust legal frameworks that obstruct digitalization
- Financial support schemes and incentives to induce investments in digital solutions
- Continued efforts to make public data easily available