Factors to Consider When Developing the KSA's National Defense Landscape

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Purpose

The purpose of this document is to explore concepts and ideas for debate to help shape the Industrial Development Strategy and policy. It examines how the emerging industrial landscape might be shaped and considers the possible methods for doing so and potential outcomes. In particular it considers the implication of competition versus placed work, the degree to which the defence landscape will become ‘nationalised’, and the role of the national champion and regulator in shaping the landscape.

Following debate on the issues, the next step is to identify all new policies and procedures GAMI will need to design, develop and implement, and the reflective policies and procedures SAMI will need to design develop and implement within its organisation to remain compliant.

Building a National Defense Landscape

In order to build a coherent and sustainable defence landscape from the current position will require state intervention if it is to be achieved in time to realize the 2030 vision. This intervention should purposefully guide, shape, invest, and monitor the placement of defence acquisitions and support in the most effective way to achieve the goal of bringing as much defence work onshore in a sustainable manner that supports both national security and the economy. As defence is such a large percentage of the annual budget, the impact on the GDP of keeping as much of this spend in onshore companies is a well understood GDP multiplier.

If left to the market place, without clear state intervention, buying 'off the shelf' will be the default positon for the Armed Forces as they take comfort from familiar equipment, price challenge through competition / commercial leverage, ready known supply chain and training solutions, proven concept and doctrines and a promise of interoperability with allies. Similarly, in-kingdom industry will tend to focus on meeting the lower end build to print and repair market supporting existing in country contracts. They are likely to take a short term view with minimum investment and limited ambition to enter the global supply chain. Without a coordinated procurement approach they will not be able to build robust business cases to allow them to invest in, and develop the capabilities required to extend this position.

The acknowledgement of this additional cost / investment is central to the strategy and policy of Industrial Development. The size of the investment and the decision as to who bares the additional cost is considered later in the paper, but in the final analysis the state pays one way or another, it is just through which institution is the debate. Having acknowledged the requirement to invest and the possibility of a cost premium from local buying, the Kingdom's strategy to grow a defence industry must be coherent, leverage all opportunities for external investment and have, by design a pathway to transition from a national market base model to an export model where investments and costs borne by the state and Saudi industry can be amortized over a much larger order book.

It is also fully evidenced from many countries and acquisitions around the world, that the initial cost of building an on shore defence capability or indeed insisting certain capabilities are always placed on shore, often for operational freedom requirements, increases the cost of equipment and support when compared with buying 'off the shelf'.

What Landscape to build?

Fundamental to the success of building an Industrial landscape is to know what you want to build and what, as a nation, you wish to specialize in. KSA has formed GAMI to undertake this role and, through the publication of its Industrial, Technical and R&D strategies, it is becoming clear which technologies and capabilities are most important to the Kingdom. These strategies will be updated in due course and a regular assessment against the emerging landscape will feed into any updates, or changes in direction. It is difficult to underestimate the importance of these strategies, as once established will influence significant levels of that investment, impact the delivery of products and services to the Armed Forces and have a profound impact on the industrial base. Therefore there needs to be broad stakeholder buy in across these strategies to ensure consistency to allow time for their respective impacts to be established throughout the industrial base.

Who to Build the Landscape?

As mentioned above, if left to the market, the industrial landscape will not emerge as fast or in a coordinated manner, and, in recognition of this, SAMI has been formed as the national defence industrial champion and a holding company in its own right. SAMI's role is to bring together a coherent national defence industry, by sector, principally at the capability integration level, while at the same time encouraging a vibrant supply base in the Kingdom to feed the SAMI owned businesses. To achieve this, SAMI, is guided by GAMI through the Industrial, Technical and R&D strategies which set the priorities for the emerging landscape based on the projected major acquisitions of the Military entities.

Armed with this forward demand understanding, SAMI is required to develop the primary means by which KSA industry will fulfill these demands. SAMI is free to use whatever commercial constructs work best to secure an industrial base that can meet quality, time and performance to serve the armed forces and meet their capability requirements. However, SAMI is also a company which seeks to be profitable and sustainable and as such it will also be influenced by market forces and will actively seek opportunities to grow its market share beyond the confines of the Kingdom. Only by extending beyond the boundaries of KSA will this profitability be a net revenue for KSA rather than a reinvestment of existing National funds.

How to Build the Landscape?

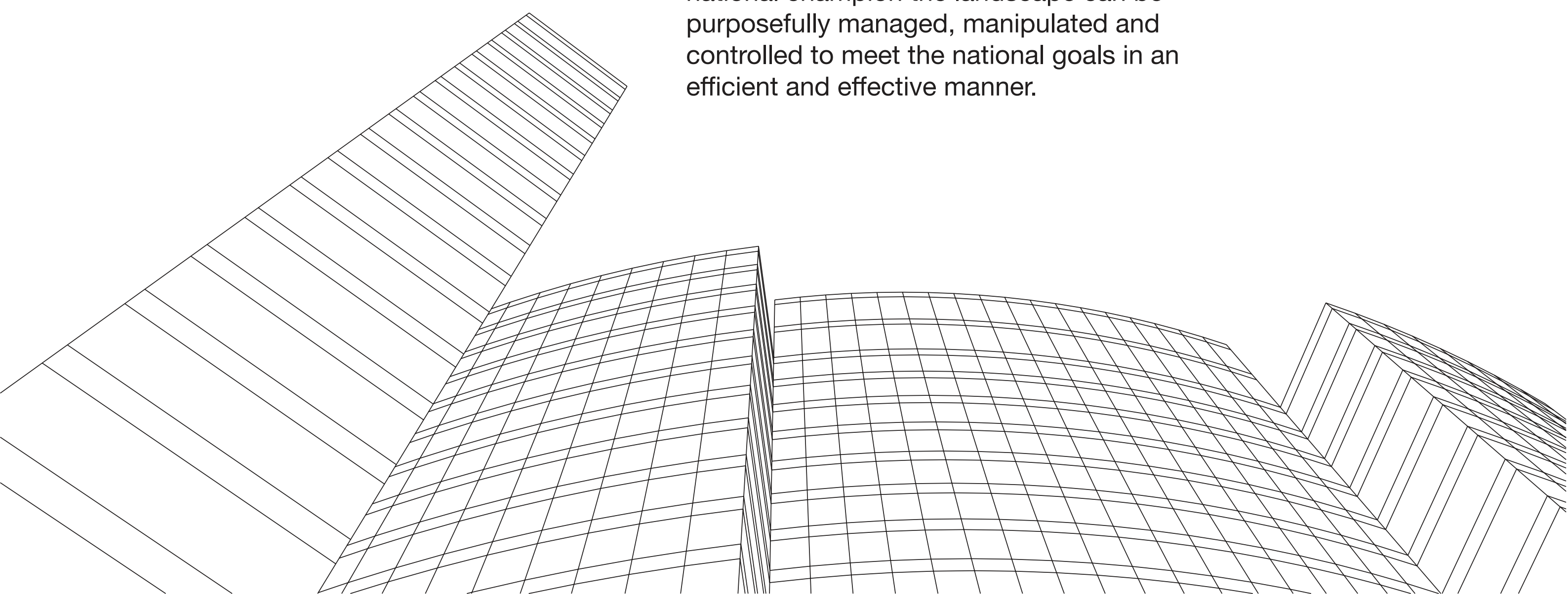
The current SAMI approach to form JVs with OEMs is based on the premise that all future contracts into the Kingdom, both acquisition and support, will have to go through SAMI JVs. As such OEMs are encouraged to establish JVs which bring technology transfer, know-how and capability and through these JVs, in time, create new IPR for KSA, hopefully leading to exports and indigenous new offerings to meet emerging capability requirements from the armed forces.

The creation of these JVs is at the moment linked to major acquisitions that provide the vehicle to encourage the OEM to invest in the initial volume of work to sustain any joint entities that are created. The JVs should be established against high enough volumes to sustain the necessary investment into facilities and infrastructure. This should include a known future demand, a clear development strategy and an understood resource capability requirement. In most cases these JVs will be 51/49% ownership. Whilst SAMI is notionally a private company and exists to make profit, it is essentially a government funded entity, and now and in the future the vast majority of its funding will come from government sources all be it through the medium of winning government contracts.

A further part of the SAMI strategy is to consolidate the current Industrial Landscape that already exists in KSA onto its balance sheet. This is driven in part by opportunity as it is in many cases linked to acquisitions by OEMs or as part of a package offering around the formation of the JVs. For SAMI it provides immediate access to industrial capability and capacity. However, there is an acknowledgement that SAMI will have to address some of the issues currently within these companies; to simplify the ownership structures to bring more into KSA control; to put control of military industry assets into one national champion; and to bring standard professional management practices across defence industry. Once it has owned and improved these businesses SAMI may have to enter a further period of consolidation as it seeks to cluster some industrial capability, which may lead to further acquisitions and write offs of underperforming or duplicated capacity.

In addition the creation of SAMI allows the Kingdom to make enabling investments in capital or capability that couldn't be justified by localization of any individual program. For example, the investment in an Aircraft Assembly capability would have benefit beyond a single program and SAMI can be a catalyst and custodian of this investment. However, care must be taken that these investments are not constrained by Joint Ventures commercial constructs that give power to individual OEMs.

Through this consolidation into a national champion the landscape can be purposefully managed, manipulated and controlled to meet the national goals in an efficient and effective manner.



Considerations for Industrial Development Policy

Given this approach, any Industrial Development Policy has to ensure it drives the right behaviors and outcomes and considers any 'unintentional consequences' in their design and development. There are 4 elements to this:

1. Choice

SAMI is clear in its statements with industry it will "direct all MOD contracts' into its JVs. This highlights the need for contracts to be 'Placed' with SAMI JVs rather than competed. The logic is GAMI will direct that the capability should be onshore, then ask SAMI through its JVs to provide the equipment or service to the Military entity. Through this arrangement the Military Entity will provide its requirement and a SAMI JV will ensure it meets it. To satisfy this approach however, SAMI will need to ensure that it has the breadth and depth of industrial capability to accept the wide range of future capability requirements, otherwise it will always be chasing the next requirement and the equipment and services it provides will invariably have a cost premium as it seeks to amortize new industrial capability creation.

Key Considerations

Industrial Development Policy will dictate Military Entities have no choice in the provider of their capabilities.

It will be for GAMI and SAMI to decide the provider as long as they meet the military requirement for an agreed and acceptable cost / schedule premium.

Implications for Policy Design

Who bares the additional cost of the equipment?
Whoever does, it is all government money, so the debate is only about who is best placed to manage the issue. The decision must be based on the level of transparency required, the ability to measure additional costs, scrutiny of additional costs, and the volume and recipient of benefits realized. This would include benefits that may be realised beyond the scope of the specific procurement.

What level of compromise is acceptable?
It may be the case that for a first time order that due to the necessity to create new industrial capability that the Saudi Industry may not be able to meet the full requirement to either time, quality or specification. What level of compromise is acceptable and how is this to be managed? Time can often be traded except for urgent operational requirements, while quality and specification are more difficult and often linked to IPR. Each major armament acquisition is unique and it may have to be reviewed on a case by case basis. However, over time cumulative compromises may well start to have a detrimental effect. What policy safeguards should there be for this issue and ensure the longer term view is considered in each case?

What happens if the local industry fails to meet the requirement?
With the very best of endeavors it may be the case that the local solution just does not work, is too late, fails certification, qualification, can't obtain licenses etc. Whilst there will be contractual repercussions within SAMI the Armed Forces still won't have their capability requirements met. If there has to be an emergency buy who bares the cost of this? GAMI, SAMI or the Armed Forces?

2. Monopoly

As all major contracts will be 'placed' does this mean there could be competition between the entities within SAMI or the wider KSA market place? If created and managed in isolation there is a possibility for example that the BAE Systems / SAMI JV and the Boeing / SAMI JV may well both be able to undertake certain MRO activities.

Similarly there may be examples where SAMI owned entities or businesses within SAMI JVs may have similar capabilities to those in non SAMI owned Saudi businesses. While it is acknowledged that competitive tension is valuable in price reduction, developing new approaches and being more creative in finding solutions, there is also the potential for duplication in a relatively small market and a tension for resources such as skilled manpower.

If SAMI does not design its JVs with the avoidance of duplication as a key principle there is a risk that SAMI could end up part owning companies competing against each other, which brings the prospect of significant practical and commercial issues. As SAMI is party to both companies it will be in a position to manipulate the result. For example it could force a BAE Systems or Boeing JV to undercut the other and it would have perfect information regarding the bids in order to do so.

There are many examples of where nations have tried to keep competition within the landscape to avoid being put in the position where they have no choice and there becomes only one provider of certain capabilities. The market creates a duopoly and the government has to 'feed' each company equally over time to retain key skills, infrastructure and design capabilities.

The current approach will require SAMI to ensure the boundaries between each JV are clear and there is no overlap between JVs to cause competitive tensions.

Each JV obviously wants to grow, but through the placement of contracts. SAMI cannot win overall by putting two or more of its JVs into competition. So if each JV has a monopoly on certain aspects of the landscape what policy needs to be put into place to ensure they strive for efficiency, effectiveness and cost reduction?

JVs which are artificially constrained by 'Business Boundaries' imposed by one of the parents are likely to face challenges to their long term sustainability as their potential growth is constrained by an artificial boundary.

2. Monopoly

Implications for Policy Design

- **Avoiding competitive behaviors**
  Each of the JVs will be businesses in their own right and as such will wish to be as successful as possible and the OEMs are well known to each other in the international competitive market place.

  Policy, describing clear boundaries of activity, must be in place to curb the natural implication to try and win work off other JVs, however care will need to be taken not to excessively constrain their activity and stifle their appetite to succeed.

  They all have underlying core skills of integration, systems design, and support expertise and in some cases these will overlap.

- **What level of audit?**
  Increasingly around the world as the Defence landscapes mature and consolidate into a few national monopoly champions the lack of competition leads to inefficient ways of working.

  Governments have put into place systems to allow full audit of costs and full transparency in what is usually termed ‘open book’ arrangements. All the money flowing through the companies is government money so this right is hard to deny.

  The UK has enshrined this right in law through the Defence Reform Act and the Single Source Regulations Office. What arrangements should GAMI have?

- **How to deal with monopoly at Tier 1**
  Ongoing future demand will be paramount to the JVs. Policy must be in place to ensure the forward demand is well understood and timely provision can be made to absorb future requests such that the factories do not face the very real problems of peaks and troughs in demand.

Key Considerations

The MOUs with SAMI are written to give each SAMI /company JV a monopoly on certain core aspects of the Industrial Landscape.

3. Competition

While it is accepted that initially all contracts should go through SAMI to give it sufficient volume to establish a new defence industrial sector, there is a risk that if prolonged unchecked this approach will lead to an expensive and non-innovative internal market that will not serve either Saudi military or the KSA economy to best effect.

Where therefore should there be competition? Currently the default policy is competition in all procurements. The reality is 94% by value was placed in cases taken in 2017 through the ACRC, so this policy is not universally enforced. The creation of SAMI and its potential monopolies or exclusivity on the internal market access potentially makes the lack of current competition worse.

Given the set up in SAMI should this policy be modified to cope with the monopolies that will be created by SAMI and only apply to Non SAMI JVs? Competition can be onshore competition between KSA companies or open competition inviting international firms.

Implications for Policy Design

- **Competition to be enforced except in SAMI JVs**
  Policy needs to be tightened up to ensure competition does actually happen where offshore procurement has been agreed as the procurement strategy.

- **Dictate On shore Tier 2 competition for SAMI JVs**
  Clear policy guidelines should be designed around Tier 2 competition for the SAMI JVs to ensure they look to using the most competitive onshore providers.

  Notwithstanding that SAMI is acquiring a significant element within the Tier 2 supply chain who will seek to establish themselves as preferred suppliers to the SAMI JVs to leverage their investment and drive efficiency.

- **Onshore and Offshore Competition Guidelines**
  As the landscape matures there should be clear guidelines as to when to run competitions between onshore providers and when acceptable to look to offshore providers. Both have merit. Onshore to continue to develop the defence landscape, offshore to attract ongoing. localization.

- **Export targets**
  SAMI could set specific export targets as a percentage of its gross sales in order to force it to compete externally and drive cost effectiveness in its operations. This will need to be regulated however as it may be open to potential accusations of unfair subsidy from its domestic market.

Key Considerations

Competition, which is removed from the Tier 1 companies should be encouraged throughout the supply chain to secure the greatest Industrial Development.

4. R&D Investment

In a competitive market place companies constantly look to improve their product range, be more innovative, and introduce new concepts through the reinvestment of profit.

In established national defence champions across the world they tend to do the majority of their R&D investment as a result of the government asking them to develop a new capability and funding them to do so. It can be virtually impossible to get them to invest their own profits as the argument is thus “our main customer is defence. There is no point us speculatively investing in R&D if it is not what you will then buy. You tell us what you want us to develop and as you may be the only customer you pay for it”. And it works.

SAMI will be competing in a congested and challenging international market place if it offers products which are best value for money or bring new and exclusive technology either in the manufacture or operation of the equipment. SAMI therefore needs to invest, develop new products and new IPR and create potential exports.

However, it must do in a manner that addresses specific market demands and in which is coherent with other R&D being undertaken in the Kingdom. The Industrial Development policy will need to consider the incentives required to ensure the SAMI companies do not take the OEM profits offshore.

It will also need to direct outcomes and be sensitive to new and emerging technology trends and it will have to incentivize SAMI and its JVs to invest in country. This later point will require GAMI to ensure that the Kingdom has the R&D infrastructure to undertake and operationalize the type of cutting edge R&D necessary to give SAMI a lead in the competitive global market.

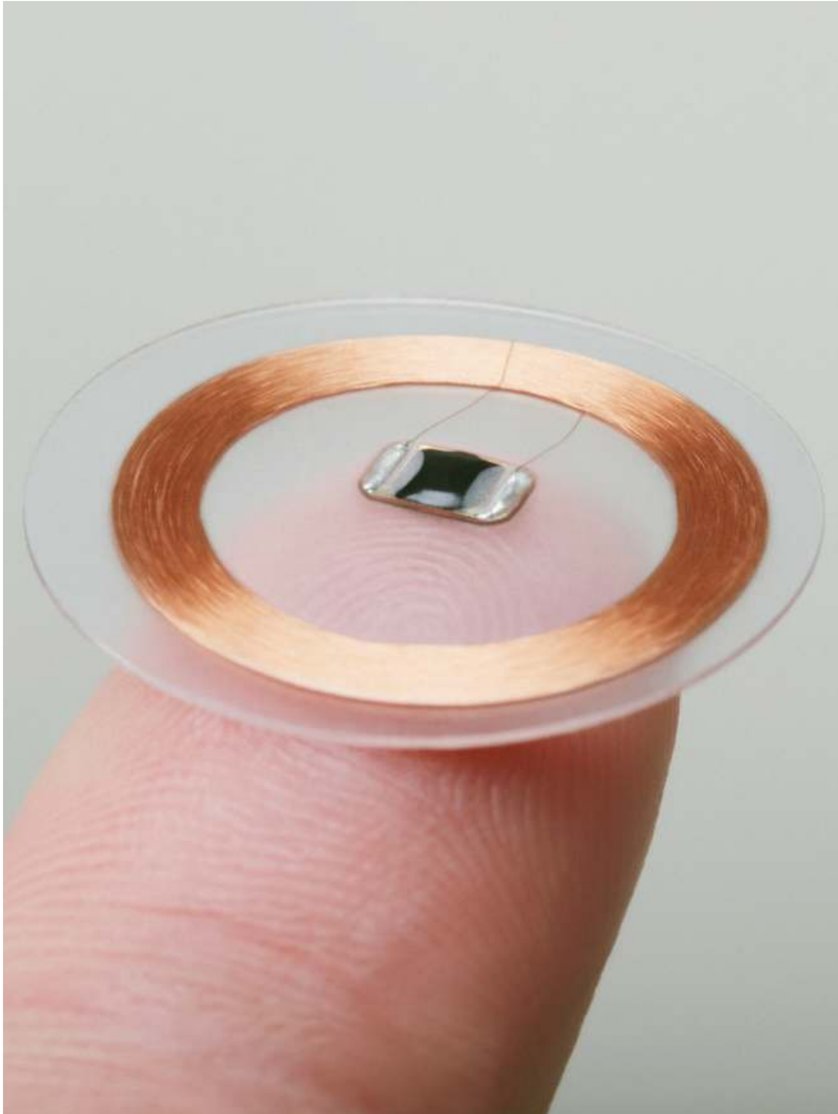
Implications for Policy Design

- **R&D investment**
  R&D is vital to continue to grow and mature Industrial Development. Without incentives the SAMI JVs may well not reinvest profits in R&D, leaving government to fund all requests through the companies. Policy should dictate the amount and nature of investment.

- **Use of local companies/institutions in R&D work**
  To develop the landscape, policy should direct the creation and use of local companies and institutions to ensure the R&D investment stays onshore.

Key Considerations

A certain proportion of profits of SAMI JVs should be reinvested in R&D as directed by GAMI in support of future National Requirements.



Implications for a National Champion

SAMI as the National Champion has a duty and responsibility to develop in such a way that brings the best aspects of having a national champion and minimizes the compromises. GAMI Industrial Development Policies and Procedures will be designed to guide SAMI in this endeavor. The National Champion needs to develop in a structured manner and the Regulator needs rights of monitoring and audit.

SAMI has already developed industrial strategies across the aeronautics, defence electronics, weapons and land systems sectors. These strategies have in most cases three principle anchors; the creation of Joint Ventures with OEMs, the consolidation of existing KSA industry through acquisition of offset companies, and the creation of new indigenous capability where it does not currently exist. The aim of the strategies is to leverage localization on current acquisitions to provide a step change in industrial capability while increasing SAMI's own capacity to undertake work by acquiring and improving existing businesses, and in doing so remove duplication where it is identified.

As a national enterprise, SAMI needs to grow, and care needs to be taken to ensure it does not distort the market, become uncompetitive or allow OEMs to rely on SAMI to maintain their franchise. If OEMs believe they have a locked in position with the National Champion this may dilute their focus on delivering localization. If SAMI is incentivised by delivery of profit then it may unwittingly collude with the OEMs to deliver a 'low risk' solution to the Customer that doesn't offer value for money. As a profit sharing JV partner, what is good for the OEM will be good for SAMI and this needs to be aligned with National interest.

SAMI will need to create a set of JVs and relationships with Saudi and regional industry that minimizes competition where it is appropriate to do so. SAMI will not be able to create complete exclusion because IPR, ITAR and security issues might necessitate the creation of similar businesses in silos that protect sovereign or commercial interests. However, where possible SAMI should seek to co-locate these 'similar' businesses so that they can feed off shared common services provided by SAMI and maximize the opportunity to share investment costs. This may become problematic if SAMI is trying to encourage multiple JVs to use shared facilities where it controls the price and could therefore manipulate profit flows through its 'monopoly' suppliers.

While all contracts should initially go through SAMI to enable it to establish a new defence industrial sector, check and balances will need to be introduced to ensure it does not create an expensive, inflexible supplier that cannot innovate as this will not serve either Saudi military or economy to best effect.

In Summary

Choice

- SAMI needs mechanisms in place to identify cost, quality and schedule premiums over an Off The Shelf solution. SAMI will need to demonstrate it can meet the threshold capability requirements of the end user and justify on, a case by case basis, the additional investment in terms of enhanced economic value to the Kingdom in line with GAMI policy and procedures.
- At the appropriate approvals gate, SAMI will need to provide to GAMI, in the standard GAMI format, the cost benefit case with justification as to the added value of localisation and the GDP multiplier.
- Terms and conditions within any SAMI contracts with Armed Forces will provide for failure to deliver to agreed time cost and quality.
- SAMI will provide regular monitoring and review data in accordance with GAMI templates.

Monopoly

- Where a monopoly situation is created, SAMI will need to provide ‘open book’ to GAMI to allow full audit for efficiency and effectiveness and value for money
- If large parts of the supply base also belong to SAMI it may be necessary for it to enter into undertakings to maintain arms-length trading and ensure potential competitors have access to capability on equivalent terms

Competition

- SAMI will need to implement a policy within its JVs to compete all second tier supply contracts from within the Saudi landscape.
- At the first tier capability integration, GAMI should continue to benchmark SAMI offerings against international competition to drive best value for money
- SAMI to be actively encouraged to compete in the global market to drive both innovation and cost effectiveness

R&D Investment

- SAMI will provide full financial statements allowing assessment of profitability to facilitate a policy of investment in R&D. This is likely to be through an agree pricing formula that would include all SAMI profits earned in Kingdom, including that of its JV partners
- SAMI will expect to participate in Government funded R&D programs, where it is funded to perform sponsored work

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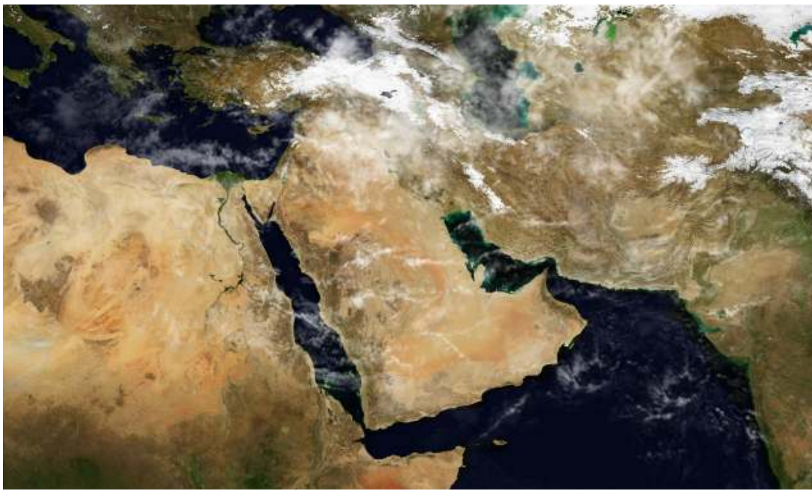

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- Strategy and Localization Approach in KSA
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- Establishment of National Security Entity

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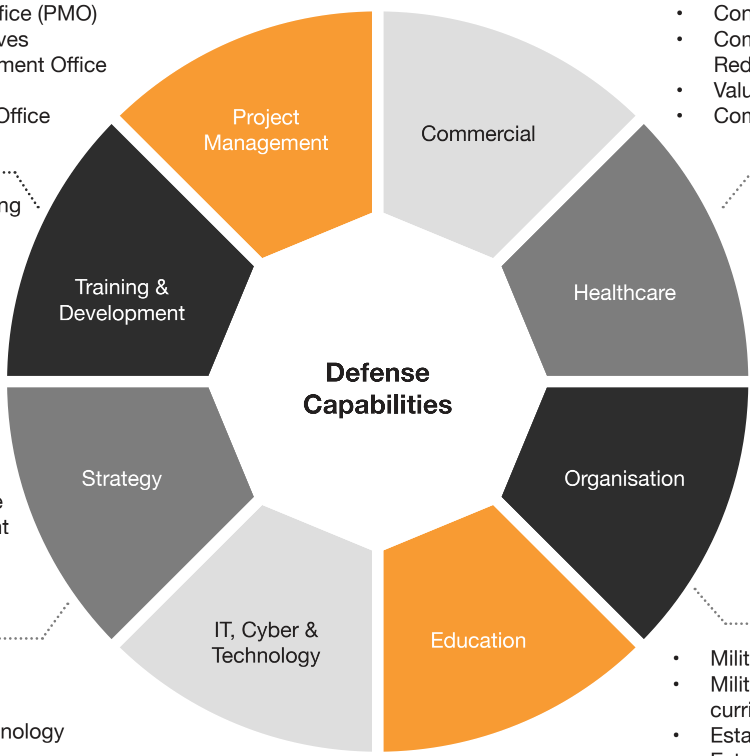

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