The role of Information Systems Architecture

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The role of Information Systems Architecture

Public Administration, being it Central, Regional or Local.

plays a key role in any country.

One might and should wonder why a given PA is organized, structured, managed and governed as it is.
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Is the rationale behind the present configuration of a Public Administration coherent and consistent with its ultimate purpose, that is, to serve the society where it operates in the best way possible with the available resources?

More to the point: Can one talk of one rationale for a given AP at all?
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This talk will address these questions, using the most recent and rigorous frameworks provided by Enterprise Engineering, Architecture and Governance fields of knowledge.

A Concrete example will be shown, in the central administration context.
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The interaction among all stakeholders

Requires

A Shared Semantic Space

Supporting a Shared Language

Without Ambiguities!
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The core concepts of any language are:

**NAMES** – designate the entities of the shared world

**VERBS** – designate the actions the change the world

**Syntatic rules** – that define how to formulate adequately actions fired by actors (Names) through Acts (Verbs) that change the state of Entities (actors or entities) of the world (Names)!
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The language is contextualized by

**SEMANTICS** – the meaning for the human minds of the concepts

and

**ONTOLOGY** - the purpose, the intention behind any action
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To deal properly with IT and IS systems, one needs to address explicitly all these key aspects of human communication and cognition.

The new discipline of Enterprise Engineering attempts to do that!

It uses concepts such as Enterprise Ontology, Enterprise Architecture, Enterprise Governance and Enterprise Transformation.
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Example

Interoperability for E-Procurement

THE PUBLIC CONTRACTS BASE PORTAL

AN ELECTRONIC PLATFORM
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Example from BASE PORTAL

Information Architecture
Enterprise Self-Awareness

The explicit representation of the common semantic model of an Enterprise is called the **Enterprise Cartographic Map**

which is the essential artifact for

**The Enterprise Self Awareness**
Enterprise Governance

The essence of Enterprise Governance is the competence to deal with the essence of the systemic and holistic dimensions of the Enterprise Self.
The fundamental role of Enterprise Governance is to dynamically preserve Enterprise self-integrity!
Enterprise Cartography is, by essence, an Essential Artifact, whose existence and continued preservation is the primary responsibility of Enterprise Governance.

Without systemic, coherent, complete, consistent Cartography, Governance is blind and acts on virtual reality.
Enterprise Cartography

“Enterprise Cartography” denotes the discipline dealing with the conception, production, dissemination and study of enterprise maps to support the collective understanding of a dynamically changing organization.
Enterprise Cartography (EC)

EC process aims at the production of architectural views exhibiting organization´s components and their dependencies, using the full set of the conceptual body of knowledge of EA.
EC deals solely with the descriptive mission of EA, and for this purpose, EC and EA share the same set of conceptual constructs, such as meta-models, models, viewpoints, views, repositories, frameworks, view design rules, and so on.
Enterprise Cartography

Figure 2 - from TOGAF 9, labeled as
“Figure 34-3 Interactions between Metamodel, Building Blocks, Diagrams, and Stakeholders”.
Enterprise Cartography

EC aims at the representation of organizations based solely on observation of the reality.

This means that data collection from organization’s reality is a major concern in EC.
Enterprise Cartography

EC aims at organization description, not at its transformation.

Thus, EC does not address the purposeful transformation of the organizations as in EA.
Enterprise Cartography

**EC aims at keeping organization architectural views up-to-date**

The process of collecting data and producing the architectural views should be as automated as possible and executed at least at the rate of organization´s change.
Enterprise Cartography

**ENTERPRISE CARTOGRAPHY**

**EXAMPLE**
The AS-IS of an organization includes the current state, the foreseen future states, as well as the remembered past states!
The 2nd Principle of Enterprise Cartography

Organization foreseen TO-BE states always precede actual AS-IS states
The 3rd Principle of Enterprise Cartography

Organization models and transformation plans are fundamental organization artifacts.
For the purpose of planning the transformation initiatives, one does not require the AS-IS, only the TO-BE!
The 1st Principle of Enterprise Cartography

Planning Project P

T0
Today AS-IS
Start Planning Project P, with Start Date t3

T1
TO-BE(t1)
Project X is expected to conclude

T2
TO-BE(t2)
Project Y is expected to conclude

T3
TO-BE(t3)
Project P is expected to start

T4
TO-BE(t4)
Project Z is expected to conclude

T5
TO-BE(t5)
Project P is expected to conclude

Executing Project P
Is the AS IS Irrelevant?

Knowledge of organization current state, the AS-IS is a fundamental asset of organizations for the purpose of current operations and maintenance.
In conclusion:
On the purposeful design of Enterprise Transformations

It is a common practice in actual EA projects that one first defines the goals to be attained, as well as determining the AS-IS state, as precisely as possible.
In conclusion: On the purposeful design of Enterprise Transformations

This is indeed a very common dilemma in today’s organizations: on one hand, there is the feeling that an AS-IS assessment would be an extremely valuable asset for planning the organization’s transformation and, on the other hand, the feeling that such task requires an overwhelming effort.
Both feelings are wrong!

Neither a full and accurate representation of the AS-IS is needed, since all we need in fact is the TO-BE, nor it is necessarily an overwhelming effort, since the TO-BE is be much easier to get than the AS-IS.
We claim that, by keeping ongoing the proposed EC processes, rooted in each and every transformation project, all the required information for EA to operate is permanently available.
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