



BT YÖNETİŞİMİNDEN YETERİ KADAR YÖNETİŞİME DOĞRU YÖNETİŞİM PARADİGMASINDA YENİLİK

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Öz: İş dünyası ve BT, yenilikçi paradigmaların gelişimine bağlı olarak birbirlerine bağımlı hale geldiklerinden daha iyi bir entegrasyona ihtiyaç duyuyorlar. Yönetişim, e-devlet, e-yönetişim, e-katılım, e-vatandaşlık ve e-demokrasi paradigmaları, mikrodan makro politika ve uygulama seviyelerine kadar iç içe geçmiş durumda. Farklı BT sistemlerinin iş gereksinimlerine uyumsuzluğunun zayıf entegrasyonu, iş ve BT hedeflerinin ve kurumlarının hedeflerinin gerçekleştirilmesinde başarısızlığa neden olan yönetim ve yönetişim zihniyetine yansıyan atalet ve geleneksel yaklaşımların ana açıklamalarından biri olarak kabul edilmektedir. Bu nedenle, bu makale Türkiye'nin BT yönetişim altyapılarında meydana gelen değişimin Kalkınma Ajansları (DA) örneği üzerindeki etkisini ve analizini yapmaya çalışmaktadır. Sürdürülebilir ve yenilikçi yapılar olmadan kalkınmanın sürdürülemezliği varsayımıyla, COBIT'in yönetişim yaklaşımının yönetim zihniyetinde değişiklik gerektiren bir inovasyon ortaya koyduğu ileri sürülmektedir. Bu makale aynı zamanda kalkınma ajanslarının yönetim ve yönetim zihniyetinde yenilikçilik gereksinimlerini de ortaya koymaktadır. COBIT'in yönetim süreci olan "APO04 İnovasyon Yönetme" Sürecini kullanarak daha iyi yönetim ve iyi yönetişim seviyesini hem teorik hem de pratik açıdan geliştirmek ve desteklemek için bir çerçevenin bütünsel ve bütünlük uygulamaları karşılaştırır.

Anahtar Kelimeler: BT yönetişimi, COBIT, Yenilik, Paradigma kayması, Örgütsel Değişim Yönetimi

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INNOVATION IN THE GOVERNANCE PARADIGM FROM IT- GOVERNANCE TO GOOD ENOUGH GOVERNANCE

Abstract: IT and Business need to be better integrated as they are becoming interdependent to the extent that the development of innovative paradigms. The governance, e-government, e-governance, e-participation, e-citizenship and e-democracy paradigms become more intertwined from micro to macro levels of policies and implementations. Poor integration of different IT systems incongruence with business needs is accepted as one of the major explanations for inertia and traditional approaches reflected in the mindset of management and governance that cause failures of accomplishment of the business and IT goals and objectives of institutions. Therefore, this paper tries to analyze the need and effects of change at IT governance infrastructures of Turkey on the example of Development Agencies (DA). With the assumption of unsustainability of development without sustainable and innovative structures, it is asserted that governance approach of COBIT has put forward an innovation that requires change of management mindset. This paper also sets forth the innovation needs of DAs in the management and management mindset. Using the COBIT management process “APO04 Innovation Management” as an example of modeling, it compares the integrated and integrated implementation of the COBIT framework to develop and support better levels of governance and good governance, both theoretically and practically.

Keywords: IT-governance, COBIT, Innovation, Paradigm shift, Organizational Change Management.

INTRODUCTION

No doubt that today the concept of innovation is one of the most stressed, favored and cited as the most important element of success both for individuals, organizations and countries; it is thought to be relevant to stress the fact of innovation as a prevalent concept innermost of all existence from atoms to cosmos. Although the renewal of body cells of living creatures and compilation and decomposition of atoms in the form of new creations and continuous movements of the globe, moon, sun, together in conformity with the other propelling planets and all micro and macro systems had been demonstrating the ever pervasive character of innovation from the beginning of cosmos , it is the fast growing relationships and interactions at the last decade along with rapidly developing technology that have been invoking promotion of perception of innovation the importance of which has surged and embossed to be more and more visible by the time.

As a matter of fact, apart from technical and promotional aspects, the innovation in the management mind set is not so much popular though it is of crucial importance in realization of innovative ideas based on freshness and novelty as a requirement of change management in the global competition. This approach of innovation is imperative to be effectively alive and/or continue to survive due to globalization that produced merciless competition, enhanced communications, instant interactions and multidimensional collaborations in a more wide area continuously reproducing new strengths, weaknesses, opportunities and threats. That is why innovation becomes not optional but imperative element of normal life.

The governments and bureaucracy also do not possess any exemptions in this game because their real success is solely based on their ability to attract new foreign investment and tackle with the deficit of government and capital flows that

require continuous navigation of the economy and monitoring for better alignment with the changing business needs and new trends that can change direction of new investments and positive rational expectations based on future perspectives. If business changes then bureaucracies also have to adapt to its requirements and furthermore to be proactive from the front and not reactive from the back of events public agencies need to be catalyst of change that drive and trigger innovation from environmental requirements to legislative and regulative support systems. Therefore innovation in the high-tech and business administration is inevitably reflecting itself into public administration. Results of this movement can be seen in new institutional set-ups, new legislative frameworks and hence ever changing policies, tools and strategies of government regulations.

Innovation that brought about by e-Governance paradigm today is based on a complex reform and reorganization of the classic work of the state, institutions and public administration, and its whole foundation is laid on the development of socio-economic policies for long-term strategies (Shabani, 2016). In the governance literature, it is mostly concerned with governance principles such as transparency, equal treatment, openness, participation and accountability and e-governance is particularly emphasized due to its ability for an efficient and effective governance structure through ICT mechanisms.

Mainly organizational innovation studies examine the work and organizational opportunities by considering the structure of the company and presents innovations in these issues.

- It is aimed to increase the competitiveness and productivity by redesigning the organizational structure of the company.
- Methodological changes can be made in the company's internal, external and workplace applications.
- Thanks to organizational innovations; administrative costs can be reduced, employee satisfaction can be increased, and the costs of tools and equipment can be reduced.

Some studies (Ionescu, 2015) and (Ionescu, 2016) have made conceptual and methodological contributions to the functions of anti-corruption as a means of combating e-government constraints. ICT-backed strategies as a means to combat openness and corruption, and the link between ICTs and macroeconomic variables in the reduction of more prominent state openness and corruption are also included in these studies. This study contributes to the growing literature on anti-corruption mechanisms of e-government technology. It is also thought to be used as a platform to improve the dissemination of information and data from the government. The function of e-governance in corruption control and poverty is diminishing, and ICT's capacity to reduce corruption is essential to the e-government platform. It is asserted (Lăzăroiu, 2014) that internet dissemination has an important positive influence on degrees of transparency and a negative impact on levels of corruption. The importance of innovative web 2.0 tools that can be considered as catalysts in providing inputs for citizens' information acquisition and public policy-making processes is highly emphasized (Karkin, 2013). It has been found that the web sites of government agencies have the opportunities offered by the new technological tools of Web 2.0 and do not provide an appropriate and innovative context for citizens who can participate in public policy formation. Increased use of Web 2.0, social media, mobile and wireless ICT by citizens and stakeholders of organizations is an important element to be considered in this regard. This is due to

the fact that this progress greatly influences the way public services are delivered, how citizens' participation processes are conducted and how institutional objectives are met. However, as a result of innovation, new management approaches, governance structures and policy frameworks that have to be implemented are also lacking. These facts present a challenge for governments to operate effectively in the age of big data and artificial intelligence applications, as Liu and Yuan (2015) have stated. In general, it was found that developing countries lag far behind in the adoption of e-government compared to western developed countries that are more adapted to innovation and its requirements. Therefore, important measures need to be taken in order for developing countries to successfully adopt ICT and innovation and to jump to some of the barriers faced by early ICT adopters in developed countries. These measures can be expressed as the necessity of systematic analyzes to establish the institutional environment and vision together to understand the interaction with key stakeholders and the intertwining of ICTs and ensure that ICT has a positive impact on public administration. (Liu and Yuan, 2015).

Innovative information and communication technologies (ICT) surely offers new interactive opportunities to citizens. There is no doubt that the innovative digital age in the information society of the 21st century is genetically differentiated in many areas. These range from the economy to politics and science to philosophy and policies to procedures. Today, governance, management, advocacy, citizenship and democracy are undergoing a new transformation towards digitalization in many ways. These differences can be seen through innovative approaches in their concepts and practices. But initially, this new citizenship differs from central government practices in terms of accountability trends, strong central idea, regional and local emphasis, transparency effectiveness, limited means of freedom of expression, and deeper relations of traditional media (Işıklı, 2015).

As a result of the confusion of innovations in technical development and paradigm shifts, many concepts and policies and organizational arrangements have been realized. E-government and e-governance, which are thought to make services more effective, efficient, economic, adequate, transparent and responsive, are concerned about the innovative aspects of policy makers, bureaucracy, academia and businesses. Since e-government and e-governance need to be implemented in line with innovation needs and potentials, a total transformation is required. Such comprehensive transformations on infrastructures, processes and procedures must be based on continuous changes in managerial and political mindset. It is recognized that traditional bureaucratic solutions cannot be solved by the failures of the state due to the inability to adapt to the globally changing environment and innovation ecosystem. Therefore, the resistance of change from bureaucrats is seen as one of the main obstacles to innovative e-government solutions. In one study (Karkin, 2014), the resistance of the bureaucracy in sharing its monopoly powers at the point of policy making is one of the many difficulties to be considered.

Today, states have the means to have a say in global issues and to use public resources correctly and efficiently. For this reason, public administration is the most fundamental means of people's aspirations and the development of a country. Politics is made to assume the right and responsibility to be a decision maker in the use of public resources and public organizations are operating for this kind of purposes. Therefore, it is critical for politicians to focus on good governance, not only on priorities, but also on innovative structures and processes (Efe, 2015).

Governance includes not only decision-makers but all stakeholders in an organization. Governance includes not only the prevention of abuse of these powers by decision-makers in the organization, but also ensuring that they use common sense, fairness and value. For this reason, governance, whether global organizations or countries or companies, is critical to achieving the goals and performance of an organization. In order to achieve this objective, the behavior of all stakeholders in the organization and its environment must always reflect the following principles: consistency, responsibility, accountability, fairness, transparency, effectiveness and participation.

In Turkey, the regional development agencies (DAs) were founded by Law in 2006 and 26 of which are founded for the cause of regional governance and participation of local actors in order to infuse synergy amongst stakeholders to trigger dynamics and to embolden potentialities that can make difference in competition. They are fully functional with some temporary inconveniency or inadequate of infrastructure as a result of problems of management and governance requirements. DAs were ascribed to be innovative governmental organizational setups that are required to be intermediary at producing synergies and innovation in local and regional domain (Efe, 2015).

In this paper, the requirements of the concept of innovative management and governance structure of DAs and the need for business and IT processes in restructuring according to change management are considered. Our hypothesis is the capability of COBIT as to covering the needs of DA in regards to the innovation management based on the assumption that DAs are taking innovation as the basis for regional development. The question that we are going to answer is that “*Does COBIT framework include structures for innovation management and is it compatible with regional development strategies that DAs are going to develop alongside with their regional plans*”. In addition to the answers to the question, it has been tried to make some recommendations for innovative IT governance solutions. These solutions are inspired by the COBIT enterprise IT (GEIT) management approach, which is thought to be capable of supporting the level of e-governance of DAs.

COBIT is assumed to have internal dynamics to tackle these management and governance issues. Here, what kind of solutions e-government and e-governance can offer for the needs that need to be promoted is being investigated. COBIT needs an innovative management approach as it tries to adapt to the changing environment by bringing a disciplined and systematic approach to management and governance structures.

COBIT, which is a new and comprehensive approach developed by ISACA in 2012 and 2019 on the old versions categorically, shows a big and ambitious development. Moreover, regardless of a public institution, private organization, company or NGO, there is a claim that the method appears to be a feasible, reasonable and sustainable framework from structures, principles and enabling. This work is mainly based on ISACA's books on COBIT.

The paper assumes that the advent of COBIT is an indication of innovation in change of mindset of management and governance set up of organizations not by setting basic principles of IT governance but also with governance enablers. As an example of enabling processes “*APO04 Manage Innovation*” is being analyzed in order to have a concrete understanding applicability of COBIT to public agencies.

With a literature review, a conceptual and theoretical analysis over important role of institutions in the structure of governance and e-governance is made. Then the difference of COBIT in setting governance as a separate with management processes and its applicability to public institutions with the example of regional development agencies is being demonstrated.

THE CONCEPT OF GOVERNANCE

Governance is a new concept that has emerged to replace the concept of “governance in the sense of government. “Administration” in the sense of government is a hierarchical bureaucratic management model; governance, the interaction between actors and organizations that play a role in the management process, with the participation of persons, groups and organizations that do not have formal or formal titles (Battal, 2010).

The concept of management is generally defined as the co-ordination of resources through the major planning, organizing, directing and auditing processes to achieve the objectives of the organization (Ergun, 1992).

The phenomenon of governance describes the activities carried out in all small and large groups in social life, formal or informal groups, to influence or cooperate with others to achieve certain goals / objectives. Management in short; the smallest social unit can be defined as the whole of the activities carried out at different levels starting from the family to the largest political authority state.

Public administration and private administration are within the concept of management, and it is seen that public and private administrations have similar objectives to some extent and use similar tools in their realization. However, there are some fundamental differences between public administration and private administration in terms of opinion and understanding, political environment arising from structure and functioning, public interest, adherence to rules, social cost, frequent change of political leadership, and intensity of arbitration rules (Eryilmaz, 2002).

It has brought a whole new approach to governance, public responsibility and supervision. According to this new understanding, public responsibility is expanded and those who are managed are included in the management process. This understanding has made the concept of management inadequate as well as rendering the traditional management concept out of place.

Governance; it brings new insights to management as well as new partners. According to this; the governance paradigm, which collects resources and powers within the single-subject, centralized and hierarchical division of labor, shifts from a governance paradigm to a multi-actor, decentralized, flexible structure, which makes the actors in society more capable of making them, directs them, facilitates the directing of resources and where mutual interaction is decisive.

Governance includes flexibility, democratic, pluralism, openness, accountability and locality, performance and total quality. Governance is a process that determines how power is used, how decisions are taken, and how citizens participate in governance. The concept of governance is used to express a complex system that includes public administration, private sector and non-governmental organizations and their relations network and their interactions. According to this understanding, management is considered as a process

In addition to these developments, the impact of multinational corporations in the world economy increased, production methods changed, international trade expanded, and communication systems advanced. In such a process, the concept of “governance” emerged, reflecting a new perspective on the limits of power and the role of non-governmental organizations.

Governance; It is defined as the traditions and institutional structure that determine how the authority that controls the resources in a country uses these resources for economic and social development. How decisions are taken includes the ways in which citizens participate in this process.

Good governance is a style of government that limits state intervention in the market in favor of market actors; In doing so, it is emphasized that development should be seen only as a technical issue and should be purified from politics. It is possible to see good governance as a continuation of the neoliberal paradigm.

Within the framework of good governance approach, the state is committed to creating a favorable atmosphere for private entrepreneurs, keeping the economy open to international trade and creating a competitive environment within the framework of this framework. Good governance in this context; it requires clarification and fulfillment of the responsibilities of all stakeholders.

Good governance emerges in the social sphere in four ways:

- At the public level; participatory democracy,
- At the private sector level; successful institutions,
- At the level of non-governmental organizations; important changes in society when managed well,
- People level; are useful individuals (Argüden, 2004).

CRUCIAL ROLE AND PROMINENT EFFECTS OF INSTITUTIONS

Before questioning basic role of institutions on creating innovative environment and preparing the basis and needs of its structure, it is wise to criticize supremacy and roles of institutions in an existed ecosystem which is of the key determinants of innovation. Institutions are defined by Douglas, as “*humanly devised constraints that structure political, economic and social interaction*” (Douglas, 1991, s. 97). Institutions are seen as factors that determine the individual behavior and attitudes of economic factors that contribute significantly to the performance of economies by adapting to innovation and providing innovative ecosystems and a creative environment. It is known that the most systematic and disciplined studies have stimulated and emphasized the fundamental role (in the field of the old institutional economy - OIE) that played a role in defining the actions of economic agents owned by institutions from a former institutional perspective, such as Thorstein Veblen and John Commons. (Leite, Silva and Afonso, 2014). Therefore the role that institutions can cover in an ecosystem is quite important if it is particularly related with governance and e-governance concepts that can have national, regional and local effects.

Ha-Joon Chang (2002), seeking a more intrusive model within the neo-liberal pattern, argued that the limitations of neo-liberal discourse on the role of institutions cannot be overcome. However, he acknowledges that this can only be applied by breaking this pattern and developing an alternative framework that

brings institutions and policies to the analytical core. By identifying how market, state, and political analysis differed from what the neo-liberal discourse proposes, he proposed to call it the institutionalist political economy (IPE). Therefore, IPE is also proposed as a “political economy” approach. This is because, like neo-liberal analyzes, IPE also emphasizes the role of political factors in determining state policy. However, the political economy of IPE seems to be far more advanced than its neo-liberal counterpart. This is because IPE accepts the basic political structure of the market and applies the logic of political economy to the analysis of the market. Therefore, it is not only state policy analysis. IPE has also been proposed as an “institutionalist” approach. This is because, like the New Institutional branch of the neo-liberal economy, IPE emphasizes the role of institutions in influencing human actions, including those within and around the state. However, the institutionalization of IPE seems to be far more advanced than that of the New Enterprise Economy (NIE). These differences are due to the emphasis of institutions on their “temporary priority over individuals and sometimes not seeing institutions as restrictive of personal motivations that may be the inputs and outputs of innovation (Chang, 2002).

Since Chang does not admit that IPE is of the New Institutional Economy (NIE) type, it seems to be a development of the old tradition found in the classical works. These are actually called "Old Corporate Economics and they are different from NIE in many important aspects. However, it is noted that institutions see not only the constraints of pre-formed and unchanged individuals' behavior in the NIE, but also the constraints that individuals shape themselves (Chang, 2002). The paradigm shift that occurred at the institutionalist theory between the old to the new ones is the dynamics that has been changed due to governance and e-governance requirements of innovative ecosystem. These requirements attached role of catalyst and innovation in changing economic agents' behaviors and bringing new motivations. How governance, e-governance and IT governance have been evolved as per innovations in product and services become more and more pervasive is quite important to understand the importance of governance processes within corporations and institutions to manage innovation with a holistic and integrated approach.

GOVERNANCE, GOOD ENOUGH GOVERNANCE, E-GOVERNANCE AND IT GOVERNANCE PARADIGMS

Corporate and institutional governance is all about who controls what and why. In addition, ‘Good’ governance is now considered as the key to ensuring ethical conduct and socially responsible behavior. Good enough governance is to be satisfactory in executing governance for the sake of stakeholder needs and corporate objectives. Corporate governance as the conduct of business in accordance with owner or shareholders’ needs, desires, requires that organizations at the same time conform to the basic rules of society as embodied in laws, regulations and local customs (Aksoy, 2010, s. 31).

As an innovative for organizational mind-set the governance is not a separate process and distinguished from individual and corporate behavior. It is in fact a new way of interaction between both individuals in decision making and institutions in collaboration with their ecosystem. As is indicated in different academic researches (Nonaka & Takeuchi, 1995) the ability to obtain knowledge is partly based on a corporate digestion capacity and knowledge absorption (Cohen & Levinthal, 1990). Due to all the necessary competencies for innovation may not be

available in a single body (Inkpen & Beamish, 1997) and, therefore there is the need for innovative institutions to cooperate with stakeholders (Bharadwaj, Chauhan, & Raman, 2015). Both collaboration between individuals and institutions serve for governance and can be accomplished via e-governance in the public domain and IT governance in the corporate domain.

According to the theory of paradigm shift developed by Thomas KUHN (Kuhn T., 1962, p. 10), scientific developments occur not as evolutionary but as a series of conflicts defined by intellectually violent revolutions and a single conceptual worldview. Kuhn said that awareness, according to all reasonable changes of theory (Kuhn: 1962: 67), is a condition that begins in everyone's mind according to what is perceived as normal or abnormal, conscious or unconscious. Therefore, we considered mentality which is very important in the innovation process within the scope of paradigm shift.

According to ISACA, COBIT is the only business framework for enterprise IT management and management, where it incorporates the latest new thinking in enterprise management and management techniques. It tries to present world-wide accepted principles, practices, analytical tools, approaches and models under the name COBIT. Trust and value in IT are realized through the concept of innovation and governance. COBIT creates COBIT 4.1 by integrating other key standards and resources, frameworks, including ISACA's Risk-IT and Val-IT, Information Technology Infrastructure Library (ITIL) and relevant global standards of the International Organization for Standardization (ISO), expands and exceeds. After 2012, COBIT was revised and updated in 2019.

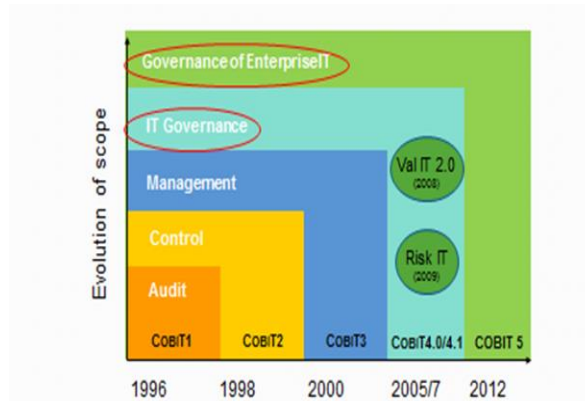


Figure 2: Governance of Enterprise IT

Source: (ISACA, 2012, s. 13)

The changes are reflected in the COBIT development life cycle can be seen as results of paradigm shifts triggered by changing environment as the time passed from 1996 to 2012 in which period both a paradigmatic shift and different but incrementing conceptual approaches are seen as innovative such as audit, control, management, IT Governance and Governance of EnterpriseIT.

COBIT provides more stakeholders a say at the governance and management processes, addresses the increasing dependency on external business and IT parties. deals with information and much more pervasive IT, provides guidance in innovation and emerging IT and requires less about audit and more about governance.

Since COBIT is a result of change management at the common body of knowledge which is constantly being revised and reproduced by ISACA according to requirements of the time passing in which approaches, methodologies, terminologies, paradigms and mindsets take sway for a better pace and place in peace.

PROBLEMS AND PAINPOINTS THAT HINDER INNOVATIVE STRUCTURES AND PROCESSES

Many factors may indicate the need for new or revised innovative IT Enterprise Management (EGIT) practices - and when closely examined, they sometimes reveal complex networks of key issues. But, the pain point may be a symptom of long-term, legacy underinvestment in innovation and IT that now manifests in significant, new or ongoing cost.

Using pain points to launch innovative governance initiatives makes it possible to relate the business case for improvement to concrete stakeholder issues, and thereby improve buy-in. The followings are the symptoms of pain points which were also listed in the COBIT® 2019 Design Guide under Design Factor 4 IT-related issues (ISACA, 2019).

- Frustration between different IT entities across the organization because of a perception of low contribution to business value:

More and more enterprises have decentralized or decoupled IT entities; each provides specific (and often discontinuous) services to its stakeholders. Dependencies may persist among the groups; when dependencies are not carefully managed, they may compromise IT effectiveness and efficiency.

- Frustration between business departments (i.e., the IT customer) and the IT department because of failed initiatives or a perception of low contribution to business value:

This frustration may indicate an innovative governance problem and suggest improving communication between IT and the business and / or creating a common view on the role and value of IT. It can also be a result of low quality portfolio and project formulation, proposal and approval mechanisms.

- Significant IT-related incidents, such as data loss, security breaches, project failure, application errors, linked to IT:

Significant events (including data loss, security breaches, project failure, and IT-related implementation errors) are often the top of the iceberg and may have an even greater impact if they draw public and/or media attention. Stronger innovative management practices are often required to comprehensively understand and manage IT-related risk.

- Service delivery problems by the IT outsourcer(s):

Issues with service delivery from external service providers (e.g., consistent failure to meet agreed service levels) may be due to governance issues. For example, defined third-party service management processes may be lacking or inadequately tailored (including control and monitoring), and/or lack proper responsibilities and accountabilities to fulfill business and IT-service requirements.

- Failure to meet IT-related regulatory or contractual requirements

Laws, regulations, and contractual terms can be combined, but the business still lacks an approach to managing them. (Regulations and compliance requirements continue to grow globally and often directly affect IT-enabled activities.)

- Regular audit findings or other assessment reports about poor IT performance or reported IT quality or service problems :

Poor assessments may indicate that service levels are not in place or not functioning well, or that the business is not adequately involved in IT decision making.

- Substantial hidden and rogue IT spending:

Excessive spending outside normal IT investment decision-making mechanisms and approved budgets often indicates that there is not enough transparent and comprehensive control over IT spending and investments.

- Duplications or overlaps between various initiatives, or other forms of wasted resources :

Repeated projects and / or overuse of resources may result in IT initiatives not being fully represented in a single, comprehensive view of the portfolio. Process and decision-making capabilities around portfolio and performance management may not be available.

- Insufficient IT resources, staff with inadequate skills and staff burnout/dissatisfaction:

These are important IT human resource management issues that require effective oversight and good governance in the effective management of people's management and skills. They can also show the underlying weaknesses of IT demand management and internal service delivery practices (among other hidden issues).

- IT-enabled changes or projects frequently failing to meet business needs and delivered late or over budget:

These pain points may be related to business-IT compliance, poor identification of business requirements, lack of benefit-realization process, inadequate implementation or problems in project / program management processes.

- Multiple and complex IT assurance efforts:

This scenario may indicate poor coordination between the enterprise and IT regarding the need and conduct of IT assurance reviews. A low level of business confidence in IT may require the business to initiate its own investigations. Alternatively, in cases where the business is not aware of when the reviews take place, there may be a lack of business responsibility for IT assurance reviews, or a suggestion of participation.

- Reluctance of board members, executives or senior management to engage with IT, or lack of committed business sponsors for IT:

The pain points may also indicate problems with board tasks that often result from poor communication between the business and IT and / or the misunderstanding of the business and IT by business sponsors for IT.

- Complex IT operating model and/or unclear decision mechanisms for IT-related decisions:

Decentralized or unified IT organizations often have different structures, practices, and policies. The resulting complexity requires optimal IT decision-making and a strong focus on innovative governance to ensure effective and efficient operations. This bitterness becomes more apparent with globalization: Each region or region may have certain (and potentially unique) internal and external environmental factors that need to be addressed..

- Excessively high cost of IT—IT is often perceived as a cost to the organization:

This problem usually occurs when IT budgets are spent on projects that keep lights on, adding value to their business, rather than bringing new opportunities and innovations first. The absence of a portfolio view of holistic, all IT initiatives can contribute to excessive cost and may indicate that process and decision-making capabilities around portfolio and performance management are not available.

- Obstructed or failed implementation of new initiatives or innovations caused by the current IT architecture and systems:

In many organizations, the old IT architecture does not allow much flexibility in implementing new and innovative solutions. Digitization often requires rapid movement and agile responses to changing conditions. Requires a new and more flexible approach to IT development and operations and therefore includes a direct management system.

- Gap between business and technical knowledge:

Business users and IT professionals often speak different languages. When business users don't have enough information about IT or don't understand how IT can improve business, or conversely, when IT professionals misinterpret business challenges and opportunities, the business can't grow and innovate as it should. This requires good governance to ensure that human management and skills development are addressed effectively.

- Regular issues with data quality and integration of data across various sources:

Businesses are increasingly recognizing the potential value that can be hidden in their information. All data quality or data integration issues can have a significant impact on the organization's success. Innovative governance is based on the right processes, roles, responsibilities, culture, etc. to obtain business value from knowledge. is the key to creating.

- High level of end-user computing, creating (among other issues) a lack of oversight and quality control over the applications that are being developed and put in operation:

High end-user computing can push communication between IT and the enterprise and require loose controls on the deployment of business applications. It may result from inadequate portfolio and project formulation and / or inadequate proposal and approval mechanism. Innovative governance can help build a

common view on the role and value of IT to optimize the security and functionality of end-user devices.

- Business departments implementing their own information solutions with little or no involvement of the enterprise IT department:

This bitter point may be related to the end-user computing problem and the optimum use of data and information; however, it occurs primarily when the business tries to implement stronger solutions and services in the normal process that seeks business advantage. Lack of communication or trust between business and IT can contribute to unapproved, independent development, or exacerbate symptoms (such as service issues, etc.).

- Ignorance of and/or noncompliance with security and privacy regulations:

Reducing new security and privacy threats should be on the agenda of every business, not only for compliance reasons, but also to maintain the value it generates. Ignorance and / or failure to comply with regulations can seriously disrupt the business and should be managed through appropriate innovative governance.

- Inability to exploit new technologies or innovate using IT:

While a common business complaint plays a supporting role in IT, the organization needs IT to innovate and provide a competitive advantage. Such complaints may point to a real lack of bi-directional compliance that may reflect communication issues between the business and IT, or may require the need to increase business participation in IT decision-making. Alternatively, the business may include IT too late in strategic planning or business initiatives. This problem usually occurs when economic conditions require rapid institutional interventions, such as the introduction of new products or services.

INNOVATIVE GOVERNANCE SYSTEM AND ITS PRINCIPLES

The COBIT framework sets out a general approach to innovative governance. Guidance provided by specific standards and good practices can then be applied to specific processes, practices, policies and procedures according to business practice. In particular, the governance system and its components must comply with the following:

- Strategies, procedures, governance and business plans ,policies, and audit approaches of the organization
- Corporate risk management framework (ERM)
- Existing corporate governance culture, organization, processes and structures

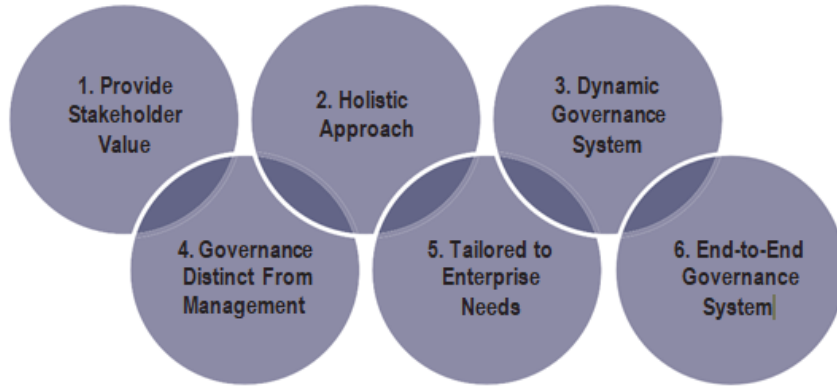


Figure 3. Principles of Governance Structure

Source: ISACA (2019)

COBIT was developed based on principles that define the basic requirements of a governance system for enterprise information and technology. These are the principles of a governance framework that can be used to create a governance system for the business. The six principles required for an innovative governance system are:

1. Every business needs a governance system to generate value from IT use by meeting stakeholder needs. While reflecting the balance between value, benefits, risk and resources, businesses need a viable strategy and governance system to achieve this value.
2. A governance system for enterprise IT consists of several components that can be of different types and work together in a holistic way.
3. A governance system must first of all be dynamic. The innovative governance system leads to a future-oriented system that can be applied to a dynamic view.
4. A governance system should make a clear distinction between governance and all structures related to governance activities.
5. A governance system should be customized to the needs of the business to customize and prioritize the components of the governance system using a set of design factors as parameters.
6. A governance system must cover end-to-end business, focusing on all the technology and information set to achieve corporate goals, regardless of its position in the enterprise, not just the IT function.

DEVELOPMENT AGENCIES (DA) AS INNOVATIVE INSTITUTIONS

Innovation is closely correlated governance of knowledge management at the local level, localization of technology supporting supplier development by assisting local companies, universities and research enterprises to develop their technological capabilities, and recollecting entrepreneurial knowledge for which conventional public organizational structure and traditional central bureaucracy could not effectively and efficiently serve.

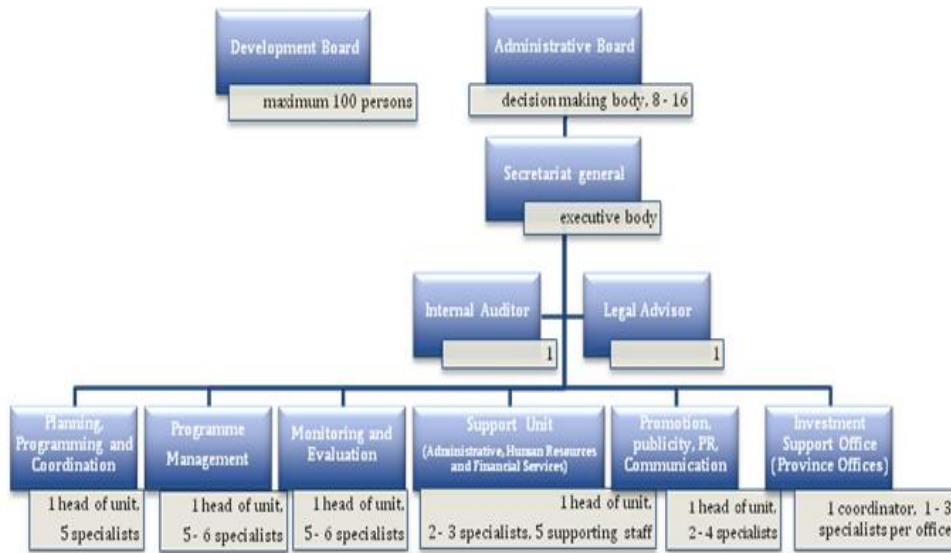


Figure 3: Average Organisational Structure of DAs

The governance structure of DAs and their working principles, procedures and organizational topology demonstrate an innovative novel nature in comparison with other traditional governmental organizations. However for the governance and e-governance structure of DAs there is no any international or national standard of framework held as reference for foundation. They are founded by legislation 5449 act in 2006 with a difference in the bodies which are administrative board and development board. Members of administrative board are consisted of mayors and governors while members of development board are consisted of different public, private organizations and some universities. Nearly all of them are full time staff of a different organization but have no benefit in acting at both of the boards. Therefore governance mechanism is not as effective as it should be in line with the legislation.

All DAs are required to prepare their own regional innovation strategy which is based on the smart specialties. The important area where the region can provide global competitive advantage is to identify and concentrate on the fields of activity and technological expertise is the smart specialization. In other words, R & D and innovation funds should not be distributed inadequately in many technology areas, but should be channeled to carefully selected priority areas that will provide cross-regional comparative advantage. This concentration will reduce the replication and dissolution of development efforts within and between EU regions.

The concept of Smart Specialization is officially defined in EU Regulation 1303/2013 as follows: “*Smart Specialization strategy; These are national or regional strategies that set priorities to take advantage of the business world and to develop competitive and research activities in areas where the region has its own strengths and thus to explore new emerging opportunities and market developments*”. The Smart Specialization strategy also avoids duplicating or disintegrating other regions in these efforts. The strategic regional or national research and innovation policy framework covers the Smart Specialization strategy.

Smart Specialization should not be understood as a simple industrial specialization in a particular field. For example, the focus on energy production is not a specialization consistent with RIS3. Instead, smart specialization is the

specialization in R & D and innovation related to promising sectors. The aim is to improve the relations between R & D and innovation resources and activities and to improve the sectoral structure of the economy. For example, focusing on developing new renewable energy sources and power generation technologies is in line with Smart Specialization objectives.

Although Smart Specialization focuses on R & D and innovation, this does not mean that RIS3 is for R & D leaders only. In fact, it is equally critical that some regions need to concentrate on creating comprehensive goals and ground-breaking R & D and innovation, while other regions are turning these new ideas into practical applications that improve quality and efficiency in many sectors. It is not an easy task to turn groundbreaking innovations into practical applications. In order to create practical and feasible applications, a great effort is needed and good relationships between information producers and users.

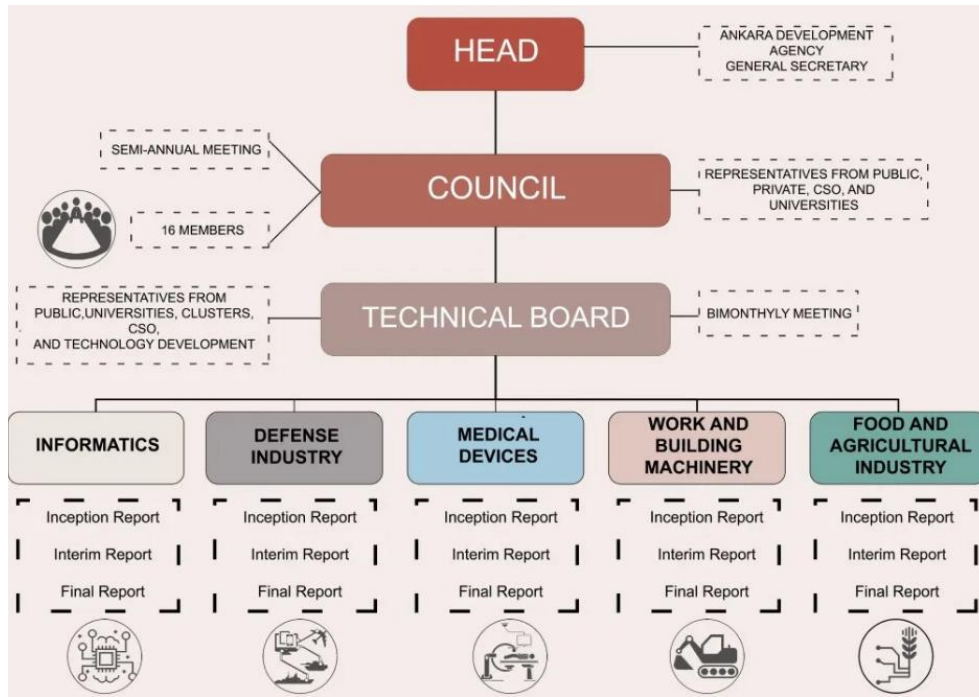


Figure 4. Governance Structure of Ankara DA

Source: <http://yenilikci.ankaraka.org.tr>

As is seen in the Fig.4 above, Ankara Regional Innovation Strategy studies, led by Ankara Development Agency, are carried by the Technical Board and Advisory Council which are composed of all related stakeholders in the region. Also, 5 working groups are established on information and communication technologies, defense industry, work and construction machinery, medical, food and agriculture. Focus group meetings are also realized in these sectors.

In order to enable the regions to switch to higher value added production structures, innovative, economic and social development projects that increase the competitiveness of the regions are implemented through employment agencies. These projects aim to assess the existing potential of the regions, accelerate economic and social development and maximize the contribution of each region to the 2023 targets. At this point; significant studies are being carried out by Development Agencies on R&D and promotion and commercialization of

innovation. Development Agencies mainly develop strategies for R&D and innovation ecosystem, carry out activities to develop innovative entrepreneurship and provide financial and technical support to R&D and innovation projects. Development Agencies, within the scope of strategy development activities related to R&D and innovation ecosystem, they prepare the innovation strategies that will guide the development of innovation-based economies by addressing the issue of innovation at local and regional level.

One of the most important processes in defining smart specialization strategies is to identify the potential entrepreneurial areas of all the actors (public institutions, firms, laboratories, universities, NGOs) and all the inhabitants of the region called the Entrepreneur Discovery Process. It is the process of defining new fields of activity based on. In the case of Ankara DA this process is as follows:

- Taking into account the potentials and vulnerabilities of Ankara, current situation analyzes and identification of sectors based on analyzes with a view that encourages innovation and cares about the participation of all stakeholders (public, private sector, university and NGO).
- Identifying areas of activity and priorities with competitive advantage or potential to create within these sectors
- Strengthening the competitiveness structure with innovative applications and technologies based on knowledge and R & D in these areas
- Funding institutions design support mechanisms to support these areas and objectives
- To contribute to the utilization of the priority areas to be determined in Ankara more than the international funds
- Providing guidance to local and foreign investors in the investments to be made in the region
- A base for the plans and programs to be prepared for the region
- Taking advantage of the opportunities provided by international networks and platforms

These all works are being carried out by Ankara DA without any innovation and governance framework as a benchmark. Therefore for DAs there should be a framework that can take knowledge and innovation embedded in an active governance structure which can be provided by using COBIT approach. Here we continue with explaining basic principles and enablers of COBIT while going towards modelling of innovation process for DAs.

ESTABLISHING THE APPROPRIATE ENVIRONMENT

It is important that appropriate content and context exist when implementing innovative governance improvements within an institutional structure. This ensures that management is managed and appropriately guided and supported by innovation. Major innovative IT initiatives often fail due to inadequate management, administration, support and oversight. Innovative governance practices are different because they have a better chance of success if they are well managed.

Innovative governance initiatives that produce new policies and procedures without inadequate support and guidance from key stakeholders, appropriate ownership or lasting impact can fail. This can disappoint people, insecurity and loss of motivation. Without a management structure that gives innovative developments, roles and responsibilities, operates and monitors compliance,

governance and innovation are unlikely to become normal business practices. The board and executives should be aware of the concepts of corporate governance and understand the need to improve the overall management structure and culture. Senior management should also accept the risk of failure of innovative management if it does not address weaknesses and threats.

Regardless of whether the implementation is a small or large undertaking, senior management should ensure that it is involved and established in appropriate management structures, principles and processes. Initial activities generally include the evaluation of existing applications and the design of advanced structures. In some cases, the innovative governance initiative can lead to business reorganization as well as its relationship with business units as well as IT functionality.

Senior management should establish and maintain the governance framework for appropriate innovation management. Senior management should also give clear roles and responsibilities to guide the innovative governance improvement program. A common approach is to form an IT board to formalize innovative governance and provide a mechanism for executive and board oversight and direction of IT-related activities. This IT board acts on behalf of the board (is responsible). The IT board is responsible for how IT is used within the company and for key IT decisions that affect the business. It should have a clearly defined mandate and should be best chaired by a business executive (ideally a board member).

CONCLUSION

The role of public administration in the form of governance envisaged by the governance approach is to be a “catalyst”. Public administration is no longer the decision-maker, the executive, the director and the governor, but also acts as the catalyst of the multilateral management process that envisages the policy-making, planning, implementation and supervision of the community actors (Individual, NGO, Business and Public Administration) in mutual interaction.

Corporate governance is all about who controls what and why. In addition, ‘Good’ governance is now considered as the key to ensuring ethical conduct and socially responsible behavior. Good enough governance is to be satisfactory in executing governance for the sake of stakeholder needs and corporate objectives. Corporate governance as a business conduct according to the needs and wishes of owners or shareholders requires organizations to also comply with the laws, regulations and basic community rules in local traditions. Corporate governance was found to be ambiguous, controversial and evolutionary. At the same time, it was found that the “one dimension“ approach was not sustainable, that various disciplines emphasized and privileged different views and led to variable analytical insights (Aksoy, 2010, s. 31).

Institutionalization and corporate governance are of paramount importance for companies to increase their credibility with the public as well as with their stakeholders such as shareholders, employees, suppliers, customers, investors and lenders. The most important obstacle for many companies to grow, to reach better human resources, to provide longer-term and cheaper financing sources, and to access to less costly supply sources is not being institutionalized sufficiently. Companies perceived as distant from the corporate governance of the

market are definitely lagging behind their competitors in the medium and long term.

Innovation management and governance involve a fundamental or substantial change in the organizational management approach. Managers' behavior and attitudes are also examined in this type of innovation. The most important factor that differentiates management innovation from other types of innovation is that management innovation covers all internal and external stakeholders of an organization. Management innovation is expected to strengthen relations with internal and external stakeholders, while ensuring the continuity of established healthy relationships.

Improving governance quality is a major challenge for about 6 billion out of the world's 7 billion population currently living in low and middle-income countries. For this large part of the world population, the quality of governance can be important to facilitate long-term sustainable economic growth and increase their welfare (Gani, 2011, p. 20). When developing countries successfully complete e-governance integration, government sectors, private companies and citizens can enjoy full e-governance advantages (Liu and Yuan, 2015, p. 149).

For the governance and e-governance structure of DAs there is no any international or national standard of framework held as reference for foundation. They are founded by legislation 5449 act in 2006 with a difference in the bodies which are administrative board and development board. Members of administrative board are consisted of mayors and governors while members of development board are consisted of different public, private organizations and some universities. Nearly all of them are full time staff of a different organization but have no benefit in acting at both of the boards. Therefore governance mechanism is not as effective as it should be in line with the legislation. For DAs there should be a framework that can take knowledge and innovation embedded in an active governance structure which can be provided by using COBIT approach.

Implementing COBIT is not only based on the management decision making but also devotion and commitment that require paradigm shifts from traditional management to post-modern proactive management that is a comprehensive organizational, procedural, structural business and IT alignment. In the Ankara Development Agency as a preliminary initiation towards innovative implementations that would prepare a basis digesting COBIT.

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