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ALLIES IN INNOVATION

Image courtesy of PT. PAL Indonesia

THE INDONESIAN NAVY:

DELIVERING FAST ATTACK CRAFTS DESPITE CHALLENGES

IMAGINE BEING ENTRUSTED WITH A MISSION TO BOLSTER THE DEFENSE CAPABILITIES OF A NATION SPREAD ACROSS MORE THAN 17,000 ISLANDS. THIS WAS THE CHALLENGE FACED BY TERMA AND PT PAL, INDONESIAN STATE-OWNED SHIP MANUFACTURER. TOGETHER, THE TWO COMPANIES EMBARKED ON AN AMBITIOUS PROJECT: TO DELIVER FOUR STATE-OF-THE-ART KCR-60 FAST ATTACK CRAFTS TO THE INDONESIAN NAVY - ALL WITH TERMA'S SCANTER 4603 RADARS, C-FLEX C2 SYSTEM, C-GUARD DECOY LAUNCHING SYSTEM AS WELL AS TERMA'S FIRE CONTROL SYSTEM C-FIRE.

The fast attack crafts weren't just additions to the Indonesian fleet; they were integral to ensuring the security of the vast maritime boundaries of Indonesia. But as Terma and PT PAL commenced this endeavor, an unforeseen storm loomed – the COVID-19 pandemic.

For many, the pandemic was a disruptor, but for Terma and PT PAL, it presented an obstacle of enormous proportions.

Face-to-face collaborations, which are crucial for aligning specifications and expectations in such comprehensive projects, were abruptly halted. Yet, the need for these vessels didn't diminish. On the contrary, ensuring the maritime sovereignty of Indonesia became more critical than ever. How do you ensure that such an essential project stays on track in the face of global disruptions?

Well, you innovate, adapt, and rise to the occasion. As you'll discover in the sections ahead, Terma and PT PAL did just that, weaving a story of resilience, innovation, and unwavering commitment to their mission.

Overcoming COVID-Challenges

Imagine initiating a complex naval project, only to have the world plunged into an unprecedented pandemic.

Suddenly, the very foundation of how businesses operate and collaborate is shaken. This is precisely the scenario Terma and PT PAL faced. The usual playbook? It had to be rewritten.

Navigating through these rough seas, Terma and PT PAL showcased a masterclass in adaptability and instead of physical meetings, like most other companies, we moved collaboration online, harnessing digital

tools and virtual platforms. However, when working with projects – and vessels – of this magnitude, a Teams-meeting becomes something entirely different than your everyday check-in meeting.

All collaboration and physical demos turned virtual; even the factory acceptance tests (FAT) were online.

In practice, "demo FATs" were implemented, using handheld cameras and online conference meetings to ensure that every specification met the meticulous standards set by both the Indonesian Navy and PT PAL.

Iqbal Fikri, COO & Head of Production at PT PAL explains.

"Despite the challenges posed by the pandemic, Terma showcased remarkable resilience and adaptability. Their commitment to keeping the project on schedule, coupled with their seamless integration of virtual tools, ensured that our expectations were not just met, but exceeded,"

Dynamic Alignment - A Tactical Imperative

While handling the COVID-challenge was a significant accomplishment from both parties, looking at the engineering behind the KCR-60's is another.

One thing PT PAL recalls as a prominent achievement is the vessels' dynamic alignment, meaning the ability to align sensors, command controls, and weaponry to hit a specific target.

On fast attack crafts, where speed meets precision, ensuring that all equipment can operate in complete synchrony is not just beneficial – it's imperative. The whole idea of a fast attack craft is to get in and out of a situation quickly, leaving very little time to perform the operation.

"Terma's proficiency in dynamic alignment has been a revelation. The integration of sensors and effectors on the KCR-60 crafts stands as a testament to their unparalleled expertise in the field. We couldn't have asked for a better partner in this endeavor. It's the difference between a near-miss and a direct hit,"
says Aris Supriyadi, Project Manager at PT PAL.

With Terma's advanced integration methodologies, every system aboard the KCR-60 seamlessly collaborates. The true essence of dynamic alignment is manifested when, even at peak velocities, every command translates into an accurate action, be it surveillance detection or a missile launch.

See the specific details on the KCR-60 ships in the table on the next page

For those in the naval sphere, the criticality of dynamic alignment is a given. Yet, without the proper expertise and experience as a systems integrator, the task may deem impossible.

Result: An Elevated Maritime Stance for the Indonesian Navy

Indonesia, with its sprawling archipelago, demands a formidable naval presence. The addition of the KCR-60 fast attack crafts, equipped with the latest in maritime technology, significantly boosts its maritime defenses.

Through collaboration, adaptability, and technical aptitude, Terma and PT PAL have together ensured that the Indonesian Navy is well-prepared to safeguard its territorial waters, reinforcing peace and security in the region.

As these vessels are taken into service they symbolize not just military capabilities, but the triumph of collaborative spirit in the face of a global pandemic.

For nations and organizations looking to enhance their naval capabilities, the Indonesian Navy's journey offers a roadmap. By leveraging resilience, innovation, and strategic partnerships, any challenge – even a global one – can be overcome.

Facts About the KCR Crafts

Class	Fast Attack Craft – Sampari Class
Names	KCR #3 – KRI Halasan KCR #4 – KRI Kerambit KCR #5 – KRI Kapak KCR #6 – KRI Panah
Ship yard	PT.PAL Indonesia
Production Year	KCR #3 – 2013 KCR #4 – 2018 KCR #5 – 2020 KCR #6 – 2020
Length	60.3m
Tonnage	460-500 ton
Radar	Terma SCANTER 4603
C2	Terma C-Flex Combat Management System
Decoy System	Terma C-Guard DL-6T Decoy Launching System
ESM	Teledyne PHOBOS RESM
Data Link	PT.LEN Tactical Data Link
Gun	Bofors 57mm Mk.3
Fire Control System	Terma C-Fire EO Fire Control Optic
EOD	Chess Dynamics Sea Eagle Electrical Optical Director
Missile	Exocet MM40 Block III SSM (only KCR #3 and #5)

Image courtesy of PT. PAL Indonesia