

# A Ready SAF: A Strategy For Tomorrow

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## Abstract:

As Singapore forges closer ties with the rest of the world, the security landscape becomes increasingly unpredictable. The multitude of threats taking turns to feature on stage—national, regional and global—demand different strategies from conventional warfare. The Singapore Armed Forces (SAF) has pursued a broader operational strategy that incorporates Operations Other Than War (OOTW) into its agenda of war-fighting readiness. The kaleidoscope of conventional and non-conventional security challenges calls for a strategy for tomorrow—a strategy which provides broad coverage over all these challenges, and has the capacity to address the most immediate threats. It is thus necessary to invest in a robust readiness model and culture that will “respond swiftly and decisively” to any threat. The SAF is ripe for such an adaptive readiness strategy.

*Keywords: Third Generation SAF; Full Spectrum Operations; Operations Other Than War; Operational Readiness*

## INTRODUCTION

Singapore embraces the world as its hinterland. But in today's globalized world, problems will spill over borders. As Singapore forges closer ties with the rest of the world, the security landscape becomes increasingly unpredictable. The impetus for full spectrum operations as part of Singapore Armed Forces' (SAF) Third Generation transformation stems from an operating environment which features new challenges, such as transnational terrorism, epidemic outbreaks and disaster relief, distinct from conventional war. A radical strategic shift is underway. The multitude of threats taking turns to feature on stage—national, regional and global—demand different strategies. SAF has pursued a broader operational strategy that incorporates Operations Other Than War (OOTW) into its agenda of war-fighting readiness. This expanded *modus operandi* requires commanders to weigh the urgency of each concern and constantly tweak the security agenda based on these *ad hoc* changes. No single strategy is a panacea. Instead, the kaleidoscope of conventional and non-conventional security challenges calls for a strategy for tomorrow—a strategy which provides broad coverage over all these challenges, but simultaneously provides the capacity to address the most immediate threats.



*Special Operations Task Force – Full Readiness*

## ORDER FULFILLMENT: LOOKING AT THE READINESS STRATEGY IN A DIFFERENT WAY

A corollary exists in the sphere of commerce. In economic terms, the Order Fulfillment (OF) process describes the functions from product inquiry to product delivery.<sup>1</sup> As firms seek to customize their products and offer greater variety, effective OF strategies become essential to trimming production costs. Likewise, as the SAF seeks to achieve its diverse strategic goals, it will have to adopt more effective methods to maximize the value of its capabilities in achieving these initiatives. As a small force, the SAF needs to maintain a qualitative edge over its potential

adversaries. Although OF is a concept grounded in supply chain management, it is a potential model for an operational strategy to prepare for tomorrow's missions, whatever they may be.

This article will cover three areas. First, it assesses how the roles in the OF model can be adopted in a military context. Second, it uses the OF model to define what the readiness strategy for tomorrow entails. Third, it contends that the SAF is well poised to exploit this strategy. The prospects of cooperation with external partners will also be evaluated.

### ESTABLISHING THE ROLES IN AN ORDER FULFILLMENT (OF) MODEL

The roles of an OF model in a military environment are best described by first comparing them with that of a commercial entity shown in Figure 1. Besides the composition and dynamics of each role, there are some distinctions between the two, most notably:

- The conduct of military operations is influenced by both battlefield commanders and political masters. In this aspect, the dynamics of power between these two groups will inevitably affect the duration and freedom of strategic planning.
- Commercial operations forecast demand to avoid holding excessive inventory. Military operations forecast threats to avoid acquiring excessive capabilities.
- A military operation desires closure through victory; a commercial operation desires perpetuity through magnification and refinement of its operations.
- The model shown in Figure 1 also incorporates John Boyd's Observe-Orient-Decide-Act (OODA) Loop to illuminate the allocation of energies in the process

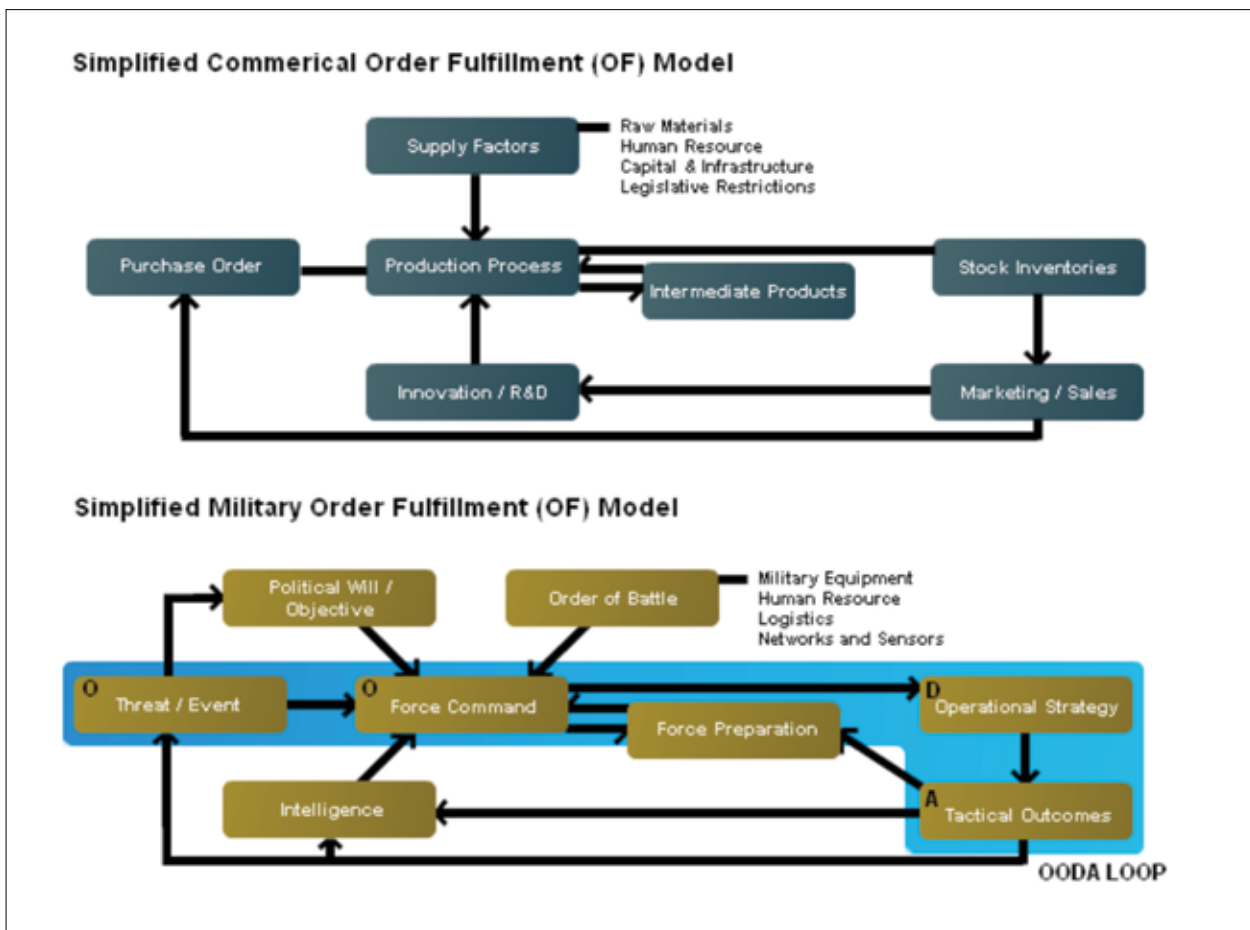


Figure 1: The Commercial and Military OF Models.

of strategic planning.<sup>2</sup> In contrast to the commercial model, a military operation strives to reduce the time taken for the OF cycle to renew itself.

These differences revolve around a central theme: readiness. Even the most technologically gifted or integrated military organization cannot succeed if it is not ready for the threat.

## READINESS STRATEGY AS DEFINED BY FULFILLMENT OPTIONS

There are also similarities between the strategic options of both models. The fulfillment options in the production process of a commercial model rely on the demand and production lead-time of the product itself.<sup>3</sup> The demand lead-time ( $D$ ), represents how long customers are willing to wait for the order to be completed, while the production lead-time ( $P$ ) represents how long it takes to manufacture the product. Mather's discussion on the  $P:D$  ratio gives rise to the following strategic options, represented in Figure 2:<sup>4</sup>

- Engineer to Order (ETO) – ( $D \gg P$ ) The product is custom designed and manufactured to the customer's specifications (e.g. housing projects).
- Build to Order (BTO) – ( $D > P$ ) The product is based on a standard design but component production and the final product are linked to the customer's specifications (e.g. automobiles).
- Assemble to Order (ATO) – ( $D < P$ ) The product is built to customer specifications based on a stock of existing components (e.g. computers).
- Make to Stock (MTS) – ( $D = 0$ ) The product is built against a sales forecast, and sold to the customer from a finished product inventory (e.g. groceries).

Fulfillment options can be applied to different military operations just as they are to different types of goods. The primary strategy which the SAF adopts against other conventional military forces is equivalent to ETO because the nature of the opponent will necessitate a period of tension before an outbreak

of war. Beyond conventional war-fighting, however, the amorphous nature of opponents means choices are blurred. ATO options might feature predominantly in the strategies of Humanitarian Assistance and Disaster Relief (HADR) operations, such as during Operation Flying Eagle, when “standby teams were deployed within 24 hours and specially assembled teams within 48 to 72 hours.”<sup>5</sup> On the other hand, MTS options should be employed in the event of potential epidemic outbreaks: during the recent episode of Influenza A, SAF medical centers were already prepared with stocks of *Tamiflu Prophylaxis* and rapid test kits for H1N1 diagnosis.<sup>6</sup>

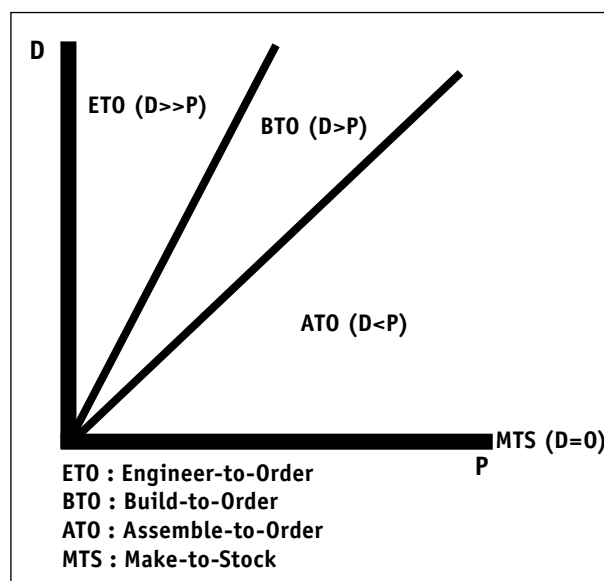


Figure 2: Fulfillment options as defined by demand and production lead times.

It will be careless generalization, however, to categorize every operation as a plot on the  $P:D$  graph. Very often military operations require a combination of two or more of these options. On 22 January 2008, two F-16 fighters were scrambled to intercept a civilian aircraft, a Cessna 208, which “was heading towards Singapore airspace without an approved flight plan.”<sup>7</sup> In this instance, strategy is constrained by both the singularity of the situation and the limited time available. For this mission, a successful operation would likely rely on careful allocation of interception assets (ATO) and a robust response plan (MTS). These two fulfillment options in turn require the following conditions, or factors, to be met: (1) fighter aircraft trained to intercept and engage such aircraft, (2) logistical support to support ad-hoc aerial scrambles,



Operation Flying Eagle

(3) proper coordination with the Civil Aviation Authority of Singapore (CAAS), and (4) surface-to-air missile sites capable of providing backup.<sup>8</sup> Without these factors, there is a high likelihood of mission failure should the worst case scenario materialize. In this simplified scenario we can also conclude that ad-hoc strategic planning can only succeed when all the crucial factors are in place.

Another observation about the top-down relationship, from operational strategy to fulfillment options to factors, as explained above, is that making factors as versatile as possible should be pursued as a strategy in itself. Figure 1 shows that a critical intermediary stage exists in an OF structure: represented by intermediate products in commercial operations and force preparation in military operations. In a commercial setting, the margin of profits can be increased by encouraging the streamlining of work

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processes and recycling of materials. The success of Toyota as the world's largest automaker bears testament to the Toyota Production System (TPS) strategy, which saved costs by developing an intelligent system that minimized the amount of in-process inventory held while ensuring smooth operations.<sup>9</sup> In other words, commercial margins benefit from negating the cost of excessive inventory. Although military operations do not pursue profit, it is logical

to develop an SAF "production system" by developing a force preparation strategy that will utilize its resources in a manner that can cover as many fulfillment options, or type competencies, as possible—a strategy that will provide the strategies of tomorrow.

#### FULFILLMENT OPTIONS FOR TOMORROW

The OF model has so far explained that the readiness strategy is to cultivate the right fulfillment options today for use tomorrow. The SAF faces two challenges.

First, to actively explore and orientate its resources in the readiness cycle, and second, to develop a doctrine that conditions its leaders to think strategically when managing these resources.

To adapt to rapidly changing conditions, it is important for the SAF to orientate its factors to achieve growth:

**Multi-Role Order of Battle (ORBAT).** The procurement of military equipment ought to be akin to that of searching for a missing piece to the jigsaw puzzle of full spectrum operations. In the instance of naval operations, while the need for specialized vessels such as minesweepers and patrol vessels remains, multi-role support vessels such as the Endurance Class Landing Ship Tanks (LSTs) provide overlapping capabilities that give a huge advantage in naval patrols, disaster relief and peacekeeping operations.<sup>10</sup> Also, future procurement packages must be designed for successful integration with the existing ORBAT to maximize its return-on-investment.

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**Silver Bullets.** While developing multi-role assets, there is a need to develop “trump card” capabilities that will be deciding factors in any strategy. While combined arms provide a range of fulfillment options, certain missions require indispensable expertise, such as specialized equipment for responding to biological attacks and major disasters. Recognizing this, the SAF has set up groups that focus on specific threats, such as the Chemical, Biological, Radiological and Explosive (CBRE) Defense Group in 2003 to deal with chemical, biological and explosive threats,<sup>11</sup> and the Special Operations Task Force in June 2009 to “combat terrorism, hostage-taking incidents and rescue tasks.”<sup>12</sup> As a combination of multi-role combat and support assets coupled with silver bullet capabilities are likely to feature as the backbone of any operational

strategy tomorrow, these groups play an important role by preparing their assets for seamless, horizontal integration with other units.

**Superior Networks.** Networks are valuable resources. On the SAF level, the primary objective as embodied in Integrated Knowledge Command and Control (IKC2) efforts is to employ capable systems and networks that will integrate all units into the information matrix and shorten the decision-making cycle in the OODA loop. On the national level, the SAF needs to establish higher levels of trust and more robust operating procedures with civil agencies to reduce friction caused during the Orient phase of the OODA Loop. One example is the Risk Assessment and Horizontal Scanning (RAHS) system set up in 2004, which “has the potential to be a strategic planning process to facilitate agency collaboration and to put in place a whole-of-government framework to think about a complex and uncertain future.”<sup>13</sup> Beyond that, cooperating with regional and international bodies through networks and systems allows us to share the economy of effort to tackle regional, global, and transnational security issues. The Information Fusion Center (IFC) located in the Changi Command and Control Center is an example of future global security networks. It houses the Regional Maritime Information Exchange (ReMIX), the Malacca Straits Patrols Information System (MSP-IS), and the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia Information Sharing Center (ReCAAP ISC) web-based systems. These systems provide timely information-sharing between their subscribers around the world to meet their maritime security needs.<sup>14</sup> The SAF should continue leveraging on its technological edge to spearhead these initiatives in preparation for tomorrow's developments.

**Total Defense.** Responding to the concept of Fourth Generation Warfare (4GW), Dr. Bernt Anderberg advocates replacing military strategy with a national security strategy as part of force transformation.<sup>15</sup> The erosion of state power means that the future of state security will be one increasingly defined by human security. Civil forces, be it domestic, regional

or international, are critical to addressing modern day threats, none more so than the long shadow cast by transnational terrorism. American journalist Fareed Zakaria made an interesting observation, "If civilians are not terrorized, then terrorism does not work."<sup>16</sup> Britain survived World War II because its population displayed determination in their support for the war effort. As the SAF's Total Defense strategy expands its mission to serve the economic and social interests of national security, a resilient, active, and supportive civil sector will be crucial should hardship strike tomorrow.

*Should the SAF expect every scenario it prepares for today to happen tomorrow? No. Should it expect to be up to the challenge when some of them do? Yes.*

**Diplomacy.** Singapore has no enemies, only interests. Diplomatic goodwill and defense relations do function, albeit unpredictably, as a fulfillment option in military operations. The emergence of a multi-polar world between the United States and other rising powers,<sup>17</sup> as well as the gathering enthusiasm for ASEAN integration, are opportunities for joint military exercises, discussion forums, technology exchanges, and defense industry collaboration. Some examples of each include the annual Southeast Asia Cooperation Against Terrorism Exercise (Ex SEACAT) held between seven nations in the region,<sup>18</sup> the Special Forces Commanders Conference in October 2009,<sup>19</sup> and the Malacca Straits Patrols in place since 2005.<sup>20</sup> These activities will affect the diplomacy variable in the equation of readiness. As the SAF participates in more overseas operations, we also need to consider how best to harness its diplomatic ties to fulfill the strategic demands of tomorrow.

To date, the SAF has developed many of these ingredients. However, its doctrine should also encourage these fulfillment options to inter-operate with one another frequently. In the absence of war, the opportunities for planning military operations are few and far between, and the SAF must therefore continue to refine its methods to ensure continual readiness.



*Special Operations Task Force—Ready for action*

## THINKING STRATEGICALLY

This article has so far addressed the first challenge: the desired orientation of resources. The second is a thinking framework from which leaders can assess the readiness of their forces. The challenge is to teach today's operational commanders to be trend spotters as well as critical thinkers:

**Sharpen Command Focus.** The concept of full employment does not equate to 100% employment; in fact 100% employment is an unattainable goal. The same can be said of full readiness. Training eight out of ten units in a task force to be on high alert will not be productive if a situation calls only for the participation of the two units that were not trained. On the other hand, training all ten units will exhaust the resources allocated to the task force. The art of readiness is to figure out the demand for capabilities and meet it. To do so, the SAF will have to produce leaders that are able to provide quality command focus.

Command focus determines what tasks a unit is trained to perform. When planning an operational strategy, a commander takes into account the command focus of the forces he is deploying. In the absence of war, repeat exercises are the most important ingredient in sharpening command focus. The objective of each exercise should be to achieve a new fulfillment option or maintain currency in an existing one. The goal of readiness for tomorrow is therefore achieved when all units are current in all the mission-type capabilities they are required to deliver. In preparing the readiness

of their units, commanders must constantly assess the demand and supply of fulfillment options, and decide how to achieve full readiness.

**Develop Tactical Agility.** Success in force preparation can only be determined by tactical outcomes in real operations. In context, the operational commander has three levels of consideration. First is speed, constantly executing each engagement with the shortest OODA loop. Second is momentum, finding ways to remove friction points in the movement of his advance. Third is contingency, always having a back-up plan to every tactical disappointment. The commander's role in peacetime is therefore, through practice, to spot the factors that are inhibiting the tactical decision-making chain and improve on them, or identifying new ones that can complement the mission.

Frequent exercises will sharpen the commander's intuition and improve his tactical finesse. However, he must also remain adaptable. Suppose today's concern is terrorism but tomorrow's is disaster relief; commanders from top to bottom will have to gauge what level of sacrifice they are willing to make to switch from one type of competency to another, and make them fast. Not only must they achieve full readiness, they must also know how to maintain it in a rapidly changing environment. Simply put, the goal of peacetime training is to generate adaptability ahead of crises.

#### **Build Awareness Of Non-Military Forces.**

Traditional force preparation focuses almost exclusively on military participation and excludes the effects of other agencies. 4GW, however, involves warfare fought in a military-civilian context.<sup>21</sup> Military exercises will achieve valuable realism by incorporating the participation of civilian agents. The Exercise Northstar series, which simulates terrorist attacks on public installations and involves collaboration between more than 20 civil and military agencies,<sup>22</sup> is a good example of how this can be done. Much like the integration of the three services in SAF, inter-agency networking with ministerial and regional agencies is essential for future operations, especially

against threats on the home front. Already, initiatives such as the Homeland Security Engineering Center (HSEC) and Homefront Crisis Management System (HCMS) serve as resource centers for various agencies, local and abroad, to prepare against future threats.<sup>23</sup> Meanwhile, commanders in the lower echelons must be continually trained to consider the effects of economic, diplomatic and political forces so that these considerations come naturally to them when devising an operational strategy.

**Share The Spirit.** The SAF has expanded its operational scope in recent years. Maintaining it will require men and women who understand the meaning of their work and the responsibility they carry. All commanders should actively engage their soldiers through formal and informal channels to develop their understanding of why readiness is vital to national security. At the same time, the system must also find ways to generate readiness amidst the changes that are taking place within the force.

Above all, the points discussed point to a convergence between readiness and force transformation. The factors involved in the Third Generation transformation of the SAF correspond to the ingredients for readiness: full spectrum operations, integration and networking, advanced technology, a focus on both people and values, and making holistic progress. Curiously, the SAF cannot strive for readiness without transformation, because such readiness will quickly become irrelevant in a rapidly changing world.

#### **READINESS NOT A SOLUTION TO EVERYTHING**

Should the SAF expect every scenario it prepares for today to happen tomorrow? No. Should it expect to be up to the challenge when some of them do? Yes. This guarantee is the service the SAF provides to its citizens. No matter how prepared we are, there will be times when a threat will catch us unaware. Therefore it is not enough to be ready—we must also be spontaneous and adaptive. The SAF should condition soldiers to not only be conversant with the procedures they are prepared to execute, but also be up to the task even without the luxury of preparation. This requires changing how its people think operationally

and inventing a system that will encourage them to discover creative methods and achieve flexibility in any scenario.

## CONCLUSION

*"We must always make sure that our investments in defense, our investments in the SAF, give us the capabilities to respond swiftly and decisively against any threat to Singapore's peace and prosperity."*

– Excerpt from Minister of Defence Teo Chee Hean, now DPM, at Committee of Supply Debate on 4 March 2005.<sup>24</sup>

Readiness is not easy. However, looking at the organization as a whole, the SAF has done well so far. It has the confidence to carry out operations with immediate notice because it has developed a strong culture of readiness. Yet the security landscape is an unpredictable one. A potential risk today can become a potent threat tomorrow; today's exercise can become tomorrow's combat operation. It is thus necessary to invest in a robust readiness model and culture that will "respond swiftly and decisively." The SAF is ripe for an adaptive readiness strategy. It needs to play a bigger role in the team effort with its partners in Total Defense; to avoid pitfalls, its people will need to get on their feet faster and further than ever before. The key to achieving readiness tomorrow is to start preparing now. 🌐

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