

Verification of Compliance

A Guide to Improving Crew Execution, Efficiency and Adherence

The safety and security requirements associated with operating a passenger vessel are extensive and multi-dimensional. They are specific to the region and are closely monitored and enforced. The volume of tasks and situations that need to be considered and the number of people to be coordinated, makes safety and security in the cruise industry extremely complex and this will only continue to evolve. The potential for error is huge, adherence must be enforced.



Only One of the Many, Verifications of Compliance, Required for Foreign Flag Vessels.

As is true for most countries, the US has strict requirements for passenger or cargo vessels that sail within US waters. All passenger ships must hold a valid Certificate of Compliance (COC) which is verified by the Coast Guard on an annual basis before it expires, and at least once during the period of validity of the COC. To support ships in earning their certificate of compliance the Coast Guard has created the [Foreign Passenger Vessel Examiners Tactics, Techniques, and Procedures \(TTP\)](#). This publication provides the step-by-step guidance to perform the many tasks involved with conducting the examinations of passenger vessels. Each region a ship enters, will have its own set of requirements, magnifying the complexity of managing safety and security on board.

As you review this document, three things become very clear:

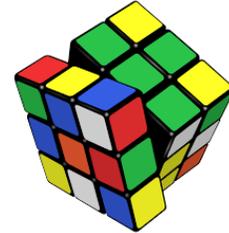
- This is complex, with many moving parts.
- This is important, without the Certificate of Compliance, a vessel can't operate.
- The tactics, techniques and procedures are all interwoven.



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Highly Complex, with Many Moving Parts

The volume of things, situations and people that must be coordinated and monitored to meet the safety and security requirements outlined by the Coast Guard is huge. Each requirement drives a different set of actions involving a different set of teams based on a different timeline.



The Possibility of Missing Something is Always Present & the Results Costly

Why	Inspection <ul style="list-style-type: none"> • Periodic • Annual • 1st Visit 	Certification <ul style="list-style-type: none"> • Industry • Government • Architecture 	Drills <ul style="list-style-type: none"> • Emergency Planning • Fire Drill • Abandon Ship
What	Systems/Things <ul style="list-style-type: none"> • Lifesaving, • Fire, • Waste, • Security, Navigation, • Bridge • Documentation 	Communications <ul style="list-style-type: none"> • Alarms • Public Address • Lifeboat • With bridge 	Duties <ul style="list-style-type: none"> • Monitor • Inspect • Hull walk • Test
When	Location	Day of Year	Time of Day

The Certificate of Compliance, It's Non-Negotiable



This is a discussion that impacts every facet of the ship's operation and is not just the concern of the safety and security team. Without a Certificate of Compliance, the ship can't operate, impacting:

- Revenue with decreased sales and increased cost due to cancelled sailings, missed ports, increased fuel.
- Passenger or cargo customer's dissatisfaction due to unfulfilled expectations.
- A negative impact on brand and occupancy or cargo due to exposure in the media.

The Ships Approach to Execution, Ready for a Refresh

Successfully coordinating, executing and validating that all the required tactics, techniques & procedures were completed on schedule is often challenging. As regulations and requirements continue to evolve, the way we execute on those requirements will need to transform to keep pace.

If It's Paper based, It's Likely Unreliable and Resource Intensive

While paper based systems have worked for us in the past, with the complexity of today's requirements it's no longer going to be enough. Paper based systems are difficult to prove, as we can only verify someone was there, we can't show exactly when the task was completed. Take for example the requirement to inspect the fire extinguisher, for those still using a paper based ticketing method, while you can see the requirement was signed off, you can't really validate when and by whom.

Also consider the time and resources required to respond to an audit or question that has arisen because of an inspection, the longer it takes to provide the information required the more it costs. Policies and procedures are also often paper based, whether available hard or softcopy the same is true, determining next steps in midst of an emergency can be tough and we don't have the time to stop and look up the answer.

If It's Manual, It's Historical and Error Prone

Tasks are often assigned verbally in person or on the phone, digitally via email or paper based with daily to do lists. Each interaction creates an opportunity for human error, due to the inevitable miscommunication, misunderstanding and mistakes that happen. Status updates are also often historical in nature with the results being communicated at the completion of the task, impacting response time. What one crew member might find urgent the another may not.

If It's Distributed, There's Limited Visibility

Successfully receiving a Certificate of Compliance requires the involvement of many teams and departments. Ensuring everyone is completing the required tasks on schedules is difficult with disparate systems and procedures.

Also, having a single view of where you currently sit, regarding meeting the inspection requirements, on the bridge or shoreside is especially difficult. Should an unpredicted inspection take place, to a certain extend we will find ourselves in a position where we just need to keep our fingers crossed, that the crew is executing their jobs perfectly. Providing a single rolled-up view of safety and security operations requires a lot of time and resources to compile.

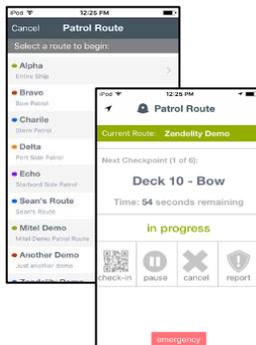
If Monitoring Requires Dedicated Hardware, It's Expensive and Limited

Up until now, many ships have been dependent on expensive hardware such as hard wired telephones to monitor their location and progress on executing routes. While there are, many other points across the ship that we would like to be able to track our physical location at, having a phone at every fire extinguisher for example is just not feasible.

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Advancement in Technology, Look What's Possible

By leveraging the latest enhancements with mobile applications, smart phones, RFID, QR codes and virtualization, operators can now create, monitor and report on detailed work plans across all aspects of safety and security from routes, to shut down procedures, emergency action plans, equipment quality checks, special events, etc.

Now you Can...

Create custom routes by category, get as granular as required enabling safety and security to be measured and managed down to the detail.

Automatically communicate the next step in executing drills, inspections, emergency action plans, or patrol routes to help ensure each step identified in the ships process guide is completed in a timely and efficient manner.

Alert the bridge or shore-side in real-time when a crew member, executing drills, inspections, emergency action plans, or patrol routes is out of adherence in completing a task in the allotted time, reducing risk and improving the response time.

Leverage the power of RFID and QR codes to cost effectively:

- Monitor more points of interest across the ship.
- Monitor crew execution in real-time as they complete the route.
- Record the sequence of events to simplify reporting and audit requirements.
- Eliminate the honor system and ensure tasks are completed on schedule.



Improve training and testing procedures by measuring and monitoring crew performance during training activities and highlighting areas for improvement. Provide new inspectors with a preprogrammed route, to help ensure nothing is missed and execution can be verified.



Report incidents in real-time, enable crew to easily identify and communicate potential issues to the bridge, simply take a picture, add notes and submit the incident report to the bridge to be actioned, improving response time and reducing risk.

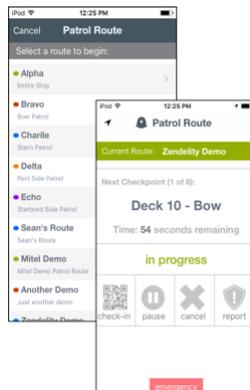
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Introducing Patrol from Zendelity

A Proactive Approach to Safety and Security

Patrol enables the creation and management of safety and security plans, covering inspection requirements, day to day responsibilities and emergency action planning.

- Create patrol routes to monitor all points of interest: High or low traffic areas, crime or hazard prevention, task verification or functional performance, etc.
- Create emergency actions plans to ensure team members know exactly what to do in the event of an emergency.
- Monitor adherence to plan in real-time to ensure execution.
- Alert management in real-time to incidents or issues that need to be addressed.
- Monitor compliance and support investigations with detailed historical reports.



Patrol in Action

Imagine, knowing in real-time, that each inspection requirement was completed, about issues of non-compliance, or enabling all staff to easily identify, capture, describe and report on incidents as they arise. Imagine being able to simply run a report for a view of crew performance and execution in support of inspection questions or audits.

Create and Assign Tasks/Routes:

- On the Fly or In Advance.
- Locate check-points with RFID or QR Codes.

iOS Mobile Application:

- Check In, Monitor Status, Capture. Incidents with pictures and notes.

Incident Management:

- Identify, Document, Alert and Report on incidents in real-time.

Monitoring Dashboard:

- Monitor routes currently in progress from the web based dashboard.
- Alerts: Receive Automated Notifications Based on flexible parameters and average time to execute.

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Coast Guard Inspection		Improve Crew Execution and Efficiency
Categories	Requirements	
Documents	<ul style="list-style-type: none"> • Licenses and/or Flag State Endorsements, • Certificates, log books, plans, fire, etc. • Vessel General Permit 	<ul style="list-style-type: none"> • Attach a QR code to each document. • Create a 'route' which includes the required documents • Execute route on desired intervals to confirm availability prior to an inspection. • Confirm when the document as last accounted for
Training	<ul style="list-style-type: none"> • Passenger Safety • Cargo Safety • Hull Integrity Training 	<ul style="list-style-type: none"> • Create a 'route' based on each step of the training procedure • Install QR code or RFID at each step • Measure crew in their ability to complete the procedure associated with the training • Monitor compliance/improvement
Walkthrough	<ul style="list-style-type: none"> • Hull Walk • Fire Patrol • Escape and signage • Space requirements • International Labor Organization 	<ul style="list-style-type: none"> • Attach a RFID tag at each checkpoint in the walkthrough. • Create a targeted 'route' which includes each check point • Execute route as required to proactively ensure compliance • Report incidents
Systems	<ul style="list-style-type: none"> • Bridge safety and navigation equipment • Fire protection and the associated systems • Ballast & Bilge • Main and emergency machinery • Ship Stability • Survival equipment 	<ul style="list-style-type: none"> • Attach a RFID tag to each system or sub system that needs to be verified • Create 'route' for each system • Execute route as required • Report on adherence • Report incidents
Procedures	<ul style="list-style-type: none"> • Vessel's security program • Fire control plan • Waste Streams • Emergency Shut down • Ship stability 	<ul style="list-style-type: none"> • Create a targeted 'route' for each procedure • Attach a RFID tag at each point in the procedure. • Execute procedure • Report incidents • Monitor compliance & performance
Communications	<ul style="list-style-type: none"> • Emergency alarms • Public address systems • Lifeboat communications 	<ul style="list-style-type: none"> • Place a RFID tag anywhere the communication must be heard • Build a route around testing plans • Report & monitor adherence
Drills	<ul style="list-style-type: none"> • Fire • Emergency • Abandon Ship • Passenger Muster 	<ul style="list-style-type: none"> • Create a targeted 'route' for each drill • Attach a RFID tag at each point in the drill. • Execute drill • Monitor compliance & performance

To learn more:

Download the [datasheet](#), Check out the [SlideShare](#), Visit www.zendelity.com, Give us a call: (613)369-4330