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**Fact Sheet – “Together, We Keep Singapore Strong”**  
**Total Defence 40 Dynamic Defence Display**



1. To commemorate 40 years of Total Defence, National Day Parade 2024 (NDP 2024) will bring the Dynamic Defence Display (D3) to the Padang for the first time. To extend the experience to more Singaporeans, it will also be expanded to the waters at the Marina Bay area. The Total Defence 40 (TD40) D3 will feature 40 assets and over 400 participants and supporting staff from the Singapore Army, Republic of Singapore Navy (RSN), Republic of Singapore Air Force (RSAF), Digital and Intelligence Service (DIS), Singapore Police Force (SPF), and Singapore Civil Defence Force (SCDF), as well as other government and non-government agencies including national water agency PUB and the Singapore Red Cross. Together, the diverse group represents the full spectrum of Singapore’s defence and emergency response capabilities.


2. The agencies and units supporting the TD40 D3 are as follows:


Service	Unit
Army	<ul style="list-style-type: none"> <li>• 16th Command, Control, Communications, Computers, and Intelligence Battalion</li> <li>• 23rd Battalion, Singapore Artillery</li> <li>• 5th Battalion, Singapore Infantry Regiment</li> <li>• 48th Battalion, Singapore Armoured Regiment</li> <li>• 41st Battalion, Singapore Armoured Regiment</li> <li>• Guards Training Centre</li> <li>• Special Operations Task Force</li> <li>• 36th Battalion, Singapore Combat Engineers</li> <li>• 3rd Battalion, Singapore Guards</li> <li>• Army Deployment Force</li> </ul>
RSN	<ul style="list-style-type: none"> <li>• Naval Diving Unit</li> </ul>
RSAF	<ul style="list-style-type: none"> <li>• 120 Squadron</li> <li>• 140 Squadron</li> <li>• 165 Squadron</li> </ul>
DIS	<ul style="list-style-type: none"> <li>• Joint Intelligence Command</li> <li>• SAF Command, Control, Communications and Computers (C4) Command</li> </ul>
SPF	<ul style="list-style-type: none"> <li>• Clementi Division</li> <li>• Tanglin Division</li> <li>• Ang Mo Kio Division</li> <li>• Bedok Division</li> </ul>

	<ul style="list-style-type: none"> <li>• Jurong Division</li> <li>• Woodlands Division</li> <li>• Police Coast Guard</li> </ul>
SCDF	<ul style="list-style-type: none"> <li>• 2nd SCDF Division</li> <li>• 3rd SCDF Division</li> <li>• 4th SCDF Division</li> <li>• Disaster Assistance Rescue Team</li> </ul>
Civilian Agencies	<ul style="list-style-type: none"> <li>• Civil Aviation Authority of Singapore</li> <li>• Cyber Security Agency of Singapore</li> <li>• PUB, Singapore’s National Water Agency</li> <li>• Singapore Red Cross</li> </ul>




3. Some of the assets and equipment presented will be making their debut in NDP for the very first time. These are:




S/N	Name of Asset / Equipment	Description
1	<p><b>Light Machine Gun (LMG)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Singapore Army’s latest weapon, the new Light Machine Gun (LMG) – Colt Infantry Automatic Rifle (IAR) 6940E-SG – will be showcased for the first time in NDP at the TD40 D3. Soldiers will demonstrate how the LMG’s features provide enhanced lethality, improved ergonomics and customisation to allow soldiers to operate more effectively in different combat situations.</p>
2	<p><b>Electric Pump Ladder (E-PL)</b></p> <p><i>[Singapore Civil Defence Force]</i></p> 	<p>The next-generation fire engine, also known as the Electric Pump Ladder (E-PL), is the latest addition to SCDF’s arsenal of firefighting vehicles.</p> <p>Being the first country in Southeast Asia to operate such a vehicle, the E-PL is a result of collaboration between the SCDF, the Home Team Science and Technology Agency, and Rosenbauer. The electrification of vehicles exemplifies SCDF's dedication to improving operational efficiency and effectiveness while prioritising sustainability.</p> <p>Equipped with an Energy Backup Unit, the E-PL can travel about 100 km in full electric mode and an additional 500 km in hybrid mode. The vehicle features a fully digitalised platform, allowing responders to manage all functions using a tablet. Its low centre of gravity and balanced axle</p>




		<p>load distribution also offer greater stability than vehicles of similar size when navigating corners.</p> <p>The E-PL is designed for improved manoeuvrability, with a shorter length compared to other Pump Ladders. This enhances its agility in navigating tight spaces such as crowded car parks or congested roads. Additionally, its all-wheel steering function enables the E-PL to have a much smaller turning radius and even be driven in “crab steering” mode, allowing diagonal movement.</p> <p>The E-PL is designed with a spacious cabin and height-adjustable chassis to facilitate faster ingress and egress of firefighters near ground level.</p> <p>The E-PL is equipped with the Modular Firefighting Machine (MFM), which allows for remote firefighting and minimises risk to our responders. The MFM can also be rapidly configured to function as a logistic support platform, casualty conveyance platform, or an offsite hazardous materials monitoring platform when sensors are installed.</p>
3	<p><b>Water Wagon</b> <i>[PUB]</i></p> 	<p>Interruptions to water supply can sometimes be caused by a number of reasons such as planned pipeline maintenance work or pipe burst. PUB, Singapore’s national water agency, will have these water wagons reach the affected site within hours, ready with a bulk supply of clean drinking water, for public collection until the interruption has been cleared. The water wagon is equipped with a 1,000-litre tank to provide potable water. In addition, the water wagon houses a pump and generator that are capable of boosting water pressure up to a height of 30m. Residents are advised to bring along their own containers or pails during collection.</p> <p>This also marks the PUB’s inaugural participation in the D3.</p>
4	<p><b>Singapore Red Cross Transporter</b> <i>[Singapore Red Cross]</i></p>	<p>The Singapore Red Cross Transporter vehicle supports Civil Emergency Exercises and Disaster Management Standby by providing transportation for volunteers and essential logistics. It is equipped with a wheelchair lifter, allowing it to also function as a passenger transport vehicle in peacetime, especially for those who are wheelchair-bound.</p>



		<p>The Transporter can seat up to 10 passengers, including the driver.</p> <p>This also marks the Singapore Red Cross' inaugural participation in the D3.</p>
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4. Other assets, arranged in order of appearance, include:

<u>S/N</u>	<u>Name of Asset</u>	<u>Description</u>
1	<p><b>F-16C/D Fighting Falcon</b></p> <p><i>[Republic of Singapore Air Force]</i></p> 	<p>The F-16 is a multi-role tactical fighter aircraft with full air-to-air and air-to-surface capabilities. The aircraft features modern core avionics, Common Colour Multi-Function Display, sophisticated radar, smart weapon compatibility and state-of-the-art navigation and targeting systems.</p>
2	<p><b>Surface-to-Air PYthon-5 and DERby (SPYDER)</b></p> <p><i>[Republic of Singapore Air Force]</i></p> 	<p>The Surface-to-Air PYthon-5 and DERby (SPYDER) Ground Based Air Defence (GBAD) system is an all-weather air defence system with anti-aircraft, anti-munition capabilities and advanced infrared and radar-guided missiles with an effective interception range of up to 15km. The SPYDER missile system is equipped for 360-degree engagement against aerial threats and is able to engage multiple aerial targets simultaneously.</p>
3	<p><b>AH-64D Apache Attack Helicopter</b></p> <p><i>[Republic of Singapore Air Force]</i></p> 	<p>The AH-64D Apache Attack Helicopter is a multi-mission attack helicopter, designed to fight and survive in day, night and adverse weather conditions. It is the first tandem-seat helicopter in the RSAF, with the pilot located in the rear seat and co-pilot in the front seat. The AH-64D can be equipped with a highly sophisticated Fire Control Radar, which gives it the ability to detect, classify and prioritise stationary and moving targets both on the ground and in the air.</p>




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4	<p><b>Combatant Craft Medium (CCM)</b></p> <p><i>[Republic of Singapore Navy]</i></p> 	<p>The Combatant Craft Medium (CCM) - RITTER is a rigid hull inflatable boat operated by the Naval Diving Unit.</p> <p>The CCM - RITTER is approximately 9m long and is powered by two Mercury engines, each generating up to 350 horsepower. It was designed to prosecute a wide spectrum of operations including Maritime Security Operations and Counter-Piracy Operations. It can carry up to eight operators and achieve speeds of up to 40kts.</p>
5	<p><b>3-Series PC Class Patrol Craft</b></p> <p><i>[Singapore Police Force]</i></p> 	<p>The 3-series PC Class Patrol Craft is designed for interception operations, boarding and search of vessels and emergency rescue operations.</p> <p>The patrol craft operates in shallow waters and is capable of achieving speeds in excess of 50 knots (92.6km/hr). Its key features include an outboard propulsion system for high performance and ease of maintenance, and enhanced hull design for speed, agility and endurance in rough sea conditions.</p>
6	<p><b>High Mobility Artillery Rocket System (HIMARS)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The High Mobility Artillery Rocket System (HIMARS) is a precision weapon system operated by the Singapore Artillery. Highly mobile, it provides the Singapore Armed Forces (SAF) long-range capabilities with pin-point accuracy.</p> <p>Equipped with the Increased Crew Protection cabin, the HIMARS is designed to protect its three-man operating crew against plume gases, rocket launch debris and small arms fire.</p> <p>Carrying a single pod of six Multiple Launch Rocket Systems (MLRS) rockets, the HIMARS can engage targets as far as 70km away. A full launcher load of six rockets can also be fired within 45 seconds.</p>
7	<p><b>Peacekeeper Protected Response Vehicle (PRV)</b></p> <p><i>[Singapore Army]</i></p>	<p>The Peacekeeper Protected Response Vehicle (PRV) is the SAF's armoured personnel carrier designed to support servicemen carrying out island defence operations.</p>



S/N	Name of Asset	Description
		<p>The PRV's Remote Control Weapon System (RCWS) allows its operators to fire its single weapon — either the 40mm Automatic Grenade Launcher, the 12.7mm Heavy Machine Gun, or the 7.62mm Coaxial Machine Gun — from inside the vehicle.</p>
8	<p><b>Terrex Infantry Carrier Vehicle (ICV)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Terrex Infantry Carrier Vehicle (ICV) provides infantry forces with enhanced protection, mobility, and firepower, while connecting them to an integrated network of air and land combat platforms.</p> <p>Fitted with a modular protection system, the Terrex ICV provides infantry forces with enhanced all-round protection on the battlefield.</p> <p>The Terrex ICV also comes with a fully stabilised Remote Controlled Weapon System (RCWS) capable of providing direct precision fires, and a Weapon Detection System (WDS) that detects and locates the source of enemy fire.</p> <p>Connecting its crew to an integrated network of combat platforms, the Terrex ICV's Battlefield Management System (BMS) also allows the data collected by the WDS to be shared with other friendly forces, enhancing the Terrex ICV's interoperability with the SAF's arsenal of combat platforms.</p>
9	<p><b>Leopard 2SG Main Battle Tank (L2SG)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Leopard 2SG Main Battle Tank (L2SG) is an integral part of the SAF's combined arms force, featuring the five key characteristics of Armour – (1) Firepower, (2) Flexibility, (3) Armour Protection, (4) Shock Effect, and (5) Mobility.</p> <p>Equipped with a 120mm main gun, and a 7.62mm Coaxial Machine Gun, the L2SG is capable of engaging armoured and soft-skin targets in rapid succession, with overwhelming firepower.</p> <p>Each L2SG is also equipped with a Battlefield Management System (BMS), which allows the L2SG to seamlessly integrate with other combat forces.</p>



S/N	Name of Asset	Description
		<p>Highly mobile, the L2SG can travel at speeds up to 68km/h and can traverse difficult terrain with trenches and vertical obstacles to reach its objective.</p>
10	<p><b>Hunter Armoured Fighting Vehicle (AFV)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Hunter Armoured Fighting Vehicle (AFV) is the SAF's first fully digitalised platform, designed to provide increased survivability and lethality on urban terrain. Designed to fight with all hatches closed, the Hunter provides greater protection for its crew.</p> <p>A comprehensive suite of surveillance sensors and sighting systems are also integrated to enable faster engagement, enhancing the situational awareness of its crew.</p> <p>The Hunter is also armed with a 30mm Cannon, 7.62mm Coaxial Machine Gun, as well as Anti-Tank Guided Missiles for selected variants.</p> <p>Its sensors, sights and weapons are fully integrated into the Army Tactical Engagement and Information System (ARTEMIS), which enables quick and accurate real-time collaborative engagement of targets. Through the Hunter's Health and Utilisation Monitoring System (HUMS), maintenance, troubleshooting, and repair are also simplified for the vehicle.</p>
11	<p><b>Light Strike Vehicle MK II (LSV)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Light Strike Vehicle MK.II is the SAF's fast and lightweight anti-tank vehicle that is a formidable force on the battlefield due to its: (1) rapid deployability, (2) night-fighting capabilities, (3) weapon systems, and (4) integrated network capabilities. This vehicle can be heli-lifted into the battlefield and is equipped with an automatic transmission gear that allows it to travel up to a 110 km/h, for a maximum distance of 500km. Combined with its superior suspension systems and all-terrain tyres, this vehicle is built to travel across undulating terrains with stability, ease and control.</p> <p>This LSV is also capable of operating stealthily at night as it is equipped with infra-red headlights which are located at the front of the vehicle. The infra-red beams emitted by the headlights are invisible to the naked eye, but serve to</p>


S/N	Name of Asset	Description
		<p>illuminate the path for the Light Strike crew members who are equipped with Night Vision goggles.</p> <p>The LSV also has a Multi-weapon Mast, which allows for a variety of weapons to be mounted on the vehicle. One such variant is the Vehicle Launch Spike System, which can fire missiles at targets up to 4000m away. Another variant of the vehicle is mounted with the Automatic Grenade Launcher, commonly used to engage soft-skinned vehicles. It fires up to 350 High Explosive grenade rounds per minute, at targets up to 1500m away.</p> <p>Lastly, the LSV is equipped with the Battlefield Management System (BMS), which connects the crew to the network of fighting systems, be it other LSVs, or other platforms such as the AH-64 Apache Helicopter and the High Mobility Artillery Rocket System. The BMS gives the crew greater situational awareness on the battlefield and allows them to tap into the greater firepower provided by the mentioned platforms.</p>
12	<p><b>Next-generation Fast Response Car (Next-generation FRC)</b></p> <p><i>[Singapore Police Force]</i></p> 	<p>The Next-generation Fast Response Car (NGFRC) is purpose-built with various advanced systems to assist Police officers in their daily duties. The Integrated Vehicular Dashboard provides officers with seamless control of all the technological functions in the car. An In-Vehicle Video Recording System provides live streaming of high-resolution video footage to the Police Operations Command Centre that allows for better sense-making and incident management. The Automated Number Plate Recognition system detects vehicles-of-interest whether on the move or in stationary position, without officers having to divert their attention from other ongoing tasks. It also provides automatic screening of vehicles, removing the need for manual screening.</p> <p>The fleet of over 200 next-generation Fast Response Cars are already operationalised as of April 2024.</p>
13	<p><b>Emergency Response Team (ERT) Vehicle</b></p> <p><i>[Singapore Police Force]</i></p>	<p>The Emergency Response Team (ERT) officers operate a Sports Utility Vehicle (SUV) that is fitted with custom modifications such as concealed strobe lights, blinkers, siren, communication and public announcement systems.</p>



S/N	Name of Asset	Description
		<p>These modifications help the ERT to alert road users of its presence and to clear a path for officers to proceed to the scene safely and swiftly.</p> <p>The speed of the ERTs' response, besides their tactical training and equipping, is critical to keep Singapore safe against Public Security threats.</p>
14	<p><b>Mobile Adjustable Ramp System (MARS)</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Mobile Adjustable Ramp System (MARS) is an elevated tactical entry system used by the Special Operations Task Force to gain access to elevated structures or objectives.</p> <p>Its dual, side-by-side hydraulic ramps allow for simultaneous elevated access at varying heights, achieving optimum solutions when addressing multiple threats.</p>
15	<p><b>Explosive Ordnance Disposal (EOD) Response Vehicle</b></p> <p><i>[Singapore Army]</i></p> 	<p>The Explosive Ordnance Disposal (EOD) Response Vehicle is used by 36th Battalion, Singapore Combat Engineers to tackle a wide spectrum of operations, ranging from Peacetime Preventive Security Sweep to Improvised Explosive Device (IED) Disposal operations.</p> <p>It houses all mission essential equipment, including a large-size remote operating vehicle to enable the conduct of operations.</p>
16	<p><b>4th Generation Fire Bike</b></p> <p><i>[Singapore Civil Defence Force]</i></p>	<p>Since its introduction in 1998, the SCDF Fast Response Bike, also known as the Fire Bike, has provided a nimble alternative to conventional firefighting vehicles. Since its inception, the Fire Bike has been instrumental in enabling the SCDF to swiftly respond to fire and medical emergencies, particularly in our urban landscape where narrow roads and heavy traffic can lead to congestion.</p> <p>In 2012, the 3-wheeled Fire Bike was introduced to enhance the safety of our responders. It is equipped with a Compressed Air Foam backpack, enabling rapid and effective mitigation of small structural fires such as</p>

S/N	Name of Asset	Description
		<p>unattended cooking and vehicle fires. Since its introduction, Fire Bikers have also upgraded their training to become Emergency Medical Technicians. This dual response capability allows the SCDF to maximise its resources while remaining lean yet versatile.</p> <p>In 2022, the latest 4th Generation Fire Bike was introduced. It was designed by a collaboration of experts from various departments including the SCDF Fire Bike Committee, comprising fire bikers from the frontline units, engineers from HTX and project officers in the SCDF Operations Department. This new Fire Bike features several enhancements such as a side-mounted CAF backpack for better ergonomics, increased stowage space, an integrated two-tone siren with day and night modes, dual-coloured blinker lights to improve visibility and safety, tyre pressure monitoring system, and a reverse gear function.</p>
17	<p><b>6th Generation Light Fire Attack Vehicle (LF6G)</b></p> <p><i>[Singapore Civil Defence Force]</i></p> 	<p>First introduced in 2000, the Light Fire Attack Vehicle (LFAV), or more affectionately known as the Red Rhino, was conceptualised and designed in-house by the SCDF to address the challenges posed by highly urbanised Singapore with narrow streets and closely built buildings. It is also designed to draw water from Singapore's comprehensive network of hydrants for firefighting purposes.</p> <p>The latest generation of the LFAV (LF6G) is equipped with the second generation of the Red Rhino Robot (3R 2.0). Weighing approximately 172 kilograms, the 3R 2.0 features a monitor with a water throwing capacity of 30 meters and an output of 945 litres per minute. The 3R 2.0 can be controlled remotely, allowing firefighters to operate from a safe distance. It is designed to be more compact and manoeuvrable, with modular attachments for casualty transportation and equipment transport.</p> <p>The LF6G is equipped with a fully integrated Compressed Air Foam (CAF) pump system. The CAF can extinguish fire four times faster while using 70% less water, thereby effectively minimising water damage to property during firefighting operations.</p>

S/N	Name of Asset	Description
		<p>In addition, the LF6G also carries a fire blanket that can be used to augment firefighting operations involving vehicles.</p>
18	<p><b>7th Generation Ambulance</b></p> <p><i>[Singapore Civil Defence Force]</i></p> 	<p>As part of SCDF's transformation efforts, the SCDF's 7th Generation Ambulance is designed to tackle both present and future pre-hospital emergency challenges. To be able to serve a country with an aging population and many complex medical cases, the ambulance's capabilities have to be future proof to operate more efficiently and effectively.</p> <p>The Ambulance is designed with various advanced features to tackle pre-hospital emergency challenges, such as:</p> <ul style="list-style-type: none"> <li>• An automatic decontamination system to sanitise the vehicle and equipment rapidly and effectively after conveying infectious patients, thus being more prepared for future pandemics.</li> <li>• The use of solar-power and smart charging to increase operational readiness and flexibility, especially during off-site deployments.</li> <li>• A modular system that improves the Ambulance's efficiency, and enhances patient and crew safety, by securing equipment firmly in the ambulance, coupled with an electronically controlled loading and unloading system for stretchers.</li> <li>• Vehicle safety features include a 360-degree vehicle camera, automatic height limit detector, vehicle lane assist and brake activation assist.</li> </ul>
19	<p><b>DART Rescue Vehicle</b></p> <p><i>[Singapore Civil Defence Force]</i></p> 	<p>The DART Rescue Vehicle, also known as the DRV, is the 6th generation of DART rescue appliance. It enhances operational capability and enables DART to respond to height, land, and water rescue incidents.</p> <p>By incorporating end user inputs, the DRV has user centric designs to improve the efficiency of DART operations.</p>

S/N	Name of Asset	Description
		<p>A high-capacity crane and tailgate are integrated to meet DART's operational requirements for both operations and logistics.</p> <p>The DRV has modular capabilities inherited from earlier DART vehicles, making it fully compatible with the urban search and rescue modules or to serve as a carrier for DART's Heli-bucket or Skid Loader.</p>
20	<p><b>5th Generation Pump Ladder</b></p> <p><i>[Singapore Civil Defence Force]</i></p> 	<p>The 5th Generation Pump Ladder, also known as the Fire Engine, stands as the backbone of SCDF's frontline emergency response and has been designed with the operational efficiency of SCDF firefighters in mind.</p> <p>The Pump Ladder's Compressed Air Foam (CAF) pump gives SCDF firefighters the flexibility to toggle between two extinguishing mediums – water and CAF. CAF is an effective firefighting medium for fires involving petroleum and flammable materials, as it can effectively cool and smother the materials, cutting off the oxygen supply during the burning process.</p> <p>The Pump Ladder also includes a Remote-Controlled Monitor with a throwing range of approximately 70 meters and an output of around 3,500 litres per minute. This enables firefighters to effectively combat large fires.</p> <p>The Pump Ladder can also be transformed into a decontamination station for Hazmat incidents, enabling casualties to undergo decontamination before being transported to the hospital.</p>

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