Our future view of ships is very simple. They will be electric, digital, and connected,” he stated. “First we must electrify the power train. Then we establish collaborative operations. This will enable the implementation of digital operations. But we are talking about evolution, not revolution,” Lepistö predicted. “Shipping will not change overnight.”

The first step on the way to intelligent shipping, Lepistö emphasised, is electrification. “An electric ship is an intelligent ship. The electric ship is more efficient, simpler, more flexible, more digital and better connected. Electric ships are the natural platform for more intelligent, digital and automated shipping.”

Lepistö added that automation systems on electric ships are 50 per cent smaller than on mechanical ships, measured in number of inputs and outputs. “But even though automation systems are 50 per cent smaller, that does not mean that capabilities are 50 per cent less. Quite the opposite.”

He also noted that a fully electric power train is already a viable choice on smaller ferries and coastal ships, and that these are the most likely to become the first fully automated vessels.

A new reality on shore
Keeping pace with the rapidly evolving digital reality means that ABB needs to be able to accelerate their own pace of development, and still keep their customers up to speed. The answer lies in a new generation of interconnected simulators.

“With the proper simulation tools,” Lepistö told the group, “instead of physical testing that would take hundreds of hours and thousands of dollars, we can quickly and easily change between motors, engine rooms, bridges.”

By removing non-intelligent components like tanks, piping, and valves, smart functionality can become the focal point. “Functionality of electric ships is created and updated with software, not with mechanically connected parts. This removes many obstacles to automation.”

He also noted that a fully electric power train is already a viable choice on smaller ferries and coastal ships, and that these are the most likely to become the first fully automated vessels. A new reality on shore

Keeping pace with the rapidly evolving digital reality means that ABB needs to be able to accelerate their own pace of development, and still keep their customers up to speed. The answer lies in a new generation of interconnected simulators.

This facility will help us maintain a leading role in maritime digitalisation.

“With the proper simulation tools,” Lepistö told the group, “instead of physical testing that would take hundreds of hours and thousands of dollars, we can quickly and easily change between motors, engine rooms, bridges. Instead of on site training we can gain an understanding of connected solutions in the virtual space. This opens up for collaborative design of spaces and equipment, together with our clients.”

“Today we are launching our newest simulator facility and collaboration centre. This facility will help us maintain a leading role in maritime digitalisation,” Lepistö declared, inviting the journalists to join him and his colleagues on a virtual tour of the new centre’s capabilities.

The group witnessed a series of demonstrations simulating everything from ship design and building to maintenance, operational assistance, and remote operations. In all the scenarios, fast and efficient concept development, real time remote collaboration, and remote access to expertise were prominent features.

“The new centre makes it possible to uncover real possibilities using the virtual experience,” Lepistö concluded. “Only a holistic approach that allows us to understand how ships move, how they are powered and operated, and how they are connected, can help us create value from digital opportunities.”