Preliminary results of measuring maturity level of IT Governance in Croatia

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Abstract.

This paper shows the overview of the results of measuring maturity level of IT Governance in Croatia. In this research many companies from private and public sector were included. Also, the results of the global survey on IT governance, focused on specific topics such as IT risks and value delivery, are presented. The deductions, came out of these researches, could lead to two directions. One of them points out the need for defining targets for improvement and developing improvement plan. For this purpose it is possible to use Implementation Road Map, based on CobIT and Val IT. IT governance is a life cycle that, for a specific objective, can be entered at any point but is best started from the point of aligned business and IT strategy. Then, the implementation will be focused on delivering the value that the strategy promises and addressing the risks that need to be managed. The other deduction, especially from the survey in Croatia, specifies that is possible to use simplified version of IT Governance framework, because the breadth and depth of the guidance provided by full framework may be too detailed and overwhelming for smaller organizations. That may require too much time and money, and couldn't be pay out at the end.

Keywords. IT Governance, CobIT, Maturity Model, Val IT, Quickstart.

1. Introduction

The effective management of information, information systems and communications is of critical importance to the success and survival of most organizations. This criticality arises from:

- The pervasiveness of and dependence on information and the services and infrastructure that deliver the information,
- The increasing scale and cost of current and future technology-related investments,
- The potential for technologies to enable the transformation of enterprises and business practices.

There is an increasing demand from boards and executive management for generally accepted guidelines for decision making and benefits realization related to IT-enabled business investments. The management practices that traditionally have been applied are no longer sufficient. There is a clear incentive for management to ensure that effective governance and management processes are in place to create value through optimizing benefits at an affordable cost with an acceptable level of risk. The results of a survey conducted by ITGI [9], confirms the problems executive management attaches to IT. Also, survey from Croatia shows the priorities which management has concerning IT. Because of that, last years many different frameworks for IT Governance have issued. CobIT and its simplified version are presented in this article.

For IT governance to be successful, it should be a workable solution able to deal with the challenges and pitfalls presented by IT. It should not only prevent problems but also enable competitive advantage. IT risks are closely related to business risks, because IT is the enabler for most business strategies. The management and control of IT should, therefore, be a shared responsibility between the business

and the IT functions, with the full support and direction of the board. IT governance provides the oversight and monitoring of these activities within a wider enterprise governance scheme.

As the successful use of IT becomes more and more critical to an organization's success, the cost of doing nothing will far outweigh the cost of implementing IT governance, which can reduce the losses caused by, for example, failed projects, security incidents and operational outages, and increase the financial and intangible benefits created by IT-enabled operational efficiency and competitive advantage.

2. Global Survey on IT Governance

The purpose of this survey [10] was to determine the companies' sense of priority and actions taken relative to IT governance, as well as their need for tools and services to help ensure effective IT governance. This high-level objective was translated into the following more detailed objectives:

- Survey and analyze the degree to which the concept of IT governance is recognized, established and accepted within boardrooms and especially by chief information officers (CIOs).
- Determine what level of IT governance expertise exists and which frameworks are known and are (or will be) adopted.
- Measure the extent to which ITGI's own framework, *Control Objectives for Information and related Technology* (CobIT), is selected and how it is perceived.

Researchers contacted CIOs and chief executive officers (CEOs). The total number of interviews conducted was 749, of which 652 were from a random sample of organizations, 71 were known as COBIT users and 26 were experienced COBIT users. The interviews were conducted worldwide (in 23 countries), and all continents/regions were represented.

2.1. Survey Results

The key messages that have been identified reflect the 13 most important findings from the survey:

1. Although championship for IT governance within the enterprise comes from the highest level of management, in daily practice IT governance is still very much a CIO/IT director issue. The few non-IT people in the sample have a much more positive view of IT than do the IT professionals themselves.

2. The importance of IT continues to increase. The sectors for which IT has the largest contribution to the overall strategy are IT/telecom and financial service. The least contribution has manufacturing, as figure 2.1 shows.
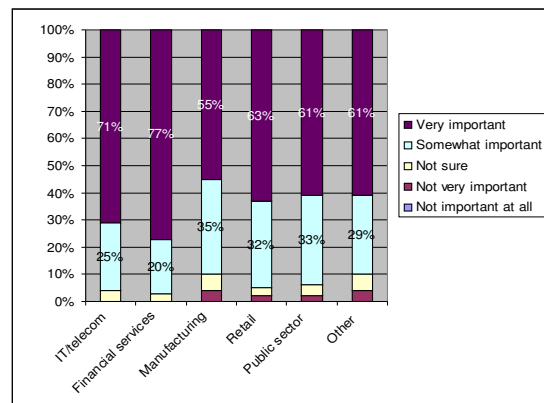

Figure 2.1 Importance of IT by Sector, [10]

3. Self-assessment regarding IT governance has increased and is quite positive.

4. Communication between IT and users is improving, but slowly. Figure 2.2 shows to what extent IT department understands and supports the business user needs.
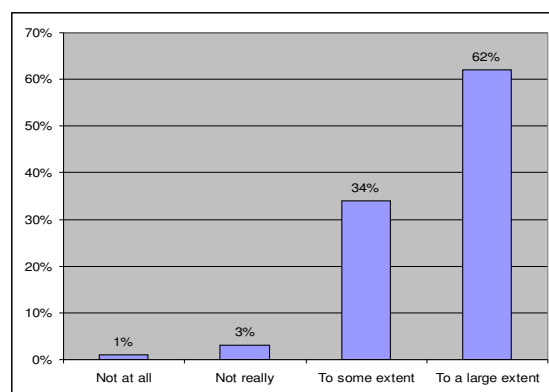

Figure 2.2 IT Department's Understanding of Business User Needs, [10]

5. There is still substantial room for improvement in alignment between IT governance and corporate governance - as well as for IT strategy and business strategy.

6. IT-related problems persist. While security/compliance is an issue, people are the most critical problem. Figure 2.3 illustrates that, when all aspects of the problem are taken into account, the most important problems are: staffing issues, service delivery and proving the value of IT.
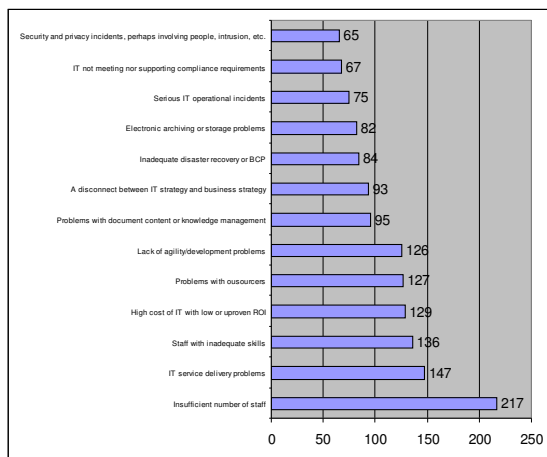

Figure 2.3 Compound Problem Index, [10]

7. Good IT governance practices are known and applied, but not universally.

8. Organizations know who can help them implement IT governance, but appreciation for the available expertise and delivery capability is only average. Figure 2.4 shows the organizations think that the best-known IT governance solution providers are: large IT and consultancy firms, the big 4 and smaller or niche consultancy firms.
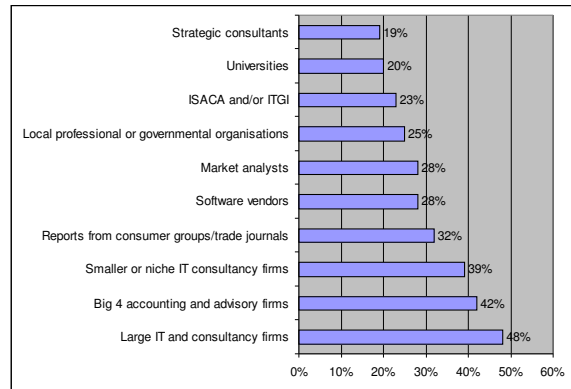

Figure 2.4 Recognized IT Governance providers, [10]

9. Action is being taken or plans are underway to implement IT governance activities. A large increase is evident when compared to the 2006 report.

10. Organizations use the well-known frameworks and solutions. As figure 2.5 shows, IT Infrastructure Library (ITIL) and ISO 20000 are the most used frameworks, even though ITIL is focused mainly on service delivery and is not an IT governance framework. COBIT is tied with internal solutions, which are often based on COBIT, ITIL and ISO 9000.
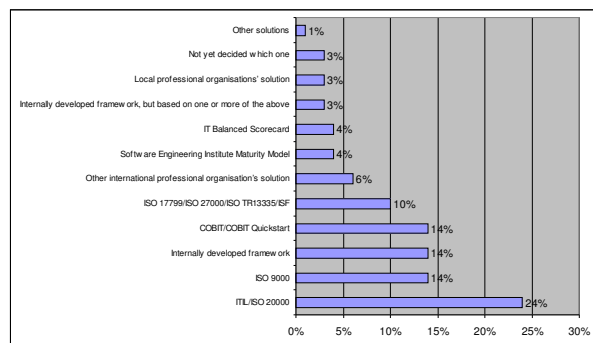

Figure 2.5 Selected IT Governance Frameworks (no CobIT respondents), [10]

11. COBIT awareness has exceeded 50 percent, and adoption and use remain around 30 percent:
   a. Twenty-five to 35 percent of respondents apply COBIT to the letter or are very strict.
   b. Fifty percent of respondents indicate that COBIT is 'one of the reference sources'.
   c. In general, there is high appreciation of COBIT.

12. More than half of the respondents apply or plan to apply Val IT principles, but are not familiar with the Val IT brand itself.
13. Major obstacles to adoption and use of Val IT principles include uncertainty regarding the return on investment (ROI) and lack of knowledge/expertise.

Based on the results of the research, the funnel analysis was done, figure 2.6. It begins with the fact that almost all (92 percent) IT users are aware of problems with the use of IT and the need to do something about them.
Eighty-eight percent of the IT user community group recognizes IT governance as a solution to these problems or as something they should do.
A large majority (80 percent) of the organizations recognizing the concept of IT governance know of at least one potential solution or framework.
About 29 percent are aware of ITGI/ISACA as a solution provider.
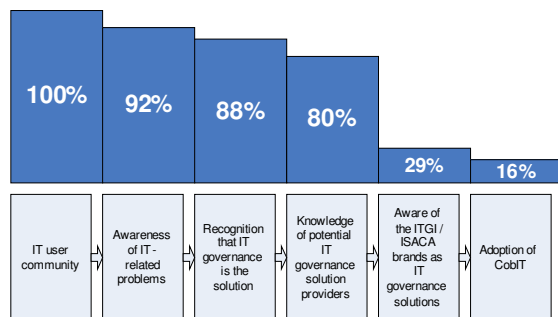Some 16 percent of the overall IT community are actually adopting COBIT.

Figure 2.6 Funnel Analysis, [10]

3. Results of Survey on IT Governance in Croatia

Some researches in IT Governance were done in Croatia during this year. For that purpose we used CobIT framework. The main objective of this survey was to determine maturity level of IT Governance in Croatian companies, and to recognize the main problems and priorities in IT efficiency and business and IT alignment.

We contacted CIOs and CEOs in 12 private and public Croatian organizations. The assessment of all processes and controls in all four domains of CobIT was done. Also, beside the maturity level, we researched importance of every control from CIO's point of view and CEO's point of view.

3.1. Maturity levels of IT Governance

All results were processed, incorporate and analyzed so the summary overviews of processes maturity levels for all domains are shown on figures 3.1 to 3.4.

During results analysis it is possible to note the considerable difference between private and public organizations. Private companies, generally speaking, have much higher maturity level in comparison with public ones. Also, it is obvious that monitoring and evaluation is much lower than other domains in most organization, despite managers' opinion that ME domain is very important for their organizations. As we expected, the best domains are AI (Acquire and Implement) and DS (Deliver and Support), figure 3.5. These are domains with mostly operational controls and every day activities.
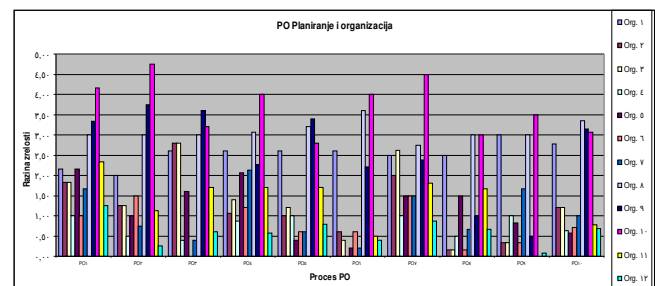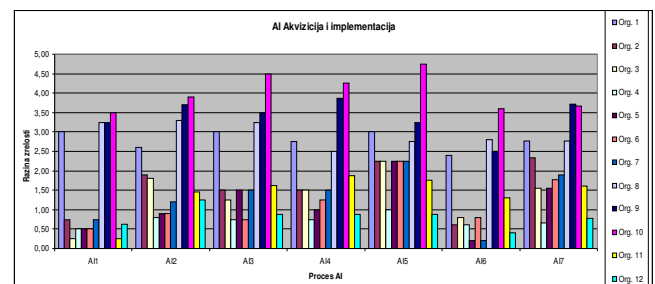

Figure 3.1: Maturity levels of PO processes

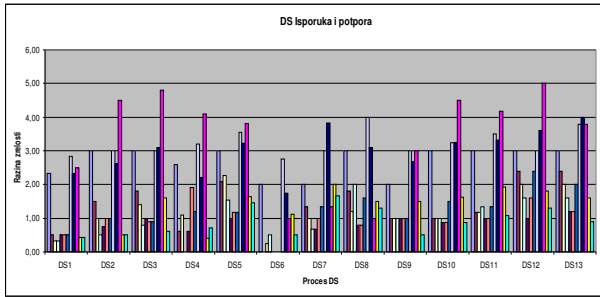Figure 3.2: Maturity levels of AI processes

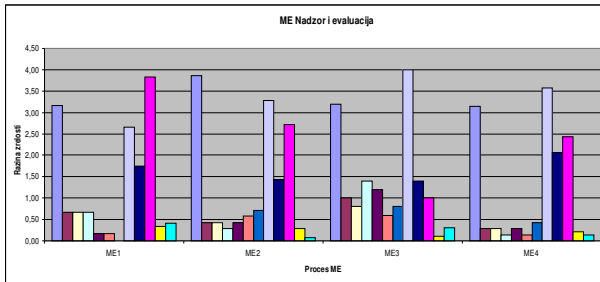*Figure 3.3: Maturity levels of DS processes*

Figure 3.4: Maturity levels of ME processes

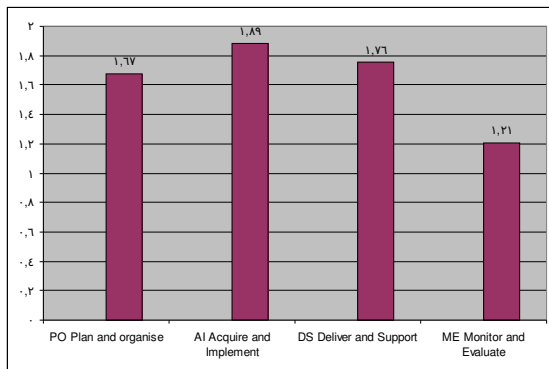Figure 3.5 shows the average maturity levels for all CobIT domains.

Figure 3.5: Maturity levels of CobIT domains

Through these measuring maturity levels using CobIT framework it is possible to recognize gaps, suggest improvements and to redirect the further development of IT use in organization. Of course, this model could be applied internally through internal audits, and in that way also be used as a tool for achieving higher business efficiency and effectiveness through better using IT.

3.2. Importance of CobIT controls

In every organization included in this survey we did interviews with CIO and CEO to find out their opinion about importance of CobIT control objectives.

Analysis of collected results shows that priorities of CIOs and CEOs are not identical. Probably, that could lead to problems in practice during try of alignment business and IT systems, and more efficient IT Governance.

According to conducted survey, figures 3.6 to 3.9 show the most important controls for CIOs and CEOs.
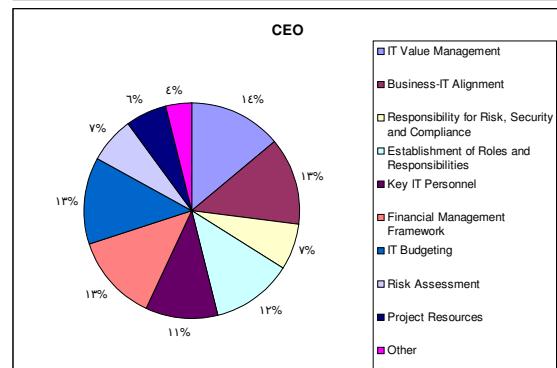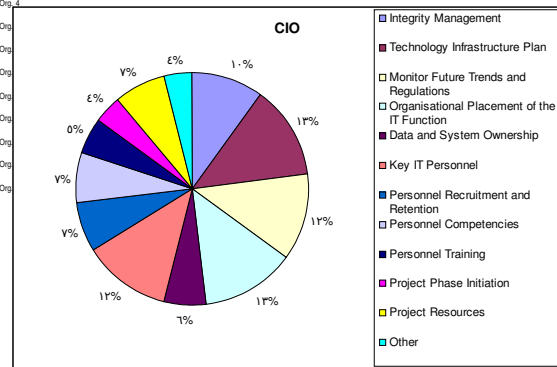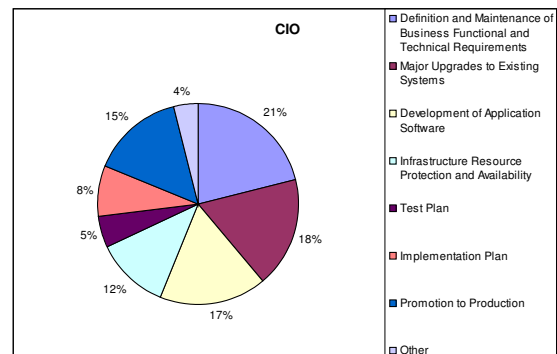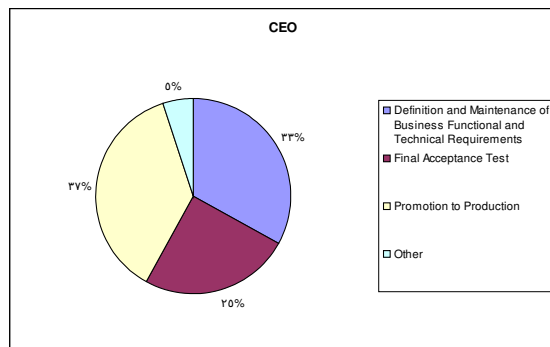

Figure 3.6: Importance of controls for PO domain
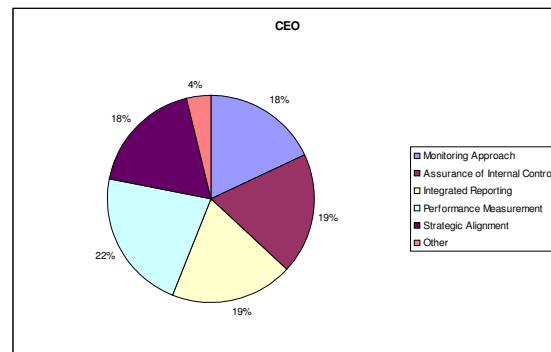
Figure 3.7: Importance of controls for AI domain

Figure 3.9: Importance of controls for ME domain
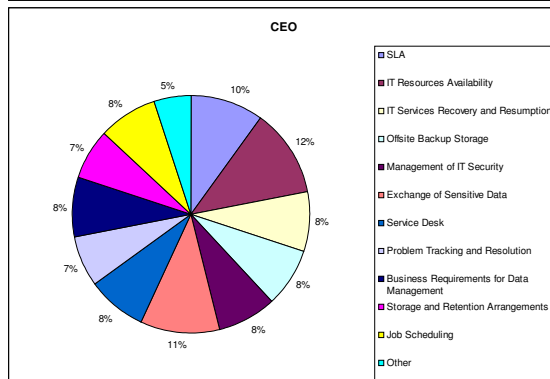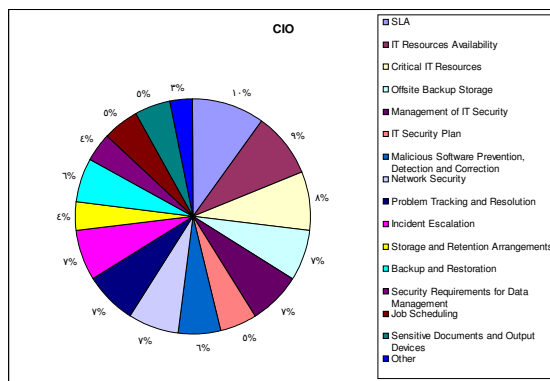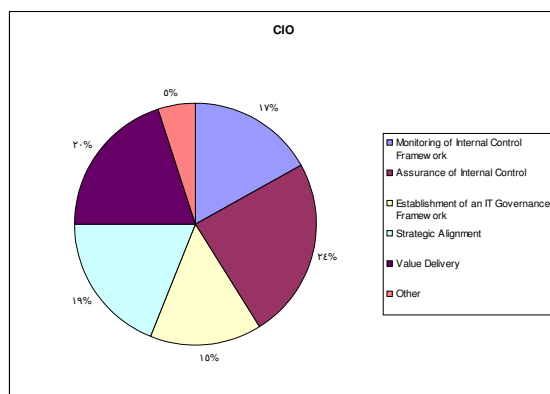

Figure 3.8: Importance of controls for DS domain

It is obvious that CIOs' and CEOs' priorities do not concur in whole, but inside of every domain they concur in a few controls that are very important for both of them. For example, in PO domain they chose key IT personnel and project resources, in AI domain definition and maintenance of business functional and technical requirements and promotion to production, in DS domain SLA, IT resources availability, data security and problem tracking and resolution, and in ME domain assurance of internal control and strategic alignment.

That represents a good base for preparing improvement plans in mentioned domains, and of course for their implementation. In that way we could expect further convergence and alignment of business and IT in future. For that purpose it is necessary to use CobIT or some other IT Governance framework, mentioned in chapter 2.

4. Implementation of IT Governance

From both surveys, it is obvious there is a need for using and implementing an IT Governance framework. For implementing CobIT we can use Implementation Road Map, as figure 4.1 shows [11]. This road map can help organizations to identify and address their IT governance needs. It provides the identification of COBIT and Val IT components to be leveraged, from initial needs identification through envisioning and planning stages all the way to the implementation of a solution. Implementing IT governance involves organizational change, often significant change,

and the management of a number of change projects.

This approach ensures that the focus is on business needs when improving control and governance of IT processes. The road map is applicable regardless of the size of the initiative. It encourages management commitment and involvement and follows good project management practices. The road map is a continuous improvement approach that is followed iteratively, building a sustainable 'business as usual' process over time.

An organization implementing IT governance will need to do so in phases based on business priorities and IT risks. The road map achieves this by prioritizing the IT goals and processes (including controls) based on the consideration of business goals and risks, figure 4.1. Given the critical IT goals defined in the first phase, the enterprise should identify what should be managed and controlled to ensure successful outcomes. Therefore, management needs to know its current capability and where deficiencies may exist. The road map uses maturity modeling to perform an as-is and to-be capability assessment relative to the controls selected, followed by a gap analysis, mentioned in previous chapter.
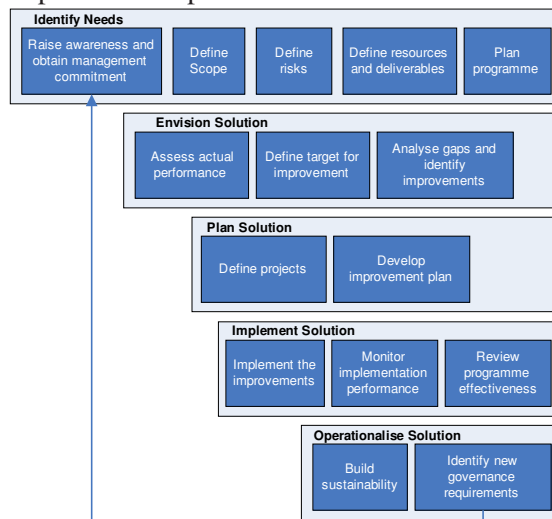

Figure 4.1: Road Map to IT Governance, [11]

Phase 1 of this map indicates that the need for IT governance has been recognized. It is important to reconfirm and communicate this

need, and to further refine and define it to the point that an agreed-upon scope for the IT governance program is reached.

Phase 2 of the road map envisions the solution and is composed of three steps. First, the organization should define where it is (as-is position), assessing current capability and maturity of the selected IT processes. Next, the appropriate and reasonable target capability and maturity levels (to-be position) should be set for each of those processes. Finally, the gaps between the as-is and to-be positions should be analyzed and translated into improvement opportunities.

The third phase of the road map builds on the previously identified improvement initiatives and translates them into justifiable projects aligned with original business value and risk drivers. After approval of these individual projects, they should be integrated into one overall detailed and practical program plan for rolling out the solution. The IT and business goals of this improvement program should be translated into a set of metrics.

In the fourth phase organization has to implement the improvements, monitor implementation performance and review program effectiveness. As the improvement plan rolls out, governed by established project and change management methodologies, the successful delivery of the desired business results is ensured by:
- The feedback and lessons learned, provided by the post-implementation review;
- The monitoring of the improvements on the corporate performance and IT balanced scorecards.

Operationalising the solution entails:
- Integrating IT governance with enterprise governance,
- Ensuring accountability for IT throughout the enterprise,
- Defining appropriate organizational structures,
- Drafting and clearly communicating policies, standards and processes for IT governance and control,
- Effecting cultural change (commitment at all levels in the enterprise, from the board to the 'shop floor'),
- Driving a process and culture of continuous improvement,

- Implementing optimum monitoring and reporting structures.

There are some obvious, but pragmatic, rules that management should follow during IT Governance implementation:

- Treat the implementation initiative as a program activity with a series of phases rather than a 'one-off' step;
- Remember that implementation involves cultural change as well as new processes. Therefore, a key success factor is the effective management of organizational change;
- Make sure there is a clear understanding of the objectives;
- Manage expectations. In most enterprises, achieving successful oversight of IT takes time and is a continuous improvement process.

5. Simplified version of IT Governance Framework

COBIT is a comprehensive set of resources that contains the information that organizations require to adopt an IT governance and control framework. However, the breadth and depth of the guidance provided by all of COBIT's resources may be too detailed and overwhelming for smaller organizations and organizations where IT is less strategic or not absolutely critical for survival. Or, for some larger organizations, COBIT may require too much time to analyze and focus on when taking the first steps towards IT governance.

In these circumstances, it is easier to use customized and simplified version of CobIT - Quickstart [5] that are consistent with the full CobIT resources, but are immediately usable as is.

Quickstart is based on a selection of the processes and control objectives of COBIT 4.1. The result is a simplified version including a limited set of processes and management practices, table 5.1. *Quickstart* also provides simplified versions of Responsible, Accountable, Consulted and Informed (RACI) charts for each of the retained processes and captures key

outcome metrics at the level of the individual control objectives and the IT processes as a whole. All these elements represent a baseline and the 'smart things to do'. Enterprises can use the baseline as is, without modification, or use it as a starting point to build more detailed management practices and measurement techniques.

Table 5.1: CobIT Quickstart as compared to CobIT , [5]

	COBIT	*Quickstart*
Domains	4	4
Processes	34	32
Control objectives	210	59

This selection from the CobIT material was made using a top-down value and risk analysis starting with business goals, then moving to supporting IT goals, then to IT processes that need improvement, and finally arriving at control objectives that need to be implemented or enhanced.

The selection was also driven by the following assumptions:
- The IT infrastructure is not complex,
- More complex tasks are outsourced,
- The goal is less build, more buy,
- Limited in-house IT skills exist,
- Risk tolerance is relatively high,
- The enterprise is very cost-conscious,
- A simple command structure is in place,
- A short span of control exists.

5.1. Quickstart Suitability Assessment

For making decision about using the simplified version of CobIT it is possible to apply many tests. All of them show applicability of Quickstart in a specific organization. One of them, known as a „Blue Zone" test, considerate the following parameters:

- *Simple command structure* – from 1. CS is informal and verbal, only short-term and tactical to 4. - CS is strictly formal and documented, covers short-, medium- and long-term and is strategy-oriented;

- *Short communication path* – from 1. CEO knows everyone's IT-related responsibilities to 4. - CEO does not know all IT-related responsibilities of key personnel;
- *Span of control* – from 1. - CEO directs and monitors everyone's IT-related responsibilities to 4. - CEO does not direct and monitor all IT-related responsibilities of key personnel;
- *IT sophistication* – from 1. - Laggard, well behind in technology adoption, with a simple IT infrastructure to 4. - Pioneer, early adopter of new emerging technology well ahead of the industry, highly complex IT environment;
- IT strategic importance – from 1. - Reliable IT is not critical to the functioning of the enterprise and is not likely to become strategically important to 4. - Reliable IT support is critical to the enterprise's current operation, and applications and technology under development are critical to future competitive success;
- IT expenditure – from 1. - IT expenditure is not more than profits and not much different from peers to 4. - IT expenditure is significantly more than the organization's profits;
- Segregation – from 1. - Those who monitor have at least two other functions (build, operate or influence) to 4. - At most, influencing and monitoring is executed by one person.

If the results from the assessment are mainly contained in the blue zone, figure 5.1, the organization most likely is suited for using *COBIT Quickstart*. If the results are not in the blue zone, it nevertheless remains management's decision to use the *Quickstart* approach anyway. However, management should remain conscious of the control assumptions described previously, as certain controls are not retained in *Quickstart*.
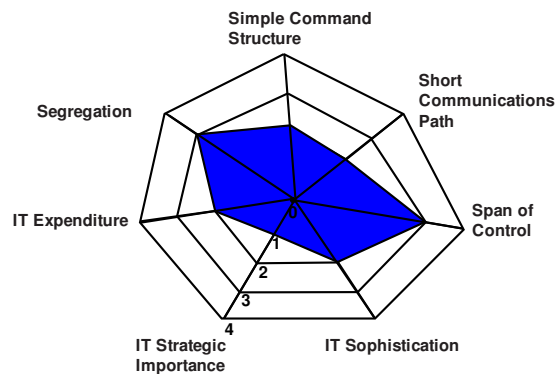

Figure 5.1: Suitability Assessment, [5]

6. Conclusion

In this paper, it is highlighted a significance of IT Governance and applying adequate framework for implementing that. Many surveys indicate that IT users are aware of problems with the use of IT and the need to do something about them. Also, IT user community group recognizes IT governance as a solution to these problems and knows at least one potential solution or framework. For that purpose CobIT can be used, and it already has been used in many organizations. Also for smaller organizations and organizations where IT is less strategic or not absolutely critical for survival, it is possible to use simplified version of CobIT.

Carried out survey in Croatian companies indicates, generally speaking, that private companies have much higher maturity level in comparison with public ones. Also, it is obvious that monitoring and evaluation is much lower than other domains in most organization. The domains with the highest levels are AI (Acquire and Implement) and DS (Deliver and Support). Importance of specific CobIT controls was also determined from CIO's and CEO's point of view. This paper presents the key differences and similarities in their priorities. That represents the important base for their better understanding, and business and IT alignment. It leads to improvement of using IT for the purpose of achieving better business results.

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