

Cabin Automation Trends

By Jonathan Foglino, International Key Account Manager at VIMAR SpA

The industry is experiencing a boom like never seen before but operators are keen to make the most of their investments in new vessels and they want to offer passengers a unique experience. This is made possible by technology, which can help operators to offer integrated services from booking, through checking in to cabin automation. Ship builders and suppliers can help cruise line companies to achieve this vision by navigating through the limits and restrictions of modern technology in the quest to offer the ideal package. Passengers are on the receiving end of this coordinated effort and they can enjoy their stay on board cocooned in their cabins.

The cruise line industry has been going through tremendous changes in the last decade and it is facing big challenges to keep up with an increasing market while catering for the changing demands of future passengers. The construction project of a new vessel, from design to commissioning, can take several years with a cost in excess of 1bn USD hence operators and shipbuilders are faced with the monumental challenge of making sure new ships will be fit for purpose for all their years of operation.

All the components of the vessel will have to be carefully selected to ensure the right performance, while making sure the technology is future proof. Any equipment or system on board will have to cater for upgrades in order to optimise running cost and provide the kind of passenger experience that will keep guests coming back to the same operator for their future holidays.

Cruise Line companies are keen to catch on the trend of providing an engaging experience and they want to take passengers on a journey from the moment the holiday is booked to the instant the guest walks into its cabin. Operators are counting on technology to achieve this. Thanks to the possibility to integrate different systems, their aim is to offer a 360° experience that will enable guests to use their mobile devices in order to manage booking of extras, such as restaurants or guided tours, get information about what is going on on-board and even control the electrical installation of their cabin.

There's been an increase in the luxury ship segment and operators see cabin automation as an integral part of their strategy to differentiate from other segments and make sure their experience is considered to be truly high end and ultra-luxury. The tricky part is to make sure that, whatever system is installed, it is reliable, future proof, cost effective and user friendly. Operators should be well aware of the demographics of their customer base hence they should make sure cabin automation is easy to use in order to avoid frustrating passengers.

Cruise line companies are keen to have an edge over competitors and they want to offer consumer type technology on board to make sure they provide the same kind of comfort, if not more, of what guests are used to at home. Consumer electronic companies are putting operators under a lot of pressure to deliver the kind of technology people are using everyday hence it is difficult to choose the best path to take. The ship will operate at least 10 years before the first major refurbishment is carried out hence it is definitely not the case of a mobile phone or tablet where a new model is launched every year if not 6 months. Systems on board have to be stable and they often cannot rely on the internet connection making, for example, voice control even more challenging. Every command given, for example, to "voice assistants" is sent over the net to be processed by servers before it is executed and this, on a ship, is simply not possible because of the lack of a stable internet connection.

Ship building is a complex operation and the cruise lines companies should work closely with the yards to find the best solutions to avoid causing delays in the construction. There are several constraints in cabin manufacturing such as the thickness of the partition walls, the need to reduce weight, etc. hence it is vital to create a close collaboration between operators, builders and supplier to provide the correct solution that will satisfy all in terms of design, cost and reliability.

A good way to make sure the selected option is feasible is the preparation of mock up cabins in order to put products to the test in a controlled environment that will resemble the conditions where the devices will actually be installed. The sample room will be useful to verify the ease of installation and to make sure enough space is provided to accommodate all electronic devices as often complex systems require additional installation space. The depth of installation is often problematic when the partitions are only 30mm deep and any layer of material added to the wall means extra cost and, probably more crucially, more weight. The carbon footprint of these giants of the seas is under close scrutiny these days and the reduction in weight can make an important contribution to the containment of fossil fuel consumption. New generation LNG powered vessels have already started to be floated out of dry docks but it is the combination of effective strategies that will bring the best result and reduce pollution.

Every little detail is reviewed in the search for weight reduction like the copper busbar that supply electricity to the cabins. Operators do not want to restrain passengers to use their favourite devices on board but, as part of the cabin automation system, selected power outlets could be disabled in order to limit the power consumption hence reducing the cross-sectional area of the busbar or cables needed to supply the cabins. This will bring the weight down further with the additional benefit of smaller cost for the busbar and protection of the electrical circuits.

Once the construction issues are addressed, it is time to concentrate of the user interfaces that will play a key role in the passenger experience. A nice interior will certainly impress passengers when they board the ship but a well designed and easy to use control system will certainly help that good impression to stick in their memories. An overcomplicated cabin automation system will contribute negatively to the customer experience hence all controls and convenience charging points should be installed with intuitivity in mind. The average stay on cruise ships is about 7 days (in hotels is two days!!) so different options should be provided to control the system; from the high tech, with the passengers' own mobile device, down to the most simple of them all, a light switch. Operators want the passengers out and about enjoying their holiday and they don't want them to deal with overcomplicated system and multi-button control panels. Passengers are meant to see only the benefit of cabin automation enjoying a relaxed environment where all controls are at a touch of a button and where scenarios can always create the right atmosphere.

The challenges mentioned above are only a few that operators, ship builders and suppliers face when starting from scratch with a new vessel but it is by working closely together, side-by-side, that all issues can be addressed and the best and most effective solutions can be found.