

2. Methodology

Feasibility Planning involves a methodical study, which is documented and presented to assist in sound decision-making by private and public healthcare facility owners, operators, investors and developers. The minimum typical structure is described below.

2.1 Executive Summary

Provide a one-page summary of the proposal and cover as a minimum the following:

- Name of the project
- The author of the Feasibility Study/ Plan
- Location – may be provided through a diagram or map
- Key features
- Key quantities, numbers, size
- Timeframe for delivery
- Estimated Capital Cost/ Intended investment

2.2 Strategic Context

The study should briefly establish the strategic context of the proposal. The typical elements of the strategic context, depending on the subject of the study may include:

- The regulatory framework
- The current state of the healthcare industry
- Population profile
- Existing facilities reaching their limits or too hard to upgrade
- New neighbourhoods and population centres
- New technology changing the patients' expectations
- Market opportunities, including Medical Tourism
- Opportunities to introduce new treatments
- Desire for healthcare reform and increased efficiency
- New Models of Care to suit new facilities and treatments.

2.3 Investment Objectives

Each project involves an investment of time, money and valuable human resources. Here, the study should briefly describe the main Objectives of the Investment. The stated objectives should be an honest representation of the aims rather than what may be regarded as the “expected” answer.

So, the Investment Objectives should be about what needs to be achieved rather than immediately justifying the pre-conceived solutions. The Investment Objectives should be used as a basis for the evaluation of the options within the study. Typical Investment Objectives may be:

New Facilities and Services:

- Create and run a profitable healthcare business to meet the needs of the growing population
- Expand the existing network of services to focus on the growing demand, for example, integrated Oncology Services

- Create a new facility in a new population catchment which is not well served by existing facilities
- Create a new Clinical Services block to replace the existing, ageing facility which no longer complies with the required facility guidelines

Existing Facilities and Services

In the case of existing facilities being upgraded, describe the key problem areas which have been identified, together with the opportunity to improve through the project development.

The problems may have been reported by the staff, through a complaint processing system, via regulator inspections or advice from consultants. Opportunities may be identified through internal consultation with the staff, engagement of specialist consultants, research or by following the recommendations of the Guidelines. The following should be covered on a case by case basis, when applicable:

Problems

- Major reported problems
- Complaints from patients
- Complaints from staff
- Capacity constraints
- Internal risk assessment reports
- Conditions of Accreditation inspections
- Non-compliances with DOH Guidelines

Opportunities

- Minor or major refurbishment/ remodelling of facilities
- Expansion of facilities
- New facilities
- Change of use
- Change of Models of Care
- Introduction of new systems and technologies
- Introduction of new services.

2.4 Needs Analysis

It is necessary to follow and demonstrate a rational process of Needs Analysis as the foundation of the proposal. Refer to the components of the Abu Dhabi Capacity Plan, published by the DOH from time to time for fundamental and locally specific service planning information. The minimum steps required are as follows;

2.4.1 Define Health Service Catchment

Define the catchment for the proposed services and facilities. Depending on the nature of the proposal, this may be a simple statement of:

Population Numbers	The current or future population to be served e.g. 750,000 in 2012, projected to grow to 1m by 2025. The basic information on population numbers may be obtained from relevant health authorities and statistical centres.
Geographic Definition	Define the geographic catchment intended or estimated e.g. 80% of the new residential neighbourhood of XYZ and 15% of the each of the adjoining neighbourhoods.

Population Type	Define the population types targeted e.g. citizens, residents and inflows from other regions/countries.
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The above may be defined and described by words and schedules and, when appropriate and possible, by maps.

2.4.2 Health Service Demand Assessment

The study should provide an estimate of the minimum demand for the intended healthcare services in the catchment. The methodology used is not prescribed, but the study should honestly declare its assumptions.

In order to assist the health industry and to provide a common platform for the study of healthcare demand, the DOH may occasionally provide service planning information such as extracts from the Abu Dhabi Capacity Plan etc. The use of such information is at the planners' sole risk. The DOH makes no representations in relation to the accuracy of the information or its application to the particular project.

If no particular methodology is preferred, then the following methods may be considered:

Method 1- projection of past trends

In this method a few years of historic data can be examined to establish a trend. For example, if there is evidence that the demand for Maternity or Emergency beds has been growing by 3% P/A for the last 5 years and the current facilities have reached capacity, there is a possible indication of demand over the next few years. The study may start with the core services and then add all the support services which enable or enhance the core services.

A simple trend-based projection of demand has the advantage of speed and is most useful for the expansion of the existing facilities. In such facilities, if there is no intention to fundamentally reform the operations, the continuation of the trends can be intuitively judged and reasonably estimated. However, comparison to new services or trends obtained from facilities with vastly different circumstances can sometimes be misleading. The study should then apply, as far as possible correction factors or assume certain risks and address them.

Another risk in the use of past trends is encountered when the sample is too small or too old.

As a rough guide, trends of less than 5 consecutive years or trends older than 5 years should not be used.

In circumstances where there are observed in-efficiencies in the current operation, the projection of those trends into the future would also carry the in-efficiencies forward. So, before such trends are used, the study should declare if there is any expectation or plan for efficiency gains through operational reforms. If so, the trends should be adjusted accordingly.

Method 2- Benchmarks

In this method, a simple benchmarking process is used to apply the experience in one location to another, similar location. For example, a new population centre may not currently be served by healthcare facilities, requiring the patients to travel long distances. This may be compared with similar population centres which are served by a few, busy and profitable healthcare facilities. In this example a benchmark comparison is used to conclude that there is a demand for at least one new healthcare facility (of a certain size and description) within the new population centre.

Method 3- pure population-based demand

This is possibly the most detailed and scientifically accurate method of demand projection. However, it will most likely require a specialist Service Planner to prepare the study and avoid possible pitfalls.

In a pure population-based demand study the data representing the healthcare activity of a reference population with a satisfactory health care system and outcome is used as a starting point. Then the

activity rates are applied to the current and project population of the study catchment to arrive at the demand. This is another form of benchmarking, but at a much more granular level. The lowest common unit of the reference data is typically Diagnosis Related Groups (DRG's) which are then grouped together to represent Specialties. In practice, the reference data requires customisation and manipulation to correctly represent the current and future population profile of the study catchment where "Burden of Disease" may be different. Therefore, this type of study requires high levels of skill and the use of various service planning tools available to specialists.

Once the activity is projected, then it can be converted into Key Planning Units or KPU's (Beds, Operating Rooms, ICU bays, LDR rooms, Consultation rooms, ED cubicles etc. based on formulas which take into account many factors such as Average Length of Stay (ALS) and Occupancy percentage, utilisation rates etc.

Method 4- use tools provided by the DOH

DOH is in the process of establishing software tools to provide automated information for Certificate of Need (CoN). This system will allow applicants and consultants to test which services are allowed or dis-allowed in certain locations based on a number of factors:

- Centralised services are generally not allowed
- Regional services are allowed as long as they are not in an area with more than 40% over-supply
- Standard services which are allowed in all locations at an unlimited quantity

The results are provided at a Specialty level with some helpful additional information.

This automated CoN information, generated online can be immediately used by the applicants as part of their Feasibility Planning and submissions to the DOH.

2.4.3 Health Service Supply Assessment

As far as possible the supply of similar healthcare services within the same catchment needs to be assessed. The comparison of Supply with Demand will require the use of the same units of measurement. The choice of unit depends on the preference of the proponents and their service planning advisors, but may include categories such as:

Key Planning Units or KPU's (Default in these Guidelines) including:

- Acute Beds
- Same day Beds
- Operating Theatres
- Emergency Department Cubicles
- LDR Birthing Rooms
- Diagnostic facilities (MRI, CT, PET etc.)
- Consulting Rooms

Some of the above KPU's such as Acute Beds may be further broken down into Adult vs Paediatric, Medical vs Surgical or classified by Specialties (or Service Lines).

Alternatively, the following activity-based supply measures may be used:

- Bed days
- Admissions
- Discharges
- Separations
- Episodes of Care
- Occasions of Service

- Operations P/A
- Presentations P/A
- Scans P/A

In practice, most Private (and some Public) healthcare facilities keep their activities confidential.

This can make the Supply Analysis difficult or unreliable, if there is too much reliance on such confidential information. Given the reality of the competitive market, it is often easier to obtain the KPU information from the facilities in the catchment as they are often proudly advertised or freely shared.

Alternatively, the applicants may consult the DOH healthcare mapping system available via a link on the DOH website. Furthermore, from time to time DOH may public extracts of the Emirate-wide Capacity Plan with good information on Supply, Demand and Gap by sector and by year. The DOH may also consider providing this information in a publicly available website but without any guarantee of accuracy.

Proponents are encouraged to visit the DOH website frequently and obtain the information as it becomes available.

2.4.4 Permissible and Restricted Health Services

The health services which are permissible by DOH should be verified as part of the Supply Analysis to avoid abortive work and disappointment. Even if the demand for certain services is identified, DOH may choose to regulate their provision due to operational and safety factors. Those making applications for licensing should use the DOH Certificate of Need web-based tool, when it becomes available on the DOH website.

DOH categorises the healthcare services as follows:

- Centralised Services
- Regional Services
- Standard Services

The above 3 categories may be allocated at a service Specialty (Service Line) and DRG level. The Feasibility Study must take these categories into account as part of the Supply and Demand Analysis and the proposed services for the given facility. The definitions of the above 3 categories are as follows:

Centralised Services

Central Services are generally those which involve high complexity, high risk and low volume service. These are best provided by a few centrally located facilities which are carefully selected, checked and monitored. The centralised provision of these services is intended to ensure the minimum safe volume which in turn attracts the best specialised clinical talent and maintains the level of skill required. Such restricted Centralised services are defined by the health authorities by service specialty or DRGs (Diagnosis Related Groups). Centralised services are generally subsidised by governments.

Allocation of centralised services to specific facilities will ensure that concentration of clinical experience can lead to improved clinical outcomes for patients, and a more efficient use of resources. Quality, access and cost outcomes are reviewed regularly, and Provider designation updated in light of these reviews.

Occasionally, the DOH may advertise such centralised services and seek applicants for their provision. These services may be provided in dedicated facilities which are granted the title of “Centre of Excellence” (COE). Services which are regarded as Centre of Excellent must be at the Role Delineation Levels 5 or 6 (refer to the Role Delineation Framework provided as an appendix to Part A the RDL Guide in Part B). The selected Centralized facilities (and COE’s) may be a combination of Public and Private health facilities of the highest quality.

The following table provides a guide to the Centralised Services:

Description	Examples	Providers
Highly specialised Strong volume-based competency Low volume High cost	Burns Care Open Heart Surgery Oncology Surgery Transplants	Public Hospitals Selected Private Hospitals

Regional Services

DOH may designate a limited number of “Regional” services, each serving a population of equal or greater than 250,000 residents (or other number as may be determined from time to time). These services may be provided by regional facilities subject to DOH approval. The Feasibility Study should check to see if the services and quantities proposed represent an over-supply of more than 40% in the proposed location. If such an over-supply is present, the DOH reserves the right to refuse the application for the affected service specialty or quantity (eg Beds).

The following table provides a guide to the Regional Services;

Description	Examples	Providers
Moderate complexity Time dependency Some volume-based competency Middle volume Middle cost	Cardiac catheterisation Specialist diabetes care	Public and Private

Important note: It is recognised that applicants may not be aware of the Regional Services which are already allocated to other providers or applicants. Therefore, the best course of action before proposing such Regional Services is to contact the DOH Investment and Capacity Planning Division (ICPD), describe the location and intended catchment and find out if there are any restrictions on the proposed services in that Region.

Standard Services

Other services for smaller population catchments, relatively low complexity and high volume may be provided by any licensed facility with an approved operator which complies with the requirements of these Guidelines.

The following table provides a guide to the Standard Services;

Description	Examples	Providers
Non-complex High volume Low cost	Basic diabetes care Family medicine Preventive services	Open market

2.4.5 Identified Health Service Gap

To put it simply, the Health Service Gap equals Demand minus Supply. This can be analysed for the current date as well as selected future dates (typically 5-year intervals).

In practice Service Gap is also affected by any planned healthcare reform which may interrupt the normal patterns of activity. For example, it may be reasonable to assume the gap will be smaller if a healthcare reform:

- Reduces the average length of stay over time
- Increases the occupancy level to the maximum recommended level (e.g. 85%)
- Reduces the need for hospital-based beds through the introduction of programs such as home-care, outreach, community care, ambulatory care, etc.

2.5 Competitive Landscape

No healthcare facility or service operates in isolation. The proponents for healthcare services should assume that at any given time, many other groups may be planning for the same identified service gap. This may be easier for the owners and operators of existing facilities than the proponents of entirely new facilities. It is also not unknown that as soon as there is preliminary news regarding a new facility, others will also take note and adopt defensive strategies, such as boosting service and upgrading their facilities in order to retain both their patients and the clinicians.

The competitive landscape is not only a concern for the private healthcare providers. In a marketplace strongly influenced by private insurance, public healthcare facilities may also be required to compete for patients and clinicians. One typical manifestation of this type of competition is where public facilities lose the relatively low risk, routine, standardised and day-only treatments to the private sector.

All of the above factors should be considered, and the proponents should satisfy themselves that the development is not overly sensitive to the competitive landscape.

Then any issues which arise from the above considerations should be recorded and strategies developed for market positioning, market differentiation, speed to market or synergies through associations, networking alliances and an established referral base.

The deliverable of Part F only requires a summary of the considerations rather than an exhaustive and detailed analysis. The proponents should indicate an understanding of the issues rather than try to convince a third party.

2.6 Proposed Services and Facilities

Considering the Identified Service Gap and the issues covered under the Investment Objectives and the Competitive Landscape, the study can then propose a range of viable services and facilities. The choices depend on the organisation's priorities and preferences; however, a methodical thought process and logical reasoning will be expected.

2.6.1 Private

In the case of Private facilities, the reasoning may be as simple as choices which have the best chance of financial return or improved market share. Private Healthcare operators are not obliged to cover all specialties or the whole of the population catchment. Effectively they can choose what they wish to offer as long as the proposed services are competently and safely delivered and approved by the DOH.

2.6.2 Public

In the case of the Public health sector, profit is not expected to be the driving force behind decisions and priorities, although the allocated annual budget still needs to be met. Instead the logical reasoning should focus on the achievement of the greatest benefit for the population catchment in line with the long- and short-term health authority policies for the given area.

2.6.3 Restricted Services

As previously explained, Private and public operators are advised to contact the DOH to enquire about the services which may be restricted to a few centralised facilities (or COE's). The applicant may also consult with Appendix 14 of Part A of these Guidelines.

Such services are typically those which require extensive resources and skills but involve relatively small number of patients. Such services are best provided from one or more central locations to maintain a minimum patient volume that justifies the provision of resources and maintains a concentration of specialised clinical skills. This in-turn will make the delivery of these services safer for the patients. Restricted services may be centralised or regional. From time to time DOH may inform the industry of the service specialties at DRG level which may be restricted.

2.6.4 Minimum Requirements

Ideally, for large and complex proposals, a dedicated Clinical Services Plan (CSP) should be commissioned and attached to the Feasibility Plan. However, the submission of an external CSP is not mandatory. In any event, the description of the Services and Facilities should be focussed on “What” needs to be provided rather than “How” it may be provided.

If a CSP is not produced at the same time as the Feasibility Plan, then the Operator should seriously consider preparing a CSP as part of the commissioning process, to guide the precise configuration of services in conjunction with the Human Resource Planning, Clinical Pathways, Models of Care and Reporting lines.

2.7 Options Generation

The purpose of Options Generation is to explore different ways of achieving the “Proposed Services and Facilities”.

Feasibility Studies for private facilities and services must include at least one option with a clear, brief and understandable description. Since these Guidelines (Part F) are part of the overall DOH Health Facility Guidelines, it is expected that most of the details of the proposal are already covered under the guideline requirements. Therefore, they should not be repeated here. The additional details which are developed from meeting these requirements are:

- Project synopsis
- Drawings (either Schematic or Detailed)
- Schedules of Accommodation
- Various attachments and reports

Ideally, the private healthcare proponents should consider more than one option before selecting one (see the next section).

In the case of Public Health sector, the generation of multiple options is mandatory in order to demonstrate that the best solution is identified in the public interest. In this context, the options for public healthcare facilities should follow these guidelines:

- The options should be sufficiently clear to permit easy evaluation or short-listing
- None of the obvious options should be missed or dismissed
- In the case of the upgrading of existing facilities and services, Option 1 must always be: “Do Nothing – keep safe and operating”, even if, in the opinion of the project stakeholders, it is unrealistic and unwise. This option will be seen as the base-case.
- When possible, options for the refurbishment of existing facilities should be contrasted against options for new facilities
- As far as possible lower cost options should be contrasted against higher cost options
- Options which immediately show greater potential may be detailed to a greater degree
- After a preliminary review of the options with the project stakeholders, a smaller number of options may be shortlisted for costing and evaluation. The minimum number of options for public healthcare facilities is 4 including the base case “Do Nothing”.