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**Eye-opener of system performance with help of Wide-Area-Measurements &
controls**

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For a decade Landsnet has been developing and implementing Wide-Area-Monitoring applications into the control room. Those applications have raised awareness and address many stability and control issues present in the low inertia power system of Iceland, and has become essential tools to help operators counteract such dynamic issues. The knowledge of the dynamic performance of the grid in terms of oscillations, frequency behaviour, islanding and disturbance analysis has greatly enhanced through the use of synchrophasor technology. For the last 5 years Landsnet has also exploitate Wide-Area-Measurements in Smart Grid developement. Intelligent controls using synchrophasor data across the network have been developed to improve stability and security of the Icelandic grid. Lately Landsnet has been part of EU Horizon 2020 MIGRATE project, were Landsnet and GE developed and implemented a new generalized fast frequency response approach. The approach has proven to be very successful, providing reliable locational based controlled responses for improved system stability, even in complex disturbance situations.