1. **Capabilities** – In this regard, you may wish to consider future integrated capability development and the planning and delivery requirements to support a joint force approach in terms of new equipment, professional military education and training, maintenance and development of infrastructure, developments in military doctrine, and transformative concepts, including specialist capabilities, that prepare and support the Defence Forces for future operations.

Towards balanced capability development?

Capabilities in the context of defence are often misconstrued as simply shopping lists for military hardware, which forgets the importance of organised, well trained and led forces who have a clear and credible doctrine. In fact, defence capabilities should be carefully matched with a national defence strategy which accurately reflects the threats a country faces, some of which are a mixture of the obvious but also the unforeseeable. Therefore, developing national defence capabilities requires investing in a balanced way.

Firstly, there needs to balance between the military software side (strategy, doctrine, morale, leadership) and the various hardware modern militaries need (specific units, sensors, weapons, logistics).

Secondly, there needs to be balance, or alignment, between the national strategic ends, the Irish Defence Forces’ operational ways (or how they are organised), and finally, their tactical means (or the equipment and techniques they employ).

Thirdly, defence capabilities need to be balanced between the various military arms (land, sea and air forces), and within each service evenness between corps/branches may also be required (artillery, cavalry, etc.). In today’s jargon this type of balance is described as Joint or Multi-Domain capabilities. In an Irish context one might add that ‘jointness’ and ‘joint capabilities’ also means as much the ability to work with other countries’ militaries in peacekeeping and crisis interventions (termed ‘combined’ operations in military jargon). Equally vital is the requirement to work well with domestic and international civil powers, agencies and NGOs, in either a domestic security or external peacekeeping context.
Fourth, any investment in capabilities should be functionally balanced to reflect timeless military variables: the importance of protection (armour, etc.); the requirement for mobility (vehicles, vessels, aircraft etc.); the necessity for adequate firepower (weapons, etc.); excellent situational awareness (sensors and communications, etc.); and timely and professional intelligence collection, analysis and dissemination.

Finally, developing defence capabilities needs to find a balance between looking forwards and backwards. Militaries inherit capabilities and do not start from a blank slate. Many weapon systems last a long time in service, while some equipment becomes obsolescent very quickly. One needs to look at legacy platforms and procurements: are these worth upgrading and keeping, or what entirely brand new capabilities might be needed? A credible capability programme needs to strike a compromise between these many features if it is to achieve balance and coherence in capability development.

**Capabilities, Structures and Staffing have to fit Strategy and Threats**

This is not the place to offer a discussion of Irish defence strategy—or lack of. As regards national strategic ends we can simply take it as a given that the traditional Irish policy of non-membership of military alliances will continue to inform defence planning (as is set out the White Paper 2015 and Update 2019). There is a wide political consensus that underpins the policy. Whatever capabilities are developed should be consistent with neutrality.

However, it is vital to observe that neutrality does not preclude an extensive military co-operation with friendly states for the purposes of training, professionalism, or delivering peacekeeping. Consequently it is possible that certain defence capabilities could be developed or procured via co-operation, sometimes jointly, or even by sharing and pooling initiatives, of which there are several in Europe that could be suitable for Ireland. Obviously this could only be done with suitable and friendly states. Yet such an approach need not involve traditional territorial defence capabilities which could impinge on the neutrality aspect.

**Develop Capabilities to Face Known (and unknown) Threats**

Capabilities should reflect the threats a country faces, insofar as these can be reasonably estimated. One way of visualizing the principal threats to Ireland’s security over the next 10 years to 2030 can be to construct a *Matrix Analysis of Threat Scenarios* (MATS) which plots on one axis a “guesstimate” as to the probability of any specific threat materializing, against on the other axis the scale of harm that a given threat scenario might entail.
Figure 1, Matrix Analysis of Threat Scenarios for Ireland out to 2020
(Dr. Brendan Flynn)

For the sake of illustration here, probability estimates for threat scenarios are simply ranked on a tri-partite scale that captures the very likely, those scenarios that are merely possible, and finally, those that are very unlikely. To estimate the scale of harm it is suggested that the most important measure should be numbers of fatalities and numbers of injured arising from a specific threat. Monetary, or other losses such as critical infrastructure downtime, could and should be included. However, this is less straightforward to estimate. For the sake of illustration here, such data are excluded. Moreover, in principle it is submitted we should prioritize the protection of life of Irish citizens (and residents) over economic interests, which although surely legitimate should not be ranked alongside threats which pose a significant degree of loss of life or mass injuries.

**Expecting the unexpected with the “Golf Bag Principle”**

One immediate objection to this sort of approach is that unforeseen, so called Black Swan threats, are left out by such an analysis. In fact threats are usually a mixture of the quite foreseeable, many of which have become endemic and routine (for example IEDS in peacekeeping missions), threats that are conceivable but very unlikely and those that are truly unanticipated. A way of responding to that problem, and indeed a good practical way to think about defence capabilities, is the ‘Golf-Bag Principle’. This is the idea that what is required is a flexible range of different capabilities, which can be combined for different situations as needed. The “Golf Bag principle” works well because it recognises finite limits: you can only carry and afford a certain number of clubs-so choose them carefully! Note however, investing in one or two wonder weapons violates this principle, because pairing it down to the bone is not an option experienced golfers welcome knowing that a decent set of several diverse clubs proves its value time and again in dealing with unexpected situations.

While a multi-use club exists and is certainly welcome (as are military capabilities that are good for many threats) the truth is that in some cases you will need quite specific tools that are rarely used but may be critical: sand wedges to get out of bunkers come to mind.
Ireland’s defence forces then should have a ‘Golf Bag’ of defence capabilities-for the routine predictable threats but also capabilities that would permit improvisation and adaptability in the face of unforeseeable contingencies, plus a few capabilities which are for very rare but critical situations. Together these should have the ability to work together as part of a suite of capabilities that can be adapted as the situation requires. Drawing from the MATS exercise described before it is now possible to list a coherent set of balanced and desirable capabilities, remembering that these are driven by a certain threat analysis, which distinguishes between the probability of a scenario occurring and the likelihood it will produce fatalities and wounded personnel, citizens or residents. Note I explore in detail here just a few worked out examples of capabilities linked to threat analysis.

**Capability 1a: Consolidating the Mobility and Protection for Irish Peacekeepers Overseas through a new Highly Protected Vehicle fleet.**

Peacekeeping is a strategic mission for the Irish Defence Forces because it aligns with Ireland’s core foreign policy goals. As a small state it is one way we gain influence and provide practical security in global situations. Yet it is during overseas peacekeeping that the Irish Defence Forces has sustained the greatest number of fatalities and injuries. A disastrously lethal ambush or attack could badly undermine Irish participation and thus represents a strategic level risk, although a tactical incident.

Peacekeeping remains a dangerous but core activity for the Irish DF. New threats are emerging (aerial drones being armed by non-state groups, vehicle based suicide tactics, improvised artillery, weaponization of social media) alongside consistent risks-notably IEDs. More sophisticated small arms, optics, night vision and guided anti-armour weapons are proliferating in the Middle East and Africa among armed elements that could threaten Irish forces deployed on peacekeeping.

To be effective, Irish peacekeepers need state of the art protection although it is important that the public understand there is never a zero risk or 100 per cent protection possible. Increasingly protection needs to be provided as well for civilian populations who may be under the guardianship of Irish troops: there is a conceptual shift underway from force protection to population protection. In this regard protection is not just a function of increased armour or countermeasures, but about a skilful blend of tactics, mobility, intelligence and in some rarer cases, the appropriate use of firepower.

The Irish military has large (8x8, circa 15-25 tonne) Pirhana IV APC vehicles, a significant number of which have been recently upgraded. However, the fleet is now 20 years old and while the latest upgrade continues to ensure these vehicles remain useful as the best protected Irish army vehicles available, they are not the best in class for protection (from IEDs) among contemporary armies. They will need to be replaced, certainly by 2030 if not well before. Smaller vehicles (RG32 LTAV, circa 10 tonne, 4x4) with good ballistic protection are also in the Irish inventory, but in very limited numbers (27) and their readiness and reliability appears to have been mixed. Moreover, they are deployed as ISTAR assets not as general personnel carriers.

Smaller 4x4 vehicles are more desirable as they are easier to deploy and have a reduced logistical footprint. If threats are low, protected SUV type vehicles in the class of Toyota Hilux are satisfactory (and some of these have been recently ordered for the Irish army from a French supplier). However, if IEDs or other threats are significant (as for example...
A proper protected vehicle is required. NATO has well worked out standards for vehicle protection which have become a *de facto* international standard, with so-called STANAG Level 4a and 4b the highest practical level that European armies are procuring.

It is imperative that from 2025 onwards that the Irish defence forces have a sufficiently large (100+) fleet of well protected vehicles that reach the highest practical NATO standard for protection (level 4a and 4b), and that these vehicles are of a size and scale that facilitates deployability by air (can fit into a Hercules) and easy shipping by sea. While it would be preferable to have smaller, more compact, and easier to deploy vehicles, much larger vehicles sometimes offer greater protection and growth potential.

The exact choice of vehicle should be a matter for Irish military experts themselves who are best placed to assess the trade-offs of competing vehicle designs. For the same reason, I do not go into speculation of the types of weapons such vehicles might be equipped with, except to note an important consideration in peacekeeping operations is the need for great caution on the proportionality and discrimination in the use of force, should such be warranted. This speaks to vehicle weapon options that would place a premium on accuracy over rate or volume of fire, have guided or precision capabilities and possibly allow for employment indirectly (from cover or concealed). Less lethal weapons and systems would also be a feature to consider, although the category is contentious. Related weapon systems that will be essential to protect Irish peacekeepers are those for jamming, disabling, or destroying small aerial drones; detection/disabling of night vision optics; detection systems for long range heavy calibre snipers; tactics, techniques and procedures to deal with VBIEDs, which are often armoured and hard to stop even if detected. For example, the 12.7mm weapons system of the upgraded Pirhana would in many cases be insufficient to deal with a VBIED threat.

Any new vehicle fleet should be reasonably interoperable with the typical European forces that Ireland can reasonably expect to be deployed with in peacekeeping missions. Indeed there could be considerable financial and operational merit in a joint procurement (economies of scale), or a shared leasing arrangement, and possibly even in a shared pool of peacekeeping vehicles that could be semi-permanently deployed overseas for ready dispatch to mission in Africa or the Middle east. There is a precedent for this in the 1980s era UN funded procurement of Finnish SISU APC for UNIFIL service, which at that time were of a good standard of protection. Could the same collaborative approach not be explored today with a few other European states who share our profile and expertise in overseas peacekeeping?

In any event a new highly protected vehicle (HPV) fleet should have a planned 20-25 year life-cycle with a mid-life upgrade/re-build planned and fully financed at their mid-career point-12-15 years in service. Their armour and protection suite should be modular, allowing the vehicles to have increased protection if threats warrant this. Today, main battle tanks and high value vehicles are protected by so-called Active Protection Systems which are expensive and sophisticated countermeasures that can detect and defeat incoming missiles and rocket projectiles. By the 2030 such technologies may become more commonplace and affordable as add-on kits for many other vehicles. Ireland’s defence force needs to follow such trends closely and this requires a dedicated standing specialist vehicle technology protection unit which has its own long-term earmarked budget, is expert on protection technology trends which are continuously evolving, and is able to
deploy overseas at short notice to update and maintain armour and other systems for vehicles essential to Irish peacekeeping missions.

**Capability 1b-growing the Defence Forces expertise on Explosive Ordnance Disposal**

The Defence Forces have a proven expertise in bomb disposal and dealing with dangerous materials. It is not widely appreciated the sheer volume of call-outs that Irish army EOD teams engage in for An Garda Síochána. The EOD skill set is a major piece in managing the menace of IEDs, although counter C-IEDs efforts are as much about identifying and disrupting bomb making networks as they are about defusing individually planted devices. Moreover, the real added value in a peace-keeping context would logically come from training local forces in EOD skills rather than deploying very expensive western personnel indefinitely. That requires a dedicated sub-unit which is focused on expeditionary training of CIED overseas with sufficient scale to allow for rotations of personnel. What is needed more generally under this heading is an increase in budget, a steady increase in staffing and greater dedicated experimentation as regards counter IED and EOD.

**Capability 1c-appropriate, deployable fire support for Irish peacekeepers in high risk environments.**

Following the above discussion, Irish peacekeepers, and the civilian populations they are obliged to protect, could easily face situations where they are under threat from artillery systems, weaponized aerial drones and in some cases, aircraft. The wanton use of heavy artillery, often passed into the hands of irregular proxy forces and militias, has been a feature of many recent conflicts, notably Syria and the Ukraine. Improvised mortars and rocket artillery have also become a ubiquitous trend in recent middle eastern conflicts. The fear here is that non-state forces, not subject to the usual restraint or discipline of regular militaries, may readily employ these weapons against Irish peacekeepers or civilians. Also a feature of many recent conflicts is a greater prevalence of siege like operations (Aleppo, Mosul, Sarajevo, etc.), in which use of artillery features as a key instrument of terror.

It is not possible to provide peacekeepers with military supports that cover every possible risk, and most peacekeeping missions today do not usually feature threats to employ these sorts of higher end weapons. However, it is naïve and complacent to not anticipate and plan for protecting and supporting the Irish peacekeepers of tomorrow, against the most severe threats. It is worth recalling that Irish contingents which deployed to the Lebanon in the 1980s did so with accompanying anti-tank, heavy mortars and armoured car support, which while rarely ever used, were useful on occasion and had a certain deterrent effect against misconduct by local forces on the ground. Heavier 155mm artillery have been occasionally deployed to UNIFIL by the French contingent in the past and light artillery guns and mortars were used successfully, and in a limited way as counter-battery assets targeting paramilitary mortars, by British, French and Dutch forces to lift the siege of Sarajevo in 1995.

This ensured the viability of the UNPROFOR mission. Artillery offered the peacekeeping force commander on the ground an asset that they could control themselves, which greatly improves their local standing and negotiation power with armed elements, and unlike air assets, these systems are relatively weather proof and logistically robust. Relatedly, an operational risk in complex, combined multi-national peacekeeping operations is that
contingency plans for fire support, aerial cover and back-up from other countries forces can easily fail or be delayed in the chaos of conflict. What this means in operational terms is that an Irish national contingent could be badly exposed, implying that having some capabilities of their own may be vital.

Somehow it has become informally assumed that Ireland will only deploy light infantry units on peacekeeping missions, with at most protected vehicles to support them, because it is implied that only incidental limited threats are likely, rather than sustained deliberate targeting of Irish units with heavy weapons. History suggests this is utterly naïve. Operationally, it also limits Ireland’s peacekeeping contribution, although to be clear here, the converse rationale of actively seeking the riskiest, most ‘kinetic’ missions is to be rejected as inconsistent with Irish foreign policy goals and our peacekeeping approach.

However, as a contingency to defend deployed peacekeepers in certain cases or for specific missions of higher risk, the Irish defence force requires an organic (i.e. Irish owned) deployable fire support or artillery unit which would have a small number of dedicated counter battery systems of sufficient range and precision to detect, deter and if necessary, destroy opposing force artillery units that constitute a proven threat to Irish forces, refugee camps or civilians areas under Irish forces protection.

There is little point going into the complex details of what such a weapon system might look like. Moreover, such a capability requires advanced fire control technologies, sensors and counter battery radar as much as weapons or munitions. Evaluation of specific systems is best left to the military professionals themselves, yet broadly speaking, two points are worth making.

(1) Ideally, what should be procured is an integral capability package which includes precision munitions, simulators and training, fire control technologies and weapons, rather than buying items piecemeal and hoping they integrate well together.

(2) Such a capability could be delivered by just a small number (10<) of either mobile protected 155mm gun systems or some type of mobile mortar system, although the latter probably lack sufficient range to provide a true counter battery capability. Regardless of whatever specific system might be chosen, it should be deployable and offer a high standard of protection for the crew (STANAG levels 3-4+).

In any event Ireland’s existing stock of British 105mm guns are now simply too old (ordered in batches from the early 1980s and late 1990s) and they will need to be replaced by 2030 if not well before. Other small states have acquired such artillery systems, notably Denmark purchased 15 French manufactured, truck mounted 155mm guns in 2017 for around USD$50m. Cheaper options might include purchasing surplus or refurbished systems.

More important than any specific weapon (whether a gun, rocket or mortar) is arguably the need for Ireland’s military to acquire a capability to use precision munitions, which are complementary with traditional artillery ordnance which is today anyhow employed which much greater precision using advance fire control technologies, computing, lasers, drones and associated innovations. Precision munitions employ a blend of technologies, GPS, laser, etc., and while they are never flawless, “wonder weapons”, they do offer considerable accuracy in a counter-battery role. Unfortunately, they are very expensive
(costs of between USD$50,000-100,000 per unit would not be unusual), and as a result they pose significant challenges for a state like Ireland that traditionally spends very little on defence. Shared purchases of such munitions with friendly states might exhibit some economies of scale.

Moreover, it is important to acknowledge that artillery remains a type of weapon class that is capable of great harm if misused, therefore utmost care is required in training, rules of engagement and doctrine as to when, and as often when not to deploy and use such weapons. However, the use of high technology precision and guided munitions fits with the political, legal and humanitarian requirement to ensure that such force, if it has to be used, would only be employed because of necessity and with great attention to discrimination and proportionality. This is a type of capability that might be realistically deployed once every 20 years, yet like the sand-wedge in the golf bag, it could prove an invaluable capability that saves the lives of Irish peacekeepers in extreme situations.

**Capability 2-Developing Irish Defence Force abilities to face unconventional aerial threats.**

Weaponized or even un-armed aerial drones will likely pose a risk for Irish peacekeepers abroad in the future. Such peacekeeping forces are also sometimes at risk from combat aircraft being used against them, although in that case the threat would typically come from states. In general, it is assumed UN level diplomacy and wider contingency planning can deter or prevent such. If aerial threats were persistent for any peacekeeping force, the logical solution would be deployment of peacekeepers with associated air defence units and/or air-force ‘top cover’. These are military assets that are simply not available to the Irish defence forces at a level of scale or sophistication of other militaries. If specialised air defence support is required as part of a peacekeeping mission which Ireland participates in, it is realistically best left to be provided by another country which has advanced air defence assets or indeed by NATO (working to a UN mandate).

The existing air defence specialism in the Irish defence force is very small and concentrated in the 1st Air Defence Regiment, in the Curragh, which employs relatively old Dutch radars, some very old guns, and a small number of short-range Swedish surface to air missiles that have been updated some years ago. These systems are probably viable against some drones, but less so against modern combat aircraft. The Irish Air Corps lack any fast mover combat aircraft or the associated aerial radar or missiles. More seriously, there is no national military radar network as such, but rather a civilian air traffic control system which cannot reliably detect military or civilian aircraft if they turn their radio transponders off. Therefore there are significant parts of Irish airspace (the north west in particular) where the Irish authorities (civil and military) have no situational awareness of what activity is taking place above Ireland. It goes without saying this is not desirable. However, it is far from clear what should be done to address such a lacuna.

This matter has come to a head with reports of several incidents involving long-range Russian military aircraft which have, apparently, transited through or near to, Irish and British air routes. It is crucial to note here that British and Irish airspace jurisdiction and competences overlap. There is a great deal of pragmatic and effective air traffic control cooperation between Irish and British civil aviation authorities to manage any irregular
aircraft movements or terror threats. Nothing should be done which might undermine such a relationship.

However, because such aircraft do not routinely employ transponders there would appear to be an issue of concern here from an Irish civil air traffic control and safety perspective, and more generally such activity while not necessarily unlawful, is far from desirable as regards the security of the Irish state. However, the reality is that such aircraft movements are tracked by NATO radar and other assets, and in particular they are intercepted by the RAF using fast jets. In the event of a 9/11 style incident over or inbound to Ireland, it would likely be NATO aerial monitoring and RAF quick reaction assets that would be employed to intercept such an aircraft attempting to control and monitor the situation as best as possible.

It does not seem very logical or feasible for Ireland to decide to invest in our own bespoke arrangements to attempt to duplicate this effort in a way that would be likely of marginal credibility. Speculative talk of Ireland buying fast jet interceptors is basically counter-productive to the sensible development of the Irish Defence Force’s capabilities, and should be dismissed as ‘magical thinking’. Training jet pilots costs several millions per person. The operating costs of, what are now considered old combat aircraft such as the American F16, are around $6,000 per hour. Bulgaria has attempted to negotiate the purchase of just eight of this model, but the price of over 1 billion USD is understandably controversial and their value in such small numbers very limited. It would be probably useful if the Defence Commission firmly ruled out equivalent suggestions for Ireland; on cost grounds alone.

What makes rather more sense, and represents a more logical intermediate step in capability development, would be the funding and deployment over a phased period of time to 2030 of a National Situational Awareness Network (NSAN) which could blend and combine a range of different technologies to detect, classify and prioritise air, sea and land movements of interest to the Defence Forces, but also other civil agencies and stakeholders. Consequently funding for such might be shared from beyond the Defence Budget. Such as system could employ a fusion of ground based mobile radars, existing ship radars and their situational awareness reports, with updated civil aviation radar feeds, and more ambitiously, commercial leased or purchased micro-satellite sensor imagery. Many relatively small state militaries now have their ‘own’ satellite systems, usually for communications relay but the relative costs of surveillance micro and nano satellites has fallen to levels which make them affordable for small states like Ireland, although typically such devices lack endurance. Collaboration and buying satellite ‘bandwidth’ time with other friendly countries, or even commercial providers, probably makes the most sense in the mid-term.

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A national situational awareness capability would be affordable if paced and phased although there is some technology and cost risk associated with building any bespoke systems of systems. Starting with simple capability nodes would be one way to proceed. For example, the UK, Uruguay and other countries have purchased Spanish manufactured long range ‘Lanza’ radars for relatively affordable costs\(^4\), and equivalent systems are available from several suppliers. Such a system would offer coverage of hundreds of km\(^2\) and would be a relatively straightforward first step in delivering national situational awareness.

Aerial drones pose a possible novel domestic terrorism threat, although less sensationally, flying (and possibly submerged) drones and small aircraft will more likely be employed for smuggling and public order/disruptive type threats, which although more a policing and civil aviation matter, would require a response from the Defence Forces to support the civil agencies.

There are some less-lethal systems that can jam and disable the smaller and cheaper drones, and these include portable designs that can be employed in direct line-of-sight against aerial drones. More extensive ‘geofencing’ systems are also available and are maturing. The Irish defence forces should procure portable drone jamming systems for overseas deployed contingents and portable geo-fencing systems that could provide point protection for specific areas.

Purchasing a new generation of air defence radars and missiles would in the short and medium term out to 2030 be a prohibitively expensive endeavour probably not justified by the rarity of the higher end threat they are optimised to deal with, as opposed to what is likely to be a more endemic nuisance use of commercial off the shelf drones by non-state actors in peacekeeping contexts, or domestically, manifesting as a policing and air safety problem. An exception to this might be the procurement of relatively limited, portable, and lower cost MANPAD systems, possibly surplus from a friendly state which could have stocks of these (notably France, Poland, etc.). If such could be procured affordably might ensure air defence capabilities and skills for the Irish defence forces remain relevant.

\textit{Capability 3-a rapidly deployable, expeditionary, and scalable Joint Irish military engineering/medical/signals task force to respond to climate change induced natural disasters and civil authorities.}

Climate Change is not the primary responsibility of any nation’s soldiers, yet as it seems probable that climate change associated extreme weather and climate events will increase, the Irish military needs to be responsive. There are other state agencies who are also relevant or indeed more suitable, but the Defence Forces should not shirk a type of threat that will be essential to proving their relevance. The militaries of other countries are drawing lessons and planning for operations that will be shaped by climate change and in many cases this will require military personnel directly responding to climate events\(^5\).

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\(^4\) Estimated at under 14m USD in 2019, see: https://chainhomehigh.com/2019/05/16/lanza-extravaganza/

Moreover, when deployed overseas, climate change will likely be a feature of local conflicts, requiring peacekeepers to not just prevent violence but to deliver water, sanitation and undertake essential works in situ. After climate change weather disasters they may also be required to provide amphibious mobility, emergency bridging, energy/electricity generation and mobile communication networks. It goes without saying that if Ireland is serious about maximising its ‘soft power’ as a peacekeeping nation we should be prepared to deploy our skilled engineering, medical and signals troops to help other countries as they face climate related problems. **What is required here is a novel capability in the guise of a standing, fast deployable, disaster aid joint task force**, although in some ways an existing structure is provided by the current *ad hoc* Joint Task Force Fortitude, which was established in response to COVID19. What is proposed here is that permanent standing equivalent task force be created.

The COVID19 pandemic, and the excellent response of the Irish Defence Force are also relevant here. However, rather than seeing such a mission as an exceptional event, it is arguable that what it reveals is the need for a permanent standing capability to respond to future pandemics (which may be conceivably worse or even more complex). Again, the military are not the first and most obvious responder, but they bring vital skills and capabilities to a suite of national responses, notably a highly disciplined well trained surge force and specialist equipment. Moreover, military training and preparation for CBRN risks are cognate with higher end pandemic responses. Therefore the Irish military must be a critical part of Ireland’s planning for future possible pandemics.

The Irish army has currently only a small combat engineering structure-just two Coy sized elements for each brigade, with a depot cadre structure in the Curragh. This is arguably far too small a scale of provision given just how important military related engineering skills will be in the future if we consider climate change events a new normal.

As regards signals (termed Communication Information Service in Irish military jargon) there are also just two company sized units with each Brigade and a few more dedicated signals units for service support. The relevant skill-set here is an ability to deploy quickly and restore civilian mobile communication networks, rather than just providing a secure radio and IT network for Irish forces.

Ireland’s medical corps is perhaps one of smallest support services, which given the realities demonstrated by COVID19 would now appear to be far from satisfactory. Ireland has no dedicated mobile, deployable, military field hospital unit, although its small number of medical staff are very professional. In 2014, limited numbers of Irish army medical personnel, along with Canadian army specialists, deployed as part of a British led Operation Gritrock to deal with the Ebola outbreak in West Africa. This type of deployment arguably provides a model for what is required here-a new normal for the Irish Defence Forces.

However, developing a NATO standard, fully certified, military field hospital would be expensive and complex objective which would require careful planning, evaluation and consultation. It is not a capability that can be delivered overnight. Interim steps at a more
scalable level could be achieved in the short term. Nonetheless, in principle it is probably an asset that in the long term Ireland should have to deal with future contingencies and align the Defence Forces to respond with domestic emergency planning and foreign policy goals that require Ireland to be responsive globally to countries facing climate change or pandemic type crises.

It is worth point out here that once again collaboration with other friendly countries could represent the most economic and practical way to develop such a capability. For example after extensive flooding in the Danube in the 1990s, Hungary, Romania, Slovakia, Ukraine, agreed to form the Tisa Multinational Engineer Battalion, which brings together special bridging, pontoon and flood management skills. Similar combined Disaster Response formations could be brokered with other European states, creating economies of scale and allowing each country to perhaps specialise.

In any event, a well-resourced Disaster Response Joint Task Force should be immediately created, principally of army personnel but also open to naval and air corps experts on secondment. It would train and deploy as an integrated package at the level of a reinforced company, combining engineers, medical and signals (CIS) specialists, and perhaps special forces for protection and reconnaissance. It should on rotation have available a company size element for deployment overseas on standby at very short notice (72 hours) to engage in disaster related relief operations which could last between 1-12 weeks. A further rapidly deployable company sized element should be available for deployment on the island of Ireland to provide fast support to civil authorities facing flooding, droughts, wild-fires and other extreme weather/climate related emergencies. As a Joint Task Force there would be an option to add naval vessels or air corps aircraft as part of an overall deployment, under the command of a single task force commander, whether in Ireland or abroad. Such ‘scaled up’ deployments should be trained for and rehearsed.

To have at any one time two ready-made companies on standby likely requires at least 3 if not 4 more companies in successive roulements for training/stand-up, stand-by, and stand-down/refitting. In summary, if Ireland wants to take the climate change threat seriously the implication is a practical doubling of military engineers, medical and signal specialists so that a deployable task force equivalent to a battalion sized unit (500-800) can be raised, equipped and staffed.

While reserves could play a really important role here, it is important to note that what is required are ready to deploy, fully-formed units, which would necessitate a model of using reserves which is comfortable with service overseas and with a pattern whereby reservists are mobilised in a planned career cycle for full-time service and then stood down on recurrent iterations. The British Army successfully operates a category of specialist ‘full time reserves’ which could serve as a model to some extent.

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2. **Structures** – In this regard, you may wish to consider the most effective high-level Command and Control (C2) structures within the Defence Forces to ensure an agile and balanced approach that can function across all domains at home and overseas.
Additionally, you may wish to address appropriate future force structures for the Army (including its brigade structure), the Air Corps, and the Naval Service, individually as component services and collectively as part of an integrated joint force approach.

Furthermore, you may wish to address the changing nature of reservists, which presents an opportunity for the Reserve Defence Force to further integrate and support the Permanent Defence Force through the provision of enhanced collective and specialist capability across all domains.

Continuing with the risk informed analysis matrix used before, a number of important structural changes would seem logical, for a defence forces that can be summed up as having air and naval components that seems far too small, and a land army that seems far too conventional and under-resourced in its structure.

As regards the Air Corps, it has been argued that dabbling in fast jets is simply unrealistic an aspiration. The single most useful aircraft type and capability the Air Corps can offer is air-mobility through a greater number of helicopters. This type of aircraft is essential when faced with terror events, with disasters and if deployed abroad, helicopters offer exceptional influence and standing within peacekeeping missions. Helicopters offer medical evacuation capabilities that get wounded personnel and people to medical assistance within ‘the golden hour’ and thus are mission critical. Unfortunately, Ireland’s armed forces have relatively few helicopters - just eight. By way of contrast neutral Austria has 29 old small helicopters and 32 medium helicopters. In 2020 Austria ordered 18 Italian manufactured medium helicopters to replace the old fleet, in a deal valued at valued at Euro 300m. Finland’s Army operate 27 helicopters, and their Border Guards (under the interior ministry) a further dozen. New Zealand’s armed forces have 21 helicopters, including several that are deployed on their naval vessels. **Ireland should at a minimum double its fleet of medium sized helicopters, that is from 8 to 16 by 2030.** These should be optimised for operations over water if required, but they should not be envisaged as replacements for the long range SAR coverage that is currently performed by a commercial contractor.

As regards the naval service, its current objective should be to stem operational problems which are limiting the number of available crews for ships. Three older vessels have been retired or are retiring - the LE. Eithne which was unique because it had a flexible hanger space and deck, and the two smaller ex-Royal Navy Peacock class OPVs (LE. Orla and LE. Ciara). Current procurement plans have promised a larger, Multi-Role Vessel which would have a helideck and some logistics capability and two coastal patrol vessels to replace Orla and Ciara. **While naval procurement plans may have to be delayed in the absence of personnel, they should not be mothballed.** In particular some version of a Multi-Role Vessel is probably essential for the growth and evolution of the naval service as it would be ideal for deployments abroad and a variety of domestic contingencies. However, as a matter of defence planning, the focus should not be exclusively on ships, but rather on threats, missions and capabilities and how the naval service as part of a joint force can deliver these.

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In this regard it is vital that the naval service be allowed to retain an expeditionary focus and not just be seen as a fishery protection service. The deployment to the Mediterranean as part of a response to the migration wave of 2015-2018 was one aspect of this, but there are other very credible missions where an Irish naval presence could play a significant role—a anti-drug interdiction mission of the West African coast is one possibility. Such deployments could also be joint operations, with Air Corp PC12 or new Airbus 295 assets (which have been ordered recently). The strategic rationale for such missions is to pre-empt the volume of narcotics flowing into Ireland, which is of a scale to provide organised drug gangs with finances (in the hundreds of millions of Euro) that give them an opportunity to fundamentally undermine the law and order of the state. This is certainly not classic defence policy, but it is exactly the type of flexible, practical and responsive approach that should be expected of a small state military.

However, it is not just new ships and missions that the naval service will require up to 2030. The Naval Service will also arguably need a new land base, ideally on the Western seaboard, with Galway one possible candidate. Of even more importance would be the procurement of a pool of aerial drones that can be launched and recovered from vessels at sea, and a pool of underwater drones to permit survey and sub-sea monitoring.

As regards land forces, the twin brigade structure of Ireland’s Army appears to make little strategic or tactical sense, although it has merits from an administrative and operational perspective. In terms of offering territorial coverage it is a coherent expediency, however, given the relatively small size of Ireland and especially the reduced scale of the Irish defence forces, a more functional and nationally oriented organisation would seem desirable.

The problem is that Irish army’s two brigades are not certified, equipped or tasked to an equivalent meaningful role as in other armies, whether large of small. Bizarrely, a mechanized company and an armoured cavalry squadron with Pirhanas, which represents an obvious concentration of combat power, sits entirely outside any Irish brigade structure. The two brigades are thus each built around three, often under strength, infantry battalions with small artillery, signals, engineer and associated supporting sub-units.

It might be tempting to ditch the entire brigade concept for the Irish Defence Forces, on the basis that it seems unlikely that an entire brigade sized formation will ever be deployed or fought. More tellingly, it is unlikely Ireland will be able to fund the resources for at least one NATO standard brigade. So why bother?

A safer and more balanced approach would be to keep a single brigade planning and command cadre. This would be staffed by a pool of senior officers from Lt. Col to Lt. Gen rank who would devote themselves to keeping a residual Irish DF capability to raise, deploy and fight a larger integrated field force to NATO standards. Some of these officers would be seconded abroad for this purpose, and to make that a success, a dedicated and well-funded roulement of such billets would be a necessity as well as a brigade capability exercise on a tri-annual basis. In other words once every three years the Irish defence forces would assemble whatever forces they had that were suitable and train to deploy and fight as a brigade. A variant, would be a flexibility that might allow Ireland to deploy overseas an entire battalion or battlegroup to participate in an international brigade exercise. This ‘brigade capability’ should be qualified and certified to NATO standard to ensure the appropriate quality and professionalism of the process.
One important reason why a Brigade leadership capacity should be retained is the UN may deploy, or authorize other forces such as NATO or the AU, to field entire brigades and an Irish officer might be offered command of such. Having a Brigade HQ cadre and a training cycle where brigades have ‘ad hoc’ stood up, deployed and exercised would be most likely enough to qualify any senior Irish officer for such a posting.

The existing units of the land army that are currently deployed to service with 2 brigades could then be redeployed to form several battlegroups (BGs), which in scale and character would be predominantly reinforced infantry battalions, but given a functional/national orientation in terms of what capability they deliver and what threat scenarios they attempt to mitigate. Battlegroups would provide a more flexible and realistic building block for the Irish DF than brigades. If the name does not appeal, the French term **Groupement**, or the American term Task Force could be used. The US Army is exploring Multi-Domain Task Forces, which are formations of about 1500 strong and thus smaller than an American Brigade Combat Team. They are stronger on cyber, EW and CIS elements and have unique long range anti-ship and long range artillery fire batteries. While their exact design would not suit, nor be affordable, for Ireland, the basic idea of such a tactical formation is on balance, most instructive. I only detail what two of these battlegroups might look like here.

A first ‘Ranger’ battlegroup should be a home for a much expanded Irish special forces structure, which might be tiered to reflect different levels of training/role. Many armies have dedicated special forces but also elite infantry who often work in tandem. Ireland has a single company sized special forces unit (the ARW) from which must be generated many quite distinct capabilities; hostage rescue, armed support to An Garda Síochána, covert and long range patrol elements, close protection taskings, training missions, etc. This is too much valuable and critical work for too small a unit. In general, increasing the size and role of special forces is an obvious way for a small state to make their Defence Forces more relevant, effective, improve morale and crucially, provide units that respond to threats. We may not be able to afford fleets of the latest fighter aircraft—but we can afford to raise, train and deploy excellent special forces.

One concern would be a reduction in quality. The ARW like all special forces units is choosy and selective and does not want to dilute its quality. On the other hand there are more than enough high qualified personnel to create lower-tiered or more specifically oriented special forces sub-units. Functionally, one can identify distinct roles which different ‘squadrons’ in such a BG might specialise on: Black/Hostage Rescue and Counter Marauder missions; Blue/Support for peacekeepers overseas by training, situational awareness and close-protection; Green/long range patrolling/intelligence gathering; Navy/maritime special forces operations.

A second mechanized ‘Pirhana’ BG could be built from the existing Curragh based 1st Mech and 1st Armoured Cav Coy/Sqs, with support elements from nearby units in Kilkenny (3 Inf Bn), Cork based artillery, engineers and CIS. This BG would progressively aim to reach a NATO standard mechanized/US Stryker Battalion Task Force equivalent level of quality. It would submit itself to external peer review and certification to this standard. It would concentrate all the Pirhana vehicles (except perhaps a cadre of 14-15 deployed overseas), and it would be the locus for any future Pirhana replacement or additional vehicles in that class.
3. **Staffing** – In this regard you may wish to consider the HR policies that support the requirement for an agile and adaptive modern military force. You may wish to consider issues such as recruitment and retention, organisational culture and values, gender and diversity, career progression, and industrial relations machinery.

Time and space preclude a fuller discussion under this heading but one observation is that the Irish Defence Forces might make greater use of ‘Short Service Commissions’ for officer and equivalent contracts for enlisted personnel. These are shorter intense 3 year periods of service, extendable in certain cases, and they may more accurately suit many young people who are interested in military service but not as such a career spanning 20 or more years as such. While not with its own problems, the approach does create a fresh pool of talent and good turnover of personnel.

4. Any other comments you may wish to make in relation to the Defence Forces having regard to the Commission’s Terms of Reference

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See: [https://eatc-mil.com/en](https://eatc-mil.com/en)


4 See: [https://www.army.mod.uk/who-we-are/the-army-reserve/full-time-reserve-service-job-opportunities/](https://www.army.mod.uk/who-we-are/the-army-reserve/full-time-reserve-service-job-opportunities/)