"Public Procurement for e-government services: Challenges and problems related to the implementation of a new innovative scheme in Greek Local Authorities"

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Motivation

- To provide **empirical evidence** on the role of PPI in addressing social needs regarding the relationship of citizens and businesses with the public administration.

- In particular: To examine different aspects of a PPI process for the provision of **local e-government services** (LGAF pilot project) in a specific country context (**Greece**).

Main Actors

- Demand:
  - o Basic procurer: The Central Union of Greek Municipalities (KEDE)
  - o End-users: Eight (8) Greek Municipalities of various sizes and geographical characteristics
- Supply:
  - o Prime Contractor: A large established Greek firm
  - o Subcontractors: five (5) key actors (+ other occasional actors)
    - o One (1) independent research laboratory
    - o One (1) academic laboratory
    - o One (1) small-medium firm
    - o Two (2) micro firms

Objective of the LGAF pilot project
Product & Services

- The development of a **centralized software system (platform)** and the connection and interoperability of this system with the **existing (legacy) application systems** of local authorities for the:
  - Provision of high value-added **E-government Services** for citizens (e.g. family record certificates, municipal tax payments, request for recycling of electrical appliances etc.) and local businesses (e.g. municipal tax payments etc.).
  - Leverage of **Information and Knowledge Management systems** of municipalities

Challenge/Need

- <u>National level:</u> The offer of **e-government services of a high online sophistication level** to citizens/businesses would contribute to the:
  - Upgrading of citizens' quality of life
  - Enhancement of businesses' productivity and competitiveness
  - Economies of scale and more efficient resources management for public agencies

- <u>European level:</u> The provision of **cross-border (life-event) e-government services** to EU citizens/businesses that require the **coordination** of public authorities in different European Member States,
  - is an important pillar for the realization of **European single market** (challenge).

Methodological Approach

- Case study work:
  - **In-depth interviews** with the founders or CEOs of the participating firms and the research centre officials that played a key role in the platform design and development.
  - Using a **semi-structured questionnaire** trying to capture the objectives of the LGAF project, its innovative characteristics, the opportunities for knowledge-intensive entrepreneurship, the relationships among different actors, the obstacles for success and the long-term potential.

The stages of PPI process

- <u>Type of Subsidy:</u> It is a **co-funded project (EU & National funds)** and the larger amount of funds are paid **after the completion** of the project

- The **basic procurer** (KEDE) through its scientific advisor team INFOSTRAG translated the needs/challenges to **functional requirements** i.e. the development of a centralized open source system for the production of value-added e-government services.

- **Detailed technical specifications** i.e. installation and modification of an existing platform that was developed in 2004 for the use of local authorities of London (APPLAWS).

- **Type of call: Open Call**

- <u>Award criteria:</u> **Least Risk, Trust**

A large established Greek IT firm was awarded to implement the project due to its previous experience/domain expertise and financial credibility.

The stages of PPI process

- The basic procurer (KEDE) has **restructured the project team** to include **two knowledge-intensive actors**: an independent research laboratory and a specialized IT micro-firm.

- A **radical redesign** of the project was decided through the consultation by these two key actors and a cooperative **dialogue** btw. these two key actors, KEDE and the prime contractor.

  ➢ This redesign implied much **less detailed technical specifications** as it consisted in the development of a **completely new** and more complex **platform** based on a **modular architecture** (SOA).

The stages of PPI process

- The project's redesign raised substantially the need of **specialized software providers'** (subcontractors) participation for the development of the **various components** (sub-systems) of the platform.

- During the implementation of the project, **some of the specialized suppliers withdrew** from the project due to the inconsistencies of the financial flux and/or their limited capacity to meet project technical requirements

- Finally, **six key actors** have been disambiguated in the project.

Result of the procurement process

- **Partial Completion:** Crucial delay of funding
  - **Product development** (LGAF software platform) & **Delivery** to the purchasing agency (KEDE)
  - The LGAF platform **has not been put in operation yet** as KEDE and the prime contractor have to cooperate with the **municipalities** in order to:
    - integrate their **legacy software systems** with the platform and
    - carry out the necessary preparatory **organizational work** (registration/modeling of data and internal processes) for the production of e-government services.

    Currently, there is being made an **attempt of pilot use** in one municipality.

Obstacles for Success

- Demand
  - **Basic Procurer (KEDE)**
    - **Although certain policy initiatives** for ICTs adoption and usage at the local government level have been developed
    - **Not an "intelligent customer"**: Lack of the human resources required to monitor the development and implementation of such an innovative project
    - **Insufficient supplementary instruments** (awareness of local government leaders, training and enhancement of local human resource, other incentives etc.)
    - **Low institutional power** to enforce specific e-government solutions
  - **End-Users (Municipalities)**
    - In general, **low quality of demand**

Obstacles for Success

- **Radical Redesign** (although it favored innovation substantially!)
  - The LGAF project incorporated new core design characteristics **without the required rearrangements** that these new core aspects demanded (e.g. significant increase of funding, reformulation of deliverables' objectives etc.)
  - Strong enhancement of its **R&D character.** Need for:
    - More **flexible & stable funding**
    - **Smaller range of services**: Higher possibility for in-depth testing

Obstacles for Success

- Supply
  - **Prime Contractor**
    - **Lack of** the required **technical capacity** to fully understand the essence of the different platform components and in turn **to orchestrate** the specialized developers responsible for their creation.
    - **Insufficient project coordination** in terms both of technical and project management.
    - Inherent problem of the Greek ICT ecosystem where large firms usually act more as **"box-movers"** and much less as creators or facilitators of innovative activities.

Type of procurement

- **PPI – Innovation Characteristics:**
  - follow the **new rationale** of e-government services development that EU strategy promotes (European Commission, 2010)
  - **Modular architecture** (SOA) of the whole system
  - use of **Open Source Software (OSS)**
  - ➢ Subcontracting opportunities for small knowledge-intensive firms
- **Direct** procurement with aspects of **catalytic** procurement
- **Adaptive** procurement
  - **Significant Incremental Innovation**: Combination of various state-of-the-art technologies (sub-systems) for the development of a completely new integrated system.

Intended Consequences

- Development of an **innovative platform** of high reusability and transferability due to its design characteristics (SOA, OSS).

Unintended Consequences

- Negative

  - **Delay and Partial Completion** (no provision of services yet) of the project

  - **Negative financial impacts** to small/micro actors (firms and research laboratories)

- Positive

  - **Creation of a knowledge network** – collaborative ecosystem, **technological opportunities** for knowledge-intensive firms

Long-term Potential

- High Reusability
  - Utilization of the LGAF platform by **more (ideally total of) municipalities**
  - Creation of **additional services**
- High Transferability
  - Many opportunities for transferability of the accumulated technological and organizational knowledge to **other** individual **public entities** or group of entities (ministries, regional authorities, hospitals, courts, public utilities etc.) and **large private firms**
- A step for cross-border services
  - Possibility of **interconnection and interoperability** of the LGAF platform (or other similar potential platforms) with relative platforms of other **EU countries** for the provision of **cross-border services**

Long-term Potential

- **Customers** (public/private sector) of IT and e-government solutions
  - **Productivity** increase of public and private sector
  - Improvement of the **delivered public services** to citizens/businesses.
- **Suppliers** (IT sector) of IT and e-government solutions
  - Enhancement of **knowledge capital, innovativeness and competitiveness** of IT firms giving them an opportunity to increase their **export activities**.

Some policy implications

- The proposed (modular) architecture of the **European Interoperability Framework (EIF)** provides opportunities for **knowledge-intensive entrepreneurship** and should be promoted more intensely
- Formulation of policies and practices that are **in favor of OSS** but in the same time consider **efficiency issues**.
- A Strategy regarding PPI for e-government services should consist of **two main stages** (crucial role of appropriate **risk management** and mitigation):
  - Pre-commercial (PCP)
    - Pilot R&D projects
    - A limited number of *potential* users
    - In-depth testing of the product (services)
    - Knowledge exploration
  - Commercial (PPI)
    - Complementary instruments
    - Institutional measures
    - Flexible business models (Public Private Partnerships, Framework Agreements)
    - Knowledge exploitation