



# Public Consultation to Celebrate Framework Agreement on Technology Consulting Services Blockchain

17 of May of 2019



**SPMS**<sub>EPE</sub>  
Serviços Partilhados do Ministério da Saúde



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## FRAMEWORK

### Values and principles of SPMS, EPE

SPMS, E.P.E. intends to conclude a Framework Agreement for the contracting of Technology Consulting Services Blockchain, in the image of the rest that it has concluded to date, always based on the pursuit of its values.





## FRAMEWORK

### Values and principles of SPMS, E.P.E.

Throughout its activities, in the framework of the conclusion of the Framework Agreement, it is also the objective of SPMS, that all its employees know and internalize the principles listed below, as a reference for conduct permanent.





# FRAMEWORK

## The public consultation

### Availability and scope

- This Public Consultation is advertised on the SPMS website ([www.spms.min-saude.pt](http://www.spms.min-saude.pt)) and in a newspaper of great circulation national, in its weekend edition (**18 of may of 2019**).
- The entire content of this document is the subject of a Public Consultation.

### Interested

- SPMS, E.P.E. considers interested in this Public Consultation the citizens, companies and associations of the sector, as well as the entities of the SNS.

### Participation

- Participation is open to all interested parties who present, in writing, by **5:00 p.m. 08 of june of 2019**, through the sending to the electronic address: [compras.transversais@spms.min-saude.pt](mailto:compras.transversais@spms.min-saude.pt) of its opinion and contributions related to the proposed Framework Agreement, to be signed by SPMS, EPE. Those interested must indicate clearly in the subject of e-mail the reference “**Public Consultation of Blockchain Technology Consulting Services**” and the body of the same when applicable, the entities they represent.



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# GOALS

## Objectives of the Public Consultation

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The experience and direct knowledge that stakeholders hold of the markets, practices, norms and regulations are to identify constraints, set priorities and seek the best needs of any public administration entity.

**Thus, with this public consultation the SPMS, EPE intends to:**

- **Inform and involve stakeholders** in the process of preparing the Framework Agreement, encouraging its constructive and creative participation;
- **Encourage stakeholder participation** in the preparation of the procedure, awaiting comments and suggestions from both service providers and public administration proposal for the development of the conceptual model and formation of this Framework Agreement;
- **Identify the main constraints and seek the best solutions**, so that the one designed in the Framework Agreement shall assist any public administration entity, facilitate procurement procedures and that it is possible for public administration entities to have more privacy and data interoperability, and, of course patients in possession and control of their own health information.



# GOALS

## Objectives of the Framework Agreement

With the creation of this Framework Agreement, the aim is to boost competition and increase public procurement procedures, since in this Framework Agreement standardization and standardization of requirements of this service provision.

### The main objectives of the framework Agreement are:

- **Select suppliers** that meet the characteristics defined in the Framework Agreement, with a view to disciplining future contractual relations;
- **Simplify the purchasing process** by any public administration entity;
- **Establish in advance the terms** of service provision;
- **Define maximum prices;**
- **Define minimum service levels.**

Service contracts are performed by any public administration develop procedures under article 259.º of the CCP, where they must consult all companies selected under this Framework Agreement, and this procedure results in the successful tenderers.





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# FRAME AGREEMENT

## Characteristics of the Framework Agreement

<b>Object of the Contest</b>	The Competition will have as its object the selection of co-contractors for the Framework Agreement, which acquisition of Consulting Services in Blockchain Technology.
<b>Kind of Procedure</b>	Public Tender with Publication in the Official Journal of the European Union (JOUE).
<b>Validity</b>	The Framework Agreement will have a duration of <b>24 (twenty-four) months</b> , from the date of its entry in force, and the term shall be automatically extended for an equal period up to the term maximum duration of the Framework Agreement.
<b>Deadline</b>	The maximum term of validity of the Framework Agreement, including extensions, is <b>4 (four) years</b> .



# FRAME AGREEMENT

## Characteristics of the Framework Agreement

### Lots

The framework agreement in question thus takes **3 diferente Lots**:

- ✓ **Lot I** - Definition of strategic models, identification, prioritization and selection of opportunity Blockchain solutions;
- ✓ **Lot II** - Development and implementation of Blockchain solutions in productive and formation;
- ✓ **Lot III** – Provision of Cloud Platform Services.

### Criterion of Adjudication

The award will be made by lot according to the award criterion of the tender economically more advantageous, with only the price factor being evaluated.



# FRAME AGREEMENT

## Characterization of Lot I

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Within the scope of **Lot I - Definition of strategic models, identification, prioritization and selection of opportunity**

**Blockchain solutions**, it is intended that the services to be provided will meet the following requirements:

- ✓ Consulting services for the definition of strategic models;
- ✓ Identification of current processes;
- ✓ Identification and selection of processes to implement Blockchain solutions;
- ✓ Proposal to adapt the current processes for possible use of the Blockchain solution;
- ✓ Design and technical specification of the requirements necessary for the implementation of the Blockchain solution in the identified processes;
- ✓ To demonstrate the advantages of using Blockchain, especially in systems with many players, a lot of information transaction where it is necessary to make it immutable / traceable / transparent, thus allowing processes to be more efficient.

The services to be provided under this batch include the following main activities, which are divided in two macro phases of deliverables::

- 1) Identification of areas for implementation of Blockchain solution;**
- 2) Specification of Requirements.**



# FRAME AGREEMENT

## Characterization of Lot I

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In the **Identification of areas for implementation of the Blockchain solution**, there are some of the following activities:

- a) AS IS report on the current areas, initial diagnosis where the existing areas should be identified currently and those that fit the use of Blockchain solution;
- b) TO BE report on the areas of application, identifying the improvements in their respective areas with the application of Blockchain solution;
- c) Definition of a plan of strategic initiatives, which identifies the path to be taken by the acquiring entity;
- d) Workshops on the potential of Blockchain and its benefits;
- e) Documentation in the form of work instructions with the purpose of making the use of the Blockchain technology;
- f) Identification and prioritization of possible areas or systems for the application of Blockchain solution.



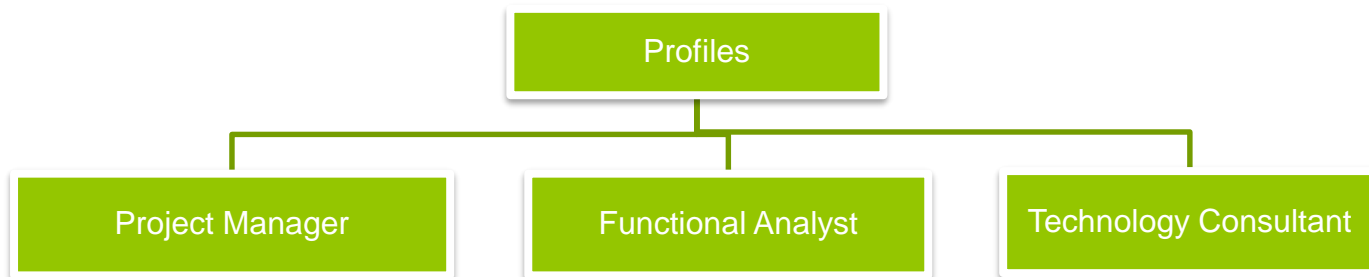
# FRAME AGREEMENT

## Characterization of Lot I

In the **Specification of Requirements**, the following activities are included:

- a) Technical project management and coordination;
- b) Definition of the change management model;
- c) Final report of the Blockchain areas to be developed;
- d) Analysis, design and functional specification, allowing to identify the best solution according to the business requirements of the acquiring entity;
- e) Analysis, design and functional specification, allowing to identify the architecture requirements implementation of Blockchain;
- f) Production of a Final Report, composed of technical, functional and test cases, between other relevant documents.

It is understood that for the present provision of services in this **Lot I**, the following profiles are considered:





# FRAME AGREEMENT

## Characterization of Lot I

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Project Manager

Minimum requirements:

- a) Degree or Masters in Management, Engineering, Economics, Information Technology or similar;
- b) Specific training in Project Management;
- c) Proven experience ( $\geq 2$  years) in:
  - i. Project management of information systems;
  - ii. Blockchain project management;
  - iii. Project monitoring;
  - iv. Team management.



# FRAME AGREEMENT

## Characterization of Lot I

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Functional Analyst

Minimum requirements:

- a) Degree or Masters in Computer Engineering or similar;
- b) Specific training in Functional Analysis and Quality and business modeling and reengineering;
- c) Proven experience ( $\geq 2$  years) in:
  - i. Functional analysis of applications;
  - ii. Methodologies for analyzing requirements and testing of information systems;
  - iii. Creation of functional documentation;
  - iv. Blockchain project management.





# FRAME AGREEMENT

## Characterization of Lot I

Technology Consultant

Minimum requirements:

- a) Degree or Masters in the areas of Computer Engineering or similar;
- b) Proven experience ( $\geq 2$  years) in:
  - i. Project management of information systems;
  - ii. Specific training in Functional Analysis and Quality and modeling and reengineering of business architecture;
  - iii. Technological knowledge namely of Blockchain;
  - iv. Development of solutions in Blockchain;
  - v. Blockchain project management;
  - vi. Project monitorings;
  - vii. Technical team management.



# FRAME AGREEMENT

## Characterization of Lot II

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The services to be provided under **Lot II - Development and implementation of Blockchain solutions in productive environments and training**, consist of:

- ✓ Services for implementation and development of blockchain solutions projects;
  
- ✓ Training on the solutions implemented or to be implemented, in order to equip the competency resources techniques.

The services to be provided will include the following main activities, which are divided into four macro phases of deliverable:

- 1) Technical and Functional Specification of the requirements to develop the Blockchain solution identified and definition of test plans;**
  
- 2) Programming, testing and implementation of Blockchain solution identified;**
  
- 3) Creation of technical reports;**
  
- 4) Training.**



# FRAME AGREEMENT

## Characterization of Lot II

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In the **Technical and Functional Specification of the requirements to develop the identified Blockchain solution and definition of test plans**, there are some of the following activities:

- a) Technical project management and coordination;
- b) Analysis, design and functional specification of the areas to be intervened;
- c) Analysis, design and technical specification of Blockchain application support architecture;
- d) Business Cases of the solution, where you can see the expected return of the use of Blockchain;
- e) Documentation associated to the project, technical and functional notebooks of the solution, test report, among other relevant documents;
- f) Definition of tests of use of the solution.

In the **Programming, testing and implementation of the Blockchain solution identified**:

- g) Blockchain solution programming;
- h) Testing in a test environment;
- i) Installation and configuration of the solution in a productive environment.



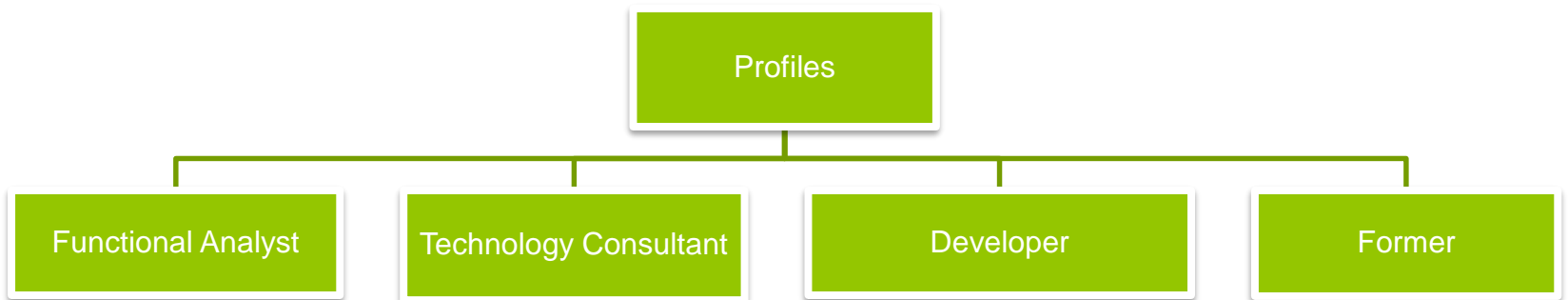
# FRAME AGREEMENT

## Characterization of Lot II

### In Training:

- j) Transfer of knowledge, to provide employees with autonomy in the use, configuration and maintenance;
- k) Training in the classroom;
- l) Hands-on training, in practical project contexts or in daily operation.

It is understood that for the present provision of services of this **Lot II**, the following profiles are considered::





# FRAME AGREEMENT

## Characterization of Lot II

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Functional Analyst

### Minimum requirements:

- a) Degree or Masters in Computer Engineering or similar;
- b) Specific training in Functional Analysis and Quality and business modeling and reengineering;
- c) Proven experience ( $\geq 2$  years) in:
  - i. Functional analysis of applications;
  - ii. Methodologies for analyzing requirements and testing of information systems;
  - iii. Creation of functional documentation;
  - iv. Project management.



# FRAME AGREEMENT

## Characterization of Lot II

Technology Consultant

Minimum requirements:

- a) Degree or Masters in the areas of Computer Engineering or similar;
- b) Proven experience ( $\geq 2$  years) in:
  - i. Project management of information systems;
  - ii. Infrastructure Architecture Knowledge of Blockchain Networks;
  - iii. Solution Development in Blockchain;
  - iv. Blockchain project management;
  - v. Project monitoring;
  - vi. Technical team management.



# FRAME AGREEMENT

## Characterization of Lot II

Developer

Minimum requirements:

- a) Degree or Masters in the areas of Computer Engineering or similar;
- b) Proven experience ( $\geq 2$  years) in:
  - i. Microsoft Business Intelligence (HTML, CSS, Java, JavaScript, among others);
  - ii. Solid knowledge in database development and management and programming;
  - iii. Domain in the process of implementation and development of Blockchain solutions;
  - iv. General knowledge about encryption, security, finance and privacy;
  - v. Blockchain project management;
  - vi. Fluent English.



# FRAME AGREEMENT

## Characterization of Lot II

Former

Minimum requirements:

- a) Degree in the areas of Information Technology or equivalent;
- b) Proven experience ( $\geq 2$  years) in:
  - i. Blockchain Solution Implementation Projects;
  - ii. Projects in which he participated, delivered in-room training, Hands-on, in contexts practical projects or in daily operation and prepared documentation, namely, user manuals, films and images to support face-to-face training and eLearning.





# FRAME AGREEMENT

## Characterization of Lot III

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he services to be provided under this **Lot III - Provision of Cloud Platform Services**, consists of the providing a platform that works in cloud, that allows to simplify the development of the solution blockchain.

The services to be provided consist of the following main activities:

- ✓ Providing the blockchain platform with a high level of performance, which allows:
  - ✓ Manage large volume of dat;
  - ✓ Provide minimum established times for transactions;
  - ✓ Enable synchronization with other systems.
- ✓ Monitoring and monitoring of the platform;
- ✓ Ensure integration with other external applications of the acquiring entity;
- ✓ Ensure corrective and evolutive maintenance that must occur in the platform (at the application level of the infrastructures arising from legislation and technological innovation);
- ✓ Maintain all means and mechanisms that comply with the basic principles of security (confidentiality, integrity of information, availability, traceability and non-repudiation);
- ✓ Ensure the existence of different testing, development and production environments;
- ✓ Provide a ticketing system that allows the recording of all occurrences, errors, incidents, improvements, among others.



# FRAME AGREEMENT

## Award Criteria

The framework agreement is structured by Lot and takes into account the following types of contract:

### Typology

**1. Key in the Hand:** Well defined and contextualized project and for which the competitor presents a closed price. The project will be executed using the type team that will execute all the activities and tasks and the deliverables.

**2. To the Resource:** Project in which resources will be allocated according to the needs identified. For the execution of defined activities and tasks, the entity contractor shall request the number of hours of work to be performed per profile.

**Lot I** – Definition of strategic models, identification, prioritization and selection of Blockchain solutions

Typology of Contract	Factors	SubFactors		Unity of Measure	Weight Subfactor	Weight Factor
Key in the Hand	<b>A</b>	<b>A</b>	Monthly Service Price	Month	100%	50%
To the Resource	<b>B</b>	<b>B1</b>	Hourly/Man Price (Project Manager)	Hour/Man	33%	50%
		<b>B2</b>	Hourly/Man Price (Functional Analyst)	Hour/Man	33%	
		<b>B3</b>	Hourly/Man Price (Technology Consultant)	Hour/Man	34%	



# FRAME AGREEMENT

## Award Criteria

**Lote II** - Development and implementation of Blockchain solutions in productive environments and training:

Typology of Contract	Factors	SubFactors		Unity of Measure	Weight Subfactor	Weight Factor
Key in the Hand	<b>A</b>	<b>A</b>	Monthly Service Price	Month	100%	50%
To the Resource	<b>B</b>	<b>B1</b>	Hourly/Man Price (Functional Analyst)	Hour/Man	25%	50%
		<b>B2</b>	Hourly/Man Price (Technology Consultant)	Hour/Man	25%	
		<b>B3</b>	Hourly/Man Price (Developer)	Hour/Man	25%	
		<b>B4</b>	Hourly/Man Price (Former)	Hour/Man	25%	

**Lote III** – Provision of Cloud Platform Services:

Typology of Contract	Factor	Unity of Measure	Weight Factor
Key in the Hand	Price per Transaction (Month)	P/Transactions	100%



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# PROCEDURES DEVELOPED UNDER FRAMEWOK AGREEMENT

## Award Criteria

The award criterion is that of the most economically advantageous tender, determined by one of the following modalities:

- a) Price Evaluation;
- b) Best Value for Money.

In Recruitment of resources, the following factors may be taken into account:

Factors	Weight
Price	> 60%
Resource Experience Level Presented in Qualifications	≤ 40%

The acquiring entity may define other factors that it deems relevant to evaluate the proposals in accordance with the subject of this framework agreement.



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## REQUESTED CONTRIBUTIONS

In this sense, the present public consultation intends to assess strategies for the application of Blockchain computer systems used in public administration, identifying the respective areas of intervention that will allow greater security in transactions, thus dispensing in some cases, the role of intermediaries, always based on the following characteristics:

### Key Features of Blockchain Technology

- **Reliable:** Much safer than traditional methods, meaning each node in the network has a log copy digital. To complete a transaction, each node needs to verify that it is valid. If the majority assert that it is valid, then it joins the registry. This promotes transparency and security.
- **Decentralized:** It does not rely on server-based technology and no one has authority over the system.
- **Immutable:** Transactions can not be changed / undone if they are already in the blockchain..
- **Distributed:** Blockchain technology offers a shared and distributed registry that is open to all users.
- **Increased network capacity:** Much more efficient than the traditional network.
- **Faster, trackable queries:** Blockchain offers faster, easier-to-locate queries, in traditional systems.



## REQUESTED CONTRIBUTIONS

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More than that, it is intended that Blockchain Technology will solve current problems in the health area, such as as:

- Storage of clinical and user data;
- Identification of the hospitals, services and specialties in which the user was in contact;
- Registration of the professional who inserted information from the user and who had and who will have access to it;
- Reliability in the registered information, in view of the clearance and validation of the same;
- Avoid data fraud;
- Reliable process control and monitoring.





## REQUESTED CONTRIBUTIONS

**Audience:** Everyone can read and send transactions or participate in the consensus in a blockchain public, because this type of blockchain does not require 'permission'.

**Private:** they are controlled by a the only organization that determines who can read and send transactions and participate in the consensus process.

### Types of Networking Blockchain

**Consortium:** which, according to definition of SAP, is controlled by one group preset - in corporations, for example.

**Semiprivates:** are administered by a single undertaking which grants access to any user what answer to criteria pre-established.

Despite being increasingly consolidated, the new technology still raises doubts on what type of network Blockchain opt out. So the greatest doubt of all is what is the difference between private and public blockchain.



## REQUESTED CONTRIBUTIONS

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The SPMS, EPE thus intends with this document to promote the participation of all stakeholders (it is understood interested parties, citizens, companies and associations of the sector, as well as entities of the NHS and the institutions If they wish, they may contribute inputs to the specifications of the Consultancy in Blockchain Technologies, which is intended to celebrate in order to enhance its effectiveness and efficiency.

Among others, contributions are also made on:

If all the resource profiles necessary for the development of technology Blockchain, namely:

- Bachelor
- Number of year of experience.

Designate the price range:

- Lots I and II – where the unit hourly cost per man decreases, depending on a particular package of hours, as being for example a package consisting of 100h, 200h, 300h, among others;
- Lot III – where the unit cost per transaction decreases, depending on a certain number of transactions, as for example 500, 1000, 1500 transactions, among others.



## REQUESTED CONTRIBUTIONS

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- If the factors making up the award criterion are either within the framework agreement or in the procedures developed under it are currently reflected in the market.
- Identification of the main constraints and indication of the best solutions so that the one designed can serve any entity of the public administration in the field of Consulting Services in Technologies Blockchain.

A solução está na partilha!

Obrigado



**SPMS**<sub>EPE</sub>  
Serviços Partilhados do Ministério da Saúde