Executive Summary

EA Modeling Applications:

Part I: Six "Recipes" to Resolve IT-Related Management Problems

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> The real problem in speech is not precise language.
> The problem is clear language.
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> — Richard P. Feynman

This quote by Richard Feynman refers to the use of mathematics to describe and communicate physicists' ideas, and it proves to be universal. We can describe things with nine-decimal-digit precision and still be unable to answer simple questions like, "Would it work like this?" In the ICT space we often go deeper and deeper into a problem, losing the overview and thus the ability to make informed, optimal decisions.

THE RIGHT TOOLSET

Every day I see analysts and architects struggling to solve problems supposedly solvable using IT tools. They try to be precise, but the more effort they spend, the broader becomes the gap between them. They become frustrated because they can't find clear answers to the problem and its solution. This issue is only one in an impressive panoply of "processes" that have been created in order to manage IT.

Professionals like myself have created many frameworks, methodologies, and standards to resolve important issues related to various IT management

disciplines. We know how to manage software development, how to deliver IT services and measure its parameters, don't we? We understand the methods for dealing with IT budgets, staff, and their competencies, right? We securely manage security, support business processes, and process huge volumes of data. But we fail at combining and consolidating all those various management disciplines into their own terms. Anyone faced with a problem requiring combining ITIL, security, and budgeting understands this perfectly. All those standards, frameworks, and methodologies abstract from information systems (IS) to some extent, making them unclear about their subject. Management disciplines related to information technology have become too distant from each other and too distant from IT itself.

GOING TO EXTREMES?

One important fact derived from the complexity theory is that the more complex a subject, the more information we lose while dividing it in order to understand it. If we are not able to understand it as a whole, we split a subject into smaller pieces believing that we will be able to understand the parts and, based on that, decipher the information lost during division, reconstruct the whole subject, and finally understand it. In the reality, we have to perform many such divisions (business analysis, system analysis, technical design, etc.), losing so much information along the way that — with no unification framework — we are unable to deliver what we need. But a unification framework already exists; it's called enterprise architecture (EA), so why not to use it?

Contemporary ICT has become so complex that, according to some science fiction writers, it is close to gaining its own conscience and autonomy. Divide and conquer tactics would no longer work. According to Ray Kurzweil's prophets in his book *The Singularity Is Near: When Humans Transcend Biology*, by the year 2045 computer processing power will exceed the processing capacity of the entire combined history of humanity.[1]

That's quite a distance in the future, so for now we must learn and understand how to deal with contemporary IT management problems — clearly and with the right tools.

ADDRESSING IT-RELATED MANAGEMENT PROBLEMS

I've face various challenges in my consultancy assignments. Over a decade ago I started to think of EA as a unification framework, which describes the subject of effort spent every day by countless IT professionals. Today I am sure of two fundamental things: (1) that EA is the most comprehensive and clear language to describe information systems in all its complexity dimensions; and (2) that it is capable of integrating any other IT-related management discipline with their subject.

The accompanying *Executive Report,* the first of two, provides six "recipes" on how to deal with some typical IT-related management problems by employing enterprise architecture as the canvas for building precise yet clear descriptions of management subjects. It starts with describing a toolset designed to integrate IS descriptions with other well-known management tools such as ITIL, security, budgeting, staff, competencies, and others. The toolset is simple, but it allows us to extend it to various, diverse purposes.

The six EA modeling applications describe how to extend the toolset, if needed, and how to resolve particular IT-related management problems. The applications provided include the following:

- Optimizing operational expenses budgets based on the capabilities of standardization and consolidation delivered by EA

- Consistently planning for IT-intensive business development in an acceptable and understandable way to all parties engaged in planning (at least business and IT)

- Identifying potential collisions among many, concurrently run IT projects and controlling these collisions' circumstances to prevent technical dependencies related to interference among projects subjects

- Identifying technology risk related to IT assets utilized and making them explicit to ensure that better support-investment decisions are made

- Preparing for outsourcing and identifying applicable subjects to outsourcing contracts

Enterprise architecture is a very valuable concept, but its value broadly exceeds the current way it is viewed.

ENDNOTE

[1]Kurzweil, Ray. *The Singularity Is Near: When Humans Transcend Biology*. Penguin Books, 2006.