

Technology Banding in Public Private Partnership in Healthcare

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Summary

The emergence of a fundamentally new environment driven by the dictates of the economical situation, demographic shifts, the increased burden of disease, and expensive new technologies and treatments are expected to force fundamental change on healthcare within the coming years

The purpose of this Method Statement is to describe how the Medical Technology Assets (Equipment and Clinical Information Systems) and Services are to be procured by the Technical Partner within the scope of a Public Private Partnership project, ensuring that the obligations relating to equivalence, refresh, replacement and uptime are met or exceeded.

Key words: Public-Private Partnership (PPP), Healthcare, Technology Banding, Lifecycle

1. Introduction

In modern societies demands on public services will continue to grow. New drugs, gene therapies and stem cell research all offer improved life chances and raise new challenges for the Public Healthcare Services Provider.

The increasing pace of technological transformation implies the need to develop new management tools between the public and private organizations. Public-Private Partnership (PPP) combines the best of both worlds: the private sector with its resources, management skills and technology; and the public sector with its regulatory actions and protection of the public interest. This balanced approach is especially welcome in the delivery of public Healthcare services

8. The new legal framework (Ley 30/2007, 30th October) defines the new collaboration between public and private entities in Spain.

2. Justification of PPP

In order to deliver healthcare services a comprehensive and integrated action is required from the Public Administration to a Private Partner. The Public Administration needs external help to define technical, legal and financial mechanisms to carry them out. It is necessary to establish a longterm relationship with a technical partner that allows not only the provision and installation of electromedical and IT equipment but to define the appropriate instruments to assume equipment renovation at the end of equipment lifecycle, continuing education for clinical staff and research collaboration programs.

Public Private Partnership is special formula of stimulating private sector participation in financing infrastructures and public services. This instrument is intended to increase the provision of high quality public services, achieving the best possible cost-effectiveness for the public interest. This type of contractual relationship although well known in the practice of Spanish Government contracting had a lack of regulatory recognition expressed in our legal framework, making it difficult to use to use by the Spanish Public Administration in general and Public Health Administration particularly, specially when such Public Private Partnership concerned the provision and maintenance of Healthcare equipment.

However this situation has been radically affected by the adoption of Law 30/2007 of October 30th Public Sector Contracts (hereinafter LCSP) which, as stated in its explanatory memorandum, has been to “establish normatively partnership contracts between the public and privates as a new figures that may be use to obtain complex solutions whose funding can be assumed, in principle, by the private partner, while the price paid by the Administration may be connected together to effectively use of goods and services that constitute its object”

The development of Public Private Partnership based on cooperation between Public Agencies and Private Partners, enables the Public and Private sector undertaking joint projects with mutual benefit through the use of their own potential to realize common objectives than purely commercial, but also social and, thus, improve the quality of the services provided. Opt for a Public Private Partnership means to have as main objective the improvement of quality of service to citizens in a specific project framework. In these cases the added value is the stronger commitment of the private sector, risks sharing, the flow of new ideas using different working methodologies and the establishment of longterm relationships.

The ultimate goal is to find a technology partner that will help to solve the problems of equipment, installation, upgrade, maintenance and knowledge management derived from medical equipment necessary for the development of healthcare activities. On the other hand it is important the provision of expertise of suppliers to determine the best solution that will form a comprehensive and integrated action in a context of technological permanent upgrading.

In the context of the above, Public Administration with its own means, would not objectively know the best solution to meet these needs and the conditions of financial relationship with the future partner.

The performance of the Private Partner is not limited to the supply of goods, requires the interplay of different level of services, providing the periodic maintenance, technical assistance, advice on additional technical developments, training for staff and a research plan elaboration.

3. Process, application and examples of Technology Banding - “Equivalence”

Given the nature of the contract, the financing terms should be open and flexible, and they should take various alternatives into account.

It is essential for the proposed financing to be very detailed in order to allow the cash flow from each of the services included in the contract to be identified, along with an indication of the relevant cost. The plan’s flexibility and its ability to interchange financially equivalent amounts must be fully explained, also identifying the associated costs.

If during the term of the contract and in accordance with applicable law, it is decided that the contract should be changed, the financial terms of such changes must be determined in advance so that the Administration knows their exact costs.

The future prices of goods and services have to be fixed from the beginning even though there is no idea about the future technical characteristics for the replacement equipments.

Technology banding is a methodology for ensuring that future equipment and systems are equivalent to those the client site has contracted for.

Within the PPP scope, the Technical Partner has to respect and commit to the principle of equivalency to allow the Hospital to preserve its technological position and service delivery capabilities. The Technical Partner will also commit to meeting the Current and Updated Equipment Specification outlined in the equipment replacement/investment plan, via the technology bandings indicated for those items, thus ensuring equivalency.

The technical “Input Specifications” normally used for tendering for each item are translated into the generic and abbreviated “Output Specifications” to avoid the specifications from becoming obsolete as the contract progresses. Part of these Output Specifications is the “Technology Band” allocated to each product

The use of Technology Banding will ensure that the “Replacement Equipment” has an equivalent functionality to that of the “Baseline Output Specification” by incorporating the technology developments that are currently available from two or more manufacturers in the market and that it has comparable functionality for the relevant item of equipment to be replaced. Equipment Output Specifications will be updated at the time of equipment replacement to take into consideration these product and system developments.

To ensure that the technical partner is sensitive to the Hospital's requirement for correct and appropriate levels of technology, Technology Banding has been developed. These levels of technology need to be maintained throughout the lifetime of the contract period. The purpose is to manage the ongoing technological evolution and development of equipment and clinical information systems to ensure equivalency at the time of replacement. The use of ‘Technology Banding’ will provide an objective gauge of all the Equipment and Clinical Information System Output Specifications produced by the Hospital/Technical partner project teams.

3.1. The Technology Banding Process

At the early stage of the project the technical partner will take the Hospital's Input Specifications, and will provide a current make and model for each Input Specification along with an indicative Technology Band.

Just prior to the deal being completed the Hospital and the technical partner will jointly confirm and agree on the Baseline Output Specification and Technology Bands for each device and system. At the time of procurement the Output Specification for each device will be updated as part of the procurement process, using the Technology Banding for that product. A range of suitable “Current Products” will be identified from those manufacturers who meet the updated Output Specification and reflect the Technology Band allocated.

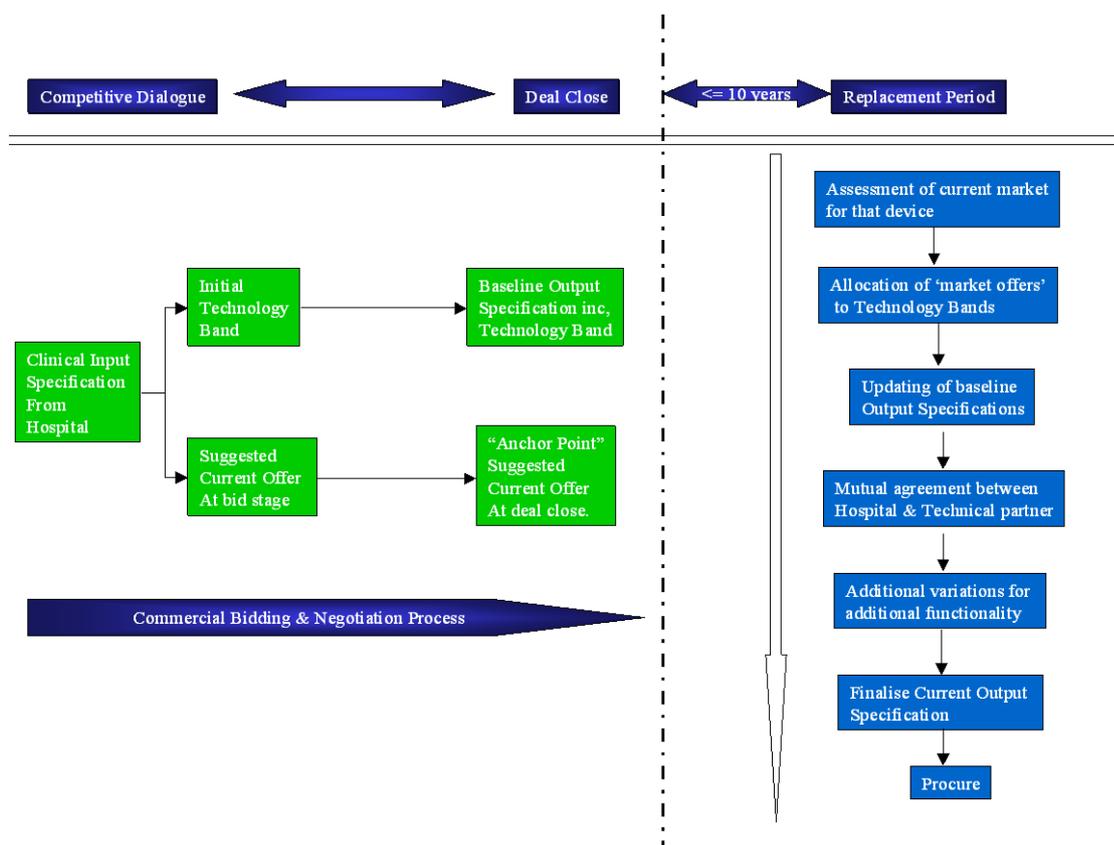


Figure 2. Technology Banding process

The Output Specification will provide the criteria against which the full range of equipment (that the potential equipment suppliers produce) is compared, in order to set its position in the relevant Technology Band within the market place. Along with the other reference documents (such as the benchmark specifications), this will be used throughout the contractual period as a baseline when equipment is in the process of being replaced.

Clinical users will be directly involved in this process as follows:

- Through the planning of the Equipment Replacement/Investment Plan.
- In the assessment of Replacement Equipment for suitability prior to procurement.
- In the updating of Output Specifications and Technology Bands, which are updated on an annual basis (or at the start of the procurement process for each item).

It is common to use a 1-5 numbering system for Technology Banding, where 1 represents the highest level of technology and 5 the lowest. The content of each band is shown on a practical level below:

1	Cutting edge and pre-production models.
2	Leading edge machines in production for 6-9 months.
3	Full production models, as found in most Teaching Hospitals.
4	Full production models, as found in most District General Hospitals.
5	Full production models with limited specification and capability.

3.2. Example of Technology Banding

A technology band secures a position in a technology spectrum and ensures that when the equipment is replaced that the Hospital maintains its position in terms of service capability. By way of illustration, the Computerized Tomography (CT) scanner equipment currently has a range of specifications available. When these are technology banded we obtain the following result:

128/256 Slice CT
64 Slice CT
32 Slice CT
16 Slice CT
8 Slice CT

The value of technology banding is best illustrated by reviewing historical technological evolution of a product range as follows:

If we review what has happened in the CT market over the past years we can see that as new technology is introduced it is superseded with a new model and increased level of technology.

Band	Year 1	Year 2	Year 3	Year 4	Year 5
1	16 Slice	16 slice Pro	32 slice	64 slice	128 slice
2	8 slice	16 slice	16 slice Pro	32 slice	64 slice
3	4 slice	8 slice	16 slice	16 slice Pro	32 slice
4		4 slice	8 slice	16 slice	16 slice Pro
5		2 slice	4 slice	8 slice	16 slice

Technology Banding is designed to protect Hospitals from this pace of change. The use of Technology Banding minimises the Hospital’s risk exposure to the rate and cost of technology changes in the market. This then allows the Hospital to maintain and develop its service delivery capability over the contract term.

During the commercial bidding stage and through the contractual term, the technical partner will ensure all equipment and clinical information systems have agreed Output Specifications and Technology Bandings. These will form the basis of a reference library.

4. PPP expected results

At this stage the possible advantages of the public-private partnership could be the following:

- It enables the Public entity to invest large amounts of money in a short period of time.
- Industry knowledge is transferred to the public entity.
- The concept of seller is transformed into the concept of partner, helping also the Public entity to make decisions.
- There is more commitment for the private sector to improve and maintain the equipment and obtain better results at the end.

- Risk is shared. The public entity takes advantage from the private sector to improve productivity and organizational development.
- There is a continuous upgrading of the equipment, thus avoiding obsolescence and becoming independent of budgetary restrictions.
- Planning is performed for a large area and for the long-term, offering not just a specific solution for a specific site. Scale economy must demonstrate more sustainability for longterm partnership than traditional procurement.
- Advantage is taken for innovation, research and continuous training. There can be direct support to universities and eventually research agreements.

Nevertheless, there are some points that require careful consideration:

- The term of the contract is long and that could amplify the mistakes made in the partner's choice.
- If the area of interest is large, mistakes can be amplified accordingly.
- There is no previous experience either at local level or at European level.
- Lack of interest in long-term business as a company, especially in times of economic and political difficulties.
- Resistance to change. Now the final client makes the decision and the final decision must be taken at corporate level.
- There is no one company capable of offering all the services. Collaboration among competitors is uncertain.
- The role of the partner is different depending on whether it is a new hospital or an old one.
- Current contracts must be transferred to the new one.

5. Conclusions

Some regions in Spain are increasingly adopting PPPs as an alternative to the traditional in-house provision/procurement of public services in Healthcare. In most advanced national experiences, new forms of PPPs are continuously emerging, and the existing ones are being tailored to the needs of, different sectors. What emerges from the observation of currently adopted schemes is that each PPP arrangement should be designed and adapted to the specific characteristics of the asset at stake, as well as to the peculiar abilities of all partners involved in the project. In order to guarantee value for money, the relative strengths and weaknesses of each PPP scheme should be considered. Depending on the sector of application, some models are better suited than others in delivering targeted outputs and in ensuring accurate risk management. Choosing the wrong model or inaccurately evaluating the risk management capacities of each party may have extremely costly consequences and a negative impact on public accounts. Moreover, EU member states have different needs and priorities when it comes to delivering public infrastructure and services. Clarification on renegotiation issues and on the competitive dialogue procedure will undoubtedly facilitate the emergence of new models, trends and innovative solutions for setting up efficient PPPs.

Finally, it is worth pointing out that PPPs are not always the best option, even if the benefits of private involvement in public assets provision are self-evident in many cases. PPP relationships are difficult to design, implement and operate. In a word, the risk of remaining locked-in an inefficiently designed contractual arrangement is high. As a result, the ex ante

assessment of value for money and the evaluation of overall expected allocative and efficiency gains should always play a pivotal role both when choosing a PPP approach and when deciding which of the available models is best suited for the case at hand.

Technology banding defines the rules of the game for long term contract in healthcare and protects Public Administrations against technology obsolescence.

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