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Full Length Research Paper

E-government towards service co-creation of value

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This paper reviews articles in e-governments models in order to determine the importance of service aspects on co-creation of value, discuss the key issues related to the foresight methods and collaboration of co-creation of value in e-governments planning. Finally, a foresight framework of e-government towards the 'connected government' involving service co-creation is proposed as an integral interaction with information communication technology (ICT) as the solution provider to public service. Future work on identifying the service value that caters for the co-creation of G2C in e-government concludes the study.

Key words: E-government service model, service co-creation of value, technology foresight.

INTRODUCTION

Many businesses and markets today are undertaking the ultimate challenge of undergoing a dramatic view from the traditional business process to services oriented processes as their core impact factor of service success. This change is the ultimate force taken in form of various perspectives (Gustafsson et al., 2003). Emerging Information technology provides the utility to change. The impact never allowed the pentagon of ruler, as it changed the perspectives of information delivery on government bodies via business to business (B2B), consumer to business (C2B), business to consumer and consumer to government (B2C and C2G) aspects.

The global phenomenon initiative on e-government was developed and implemented because developed nations regarded it as the success of the 21st century. It also expanded into the society to change into an informative community, called the "information age society". This technological renovation enables various impossible tasks to become a reality, where the services turn out to be an unconditional appraisal of the major stakeholder between the provider and the receiver. It introduces newer services that are faster and cheaper and time saving in process, output and delivery.

Additionally, it minimizes the gap between government and citizens' via communication facets. Many efficient and effective tools were initiated by e-government in order to increase the performance of government in public and state administration. Recently, issues that challenged e-government processes came up in the service delivery factor. This may occur from various factors that involve human experiences such as: work culture, uniformity and consistency, national competitiveness, inter agencies collaboration and integration level, operating procedures and expectation by the user which indirectly involves all government functions and operations. This triggered aspects of value to the public that will result from improving the government itself from an adoption of the best practices that would encourage and boost the service co-creation and value determination through creativity and service quality in work processes outlook. Hence, this transformation will directly change the way government operates, and the reaction of citizens and businesses agencies.

Consequently, in order to tackle the issue, an appropriate strategic planning that builds a successful co-creation of value into e-government service delivery is essential. According to the aim of the research, the paper is organized as follows. Firstly, characterizations of each fragment are presented, after which the study shows the motivation of this research to be operated. This is followed by the literature review of various aspects, and the critical analysis of the models and foresights aspect that are embedded in the research. Finally, the study

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concludes by reviewing the research development.

Motivation

The motivation behind the research plan is derived in two sections: general objectives and a more specific objective.

General objectives

Generally, this project aims at granting a profound imminence into the hybrid system of e-government by reasons of sheathing user in-satisfaction of e-government services, and to analyze countries approaches on methods used to boost user adaptation.

Also, it is used to preview obstacles in user adaptations in the subject of service co-creation of value in e-government system. Hence, it is finally used to propose a framework foresight on the service co-creation of value on e-government service system and to deploy ICT for improving knowledge and information in the service of citizens.

Specific objectives

Upon successful completion of this project, these results shall attain a co-creation of value into the governance of e-government service system and use ICT to give its citizen and businesses better access to public service applications, with a view of building an experienced environment, within which citizens are able to create their own unique personalized experiences.

LITERATURE REVIEW

This will fulfil literacy reviews on historical, theoretical perspectives and functionalities of the explicit area of research identified for the purpose of appreciating the subject of research clearer.

E-Government

The ideal e-government service system, own by former US vice-president Al Gore, used to collaborate the citizen and agencies to provide and receive services in an automated scheme made by the government, will work by itself upon information and network to benefit in various areas. The current definition (Vergez, 2003) in the imperative e-government is “the use of information and communication technologies, and particularly the internet, as a tool to achieve better government.”Modern administrative systems” have become a ‘meta’ data of information warehouse, which have a resemblance with the government, citizen and other agencies, on how they operate.

Several scholars have defined e-government as an “Electronic government (e-government), in that the ability for government to provide access to services and information twenty-four hours of the day, and seven days of the week, is an emerging force today (Milford, 2000).” Liza (2001) defines “e-government as any form of technology used to help simplify and automate transactions between government and constituents, businesses, or other governments”. A well accepted definition by McClure et al. (2000) explain that “government’s use of technology, particularly web-based internet applications, enhance the access to and delivery of government information and services to citizens, business partners, employees, other agencies and entities.”

Consequently, e-governance is defined as the “use of information technology for the purpose of enabling and improving the efficiency with which government service and information are provided to citizens, employees, business and other government agencies” (McClure et al., 2000). Well accepted governance shall be occupied by agencies in government to provide infinite services that are ready in hand (Trinkle, 2001).

Hence, it craved the fundamental focus of democracy, business and governmental aspects which would reduce the gab and societal change in the e-age. Failing to do so, would likely result to a failure on the e-government, basically on the design and reality gab architecturing of it. This is concerned with the soft factor, where people on the sector that mix-match fails to tackle personalized needs, accepted emotions and, strategically, politics which concern decision making and culture that should focus on valued rules and logic (Heeks, 2001, 2003, 2007).

The era of modernization is in line with the current and rapid increase that influences the way e-government transforms and evolves presently, as well as in the future. After decades of governance and research, the future of e-government gains more valuable collaboration that would inject the next e-government. Hence, it is routing the direction of public involvement in policy deliberations, which is the essence of service oriented or service co-creation society.

The next e-government initiatives are on public input of dominant rulemaking procedures. The transformation emerges because of the revolution of information and knowledge, in which people are embodied with mass knowledge that they can decide; moreover, its shows the maturity of a developed nation (Harman, 2001). Going along with the proverb “for things to change, we must change”, transformation will gain its benefit and the public shall co-create a service, which asserts that value is the central subject of governance success.

Service as the enabler

The term ‘market’ can also be applied to the subject of government, as service has been taken from the provider

(ruler) and the adopter (citizen). A concept of service co-creation is the “embedment of people, technology and value proposition, connecting internal and external service system and also sharing information” (Spohrer et al., 2007). To simplify service co-creation in the concept of e-government, it is generalized as a set of performance that provides or assists a group of people who share information from either internal or external service, in which value proposition is connected through the use of technology to achieve the goal.

Apparently, in the 1990s, during the peak of the internet era and web services, the overall traditional way of administrative processes and procedure in information technology was transformed with new partnering network by decreasing momentums of the cost of service provided and increasing the moments of relationship between the provider and adapter. This was the era that changed the whole perspectives in multiples of disciplines. Organization stated to merge unwanted scopes and many gain benefits (Leonard, 1995).

Many researches have been conducted and the concepts of services were defined, while the components were identified. So, it would generalize the implicit idea of service concept itself. For example, Lovelock and Wright (1999) endorsed ‘8Ps’ of service components: types of product involved, the process embedded, the place of incident, physical evidence of the output product, people whom planned and receive, measured productivity and quality, and the average price and promotion instilled in the whole service process, which can clearly be said that the service involves a production of raw material to usable goods or product, or a service itself. Services can be in any form, either as a product, assistance or guidance, and it varies. It is necessary to have successful services, because it is a combination of multiple components of a process as ‘what’ and ‘where’ is involved, the need of skilled people as ‘who’ and ‘whom’ and finally, materials needed as ‘what’. So, service success is, generally, a designed plan that needs skilled people as input, the process that enables the operation involved and the output on the research.

Consequently, the view of ‘service’ in economics and marketing perspectives recognized it, as a business driver that either, direct or indirectly, affect the process and excel newer perspectives of innovation in businesses that involves product development, as well as service businesses. This is much similar in service technological perspectives. From designing a product that is based on the technical view which merely includes input, process and output, the manufacturer shifts to cater for the customer’s need. An example would be on the mobile revolutions, which contributes to massive innovation and creativity that integrate, and makes the innovation as a linear process (Gallouj, 1998). Moreover, valuable research has been conducted in order to understand the innovation of service and co-creation, for example, the product cycle service innovation process model by Gallouj (1998) and the management service innovation model by Sundbo (1997). Furthermore, these areas of research that matter are yet to be explored in depth.

Service research on e-government, which combines public and private sector innovations in a way, draws new ideas, partnership and opportunities to deliver public needs. Likewise, this spots the need for government to pay equivalent importance on building a good relationship with citizens. This would increase public awareness and alertness towards effectiveness on public service. In spite of the issue of service which differs from one another, services, such as accessing, responsibility, accountability, transparency, ethics and changed culture are implicitly related to the citizens in particular, and would be jointly solved through the enhancement of public trust with the e-government. It is indirectly believed that it would help to detect the value created. Hence, service system is a complex platform of function and collaboration of components partnered in the value creation networks as it differs from “reputation systems to work system, enterprise system, industrial system, national system and global service system” (Maglio et al., 2006).

Co-creation tool

The internet has altered the proposition of service and communications to improve business processes. Citizens have become more informative and knowledgeable towards the service delivery which makes them empowered with tools of choice and indirectly contribute or becomes co-creator of value. An accepted approach done by successor, to maintain a good relationship organization has to discover the concept and ideal way of creating value. For example, Amazon.com uses the concept of partnering with its customer to co-create value, whereas it helps to capture greater value which leads to co-creation of customer loyalty. With his new tool of dissatisfaction amid available choices, people want a direct interaction with the ‘firm’ to co create value (Prahald and Ramaswamy, 2004), which redefine the meaning of value and process of value co-creation.

Eventually, the transformation changes the ideology of the customer and the employee. As people become more informative, they tend to be the employee who change the service and create value. A leadership managerial perspective is important to tackle and maintain the value with the customer. Apparently, a technique of motivation and management is needed, as co-creation grows globally. Internet access allows wider contact of interest and network, where information is transferred as the demand of choice increases. For instance, public awareness of internet usage and e-services, outlined by e-government, would be the perfect example. Values are “contingent, more than subjective, as they do not reside ‘in’ independent individual action or ‘in’ independent

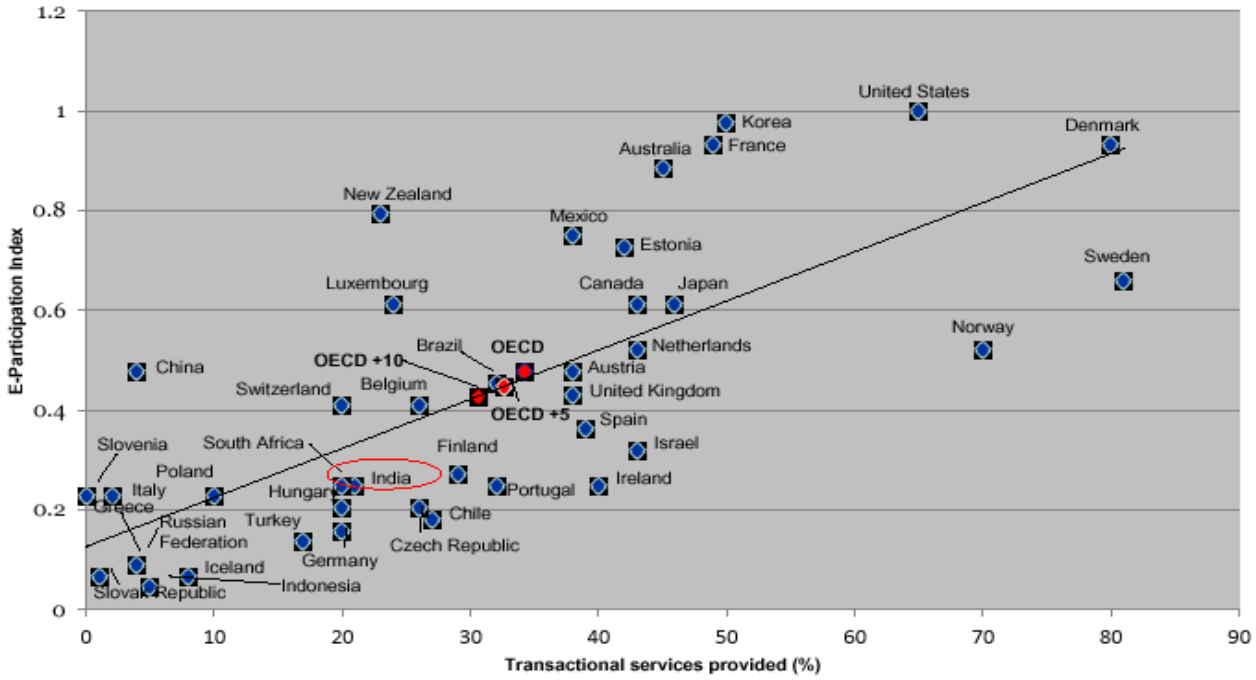

Figure 1. UN e-government survey (2008).

interactions" (Rafael, 1999) (Figure 1). Based on a study conducted by OECD on UN-E-Government Survey, back in 2008, it was shown that the transformation of the e-government's portfolio was carried out by the advanced connected governance. This gives tremendous result in service delivery by stages (percentage of utilization), where it resulted to service delivery and value co-creation, particularly in e-participation. This evaluation provides readiness in places where citizens at the fore-front focus on the governmental services and products that primarily affect them. The report on questions of readiness showed considerable variation between five continents and found that Europe got 0.649 points, America got 0.4936 points, Asia got 0.4470 points and Africa got 0.2739 points.

Alternatively, based on the study in general, a milestone would definitely be provided in becoming the next version of e-government in the "Connected Government." Citizens value can be quoted as the difference between perceived benefits, costs and value, and it lies in the "interaction of three variables: specific needs, the attributes of a product or service and overall cost (risk, effort and price)" (Ajit et al., 1999).

Therefore, co-creation is vital when service components (buying, selling and integrating) are harmonized with interaction variables on particular requests. This is aroused in a process at the citizens' level, and it produces the quote "the greater the fit, the greater the citizen values that are created. This is the challenge that needs the 'soft' factor to be mastered by the provider or ruler.

Plainly, the quality of interactions is said to have reached a peak, where the individual actually co-create a unique experience, which in reality, is the key to unlock new sources as the bridge connects the experience and quality. Also, it depends on the nature of the involvement between the individual that wants to co-create and the provider. This level is beyond limitation and it varies for different individuals. Bearing this in mind, is merely like building an experience environment within which they are able to create their own unique personalized experience in order to co-create value between citizens and e-government.

Moreover, issue of direct involvement in co-creation of value surfaces in risk elements; hence, the need to understand the strategies of risk management is also important in the administrative level. It is said that risk is labelled as an "association of privacy, legal, brand, goal divergence, effort and equity of return and can overcome it by having a proper address of each challenge and build trust to effectively co-create" (Prahalad and Ramaswamy, 2004). An outlined structure of framework that strategizes the plan which would reflect the impact of service co-creation delivery, based on the needed output which is surfaced by the co-creation of value and ICT, is therefore needed. Prahalad and Ramaswamy (2004) have outlined the concept of co-creation by differentiating between what is and what is not in the conceptual point of view

Table 1. The concept of co-creation experiences.

What is not	What is
Customer focus	Co-creation is about joint creation of value by the company and the customer.
Customer is a king/ always right	Allowing the customer to co-construct the service experience to suit his content.
Product variety	Experience variety.
Staging experience	Co-constructing personalized experience.
Deliver good customer service	Joint problem definition and problem solving.

Source: Co-creation experiences: The next practice in value creation (Prahalad and Ramaswamy, 2004).

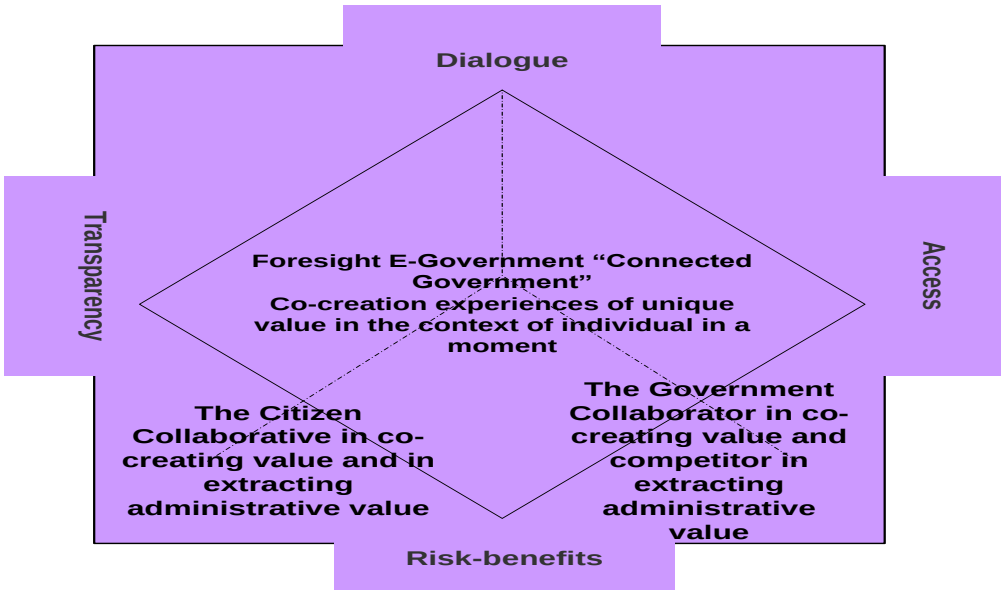

Figure 2. Foresight framework of e-government towards the 'connected government'.

that can be universally applied as in Table 1. Branding every experience that cater for uniqueness fostering individuality would be vital, as its all depends solely on individual choice on how they choose to start the interaction with the experience environment, facilitated by firms bearing in mind that not all interactions co-create value. Meanwhile, traditional business process would be strange in the application of this new phenomenon because the ideal mode is goods dominant, where product is designed with value embedded into it, and thus leaves the customers with no choice of experience. A view is that discovering this ideal process is therefore required to demonstrate that co-creation is all about partnering a creation of value and service experience. As such, the process is neither transferred nor outsourced in a product or service. This futuristic process on mega transformation is relatively possible by ordering a proper research on foresight technique which provides the necessary understanding on the scenario.

Besides that, foresight of a model that would emerge the interaction process and e-government, together with the citizen, would be essential for the customer. A big organization such as e-government has many level or stages that includes agencies from private and public sectors that are networked together to provide service for citizens and also act as a source of information and knowledge for the community worldwide. In the term of connected government, a need to look at the trends and preference of the current culture of services needed by the citizen and the importance of transparency in the information age is best shown in the form of a 'Mandala'.

Figure 2 explains, in detail, the co-creation aspect between the e-government and citizens in the experience based environment as the essential brand and interactions which are embedded in it. Its importance, in a good block of interaction in 'Mandala' or in a circle, is the complex stages of patterns described in Hinduism and Buddhism tantrums which have a resemblance with the 'wholeness' or universal stages. It is in the form of a rectangle and geometric figures that symbolically show the forces or parts of the individual's life (mood) which collectively flow the energy to the centre point. Pyramid

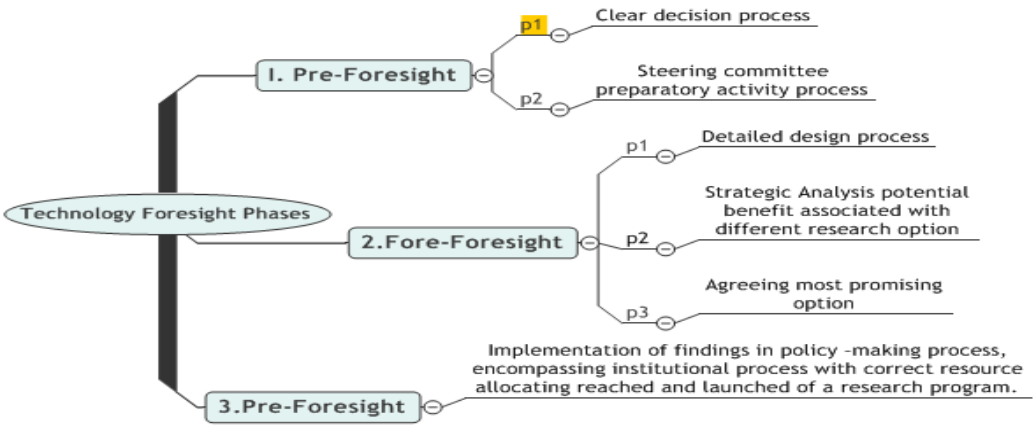

Figure 3. Foresight phases.

would be a good example to picture the shape of 'Mandala.' This thought about the theory of Mandala is explained as a "spiritual yearning to eternity" (Tucci, 2001).

The researcher sees the universal and eternity stages as a stage of service co-creation of value, because value is seen as the eternity stage that challenges the firm or agencies, while service co-create the act as the universal stage in the current service environment DART (blocks of interactions: dialogue, access, risk-benefits, trans-parency) is integrated into the table of 'Mandala' and the four aspects of blocks are placed in different compass of view without apportioning importance to each aspect. The main concern is the universe or globe, which never stops circling symmetrically. Moreover, the concept is applied here, where the individual's choice of interaction changes and never remains the same. The centre point or the top of the root is the crest of loyalty when all four aspects meet the value that is created. The triangulation which connects government and citizens under foresight connected government is the universe of co-creation of value as illustrated in (Figure 2).

Foresight of the planner

Technology foresight or 'future' became a famous subject for exploration which shaped the future, especially concerning public policy and strategic planning (European Commission Foresight, 2005). Technology foresight focus on identifying standard tools that would best fit the manipulation through "innovation studies, science/technology, policy and analysis from 'critical technologies' (Martin, 1995). In general, Martin summarized the aspects into five 5Cs: "communication, concentration, coordination, consensus and commitment". Therefore, three main phases on the process was distinguished: pre-foresight, foresight and post-foresight (Figure 3).

Similarly, Georghiou et al. (2005) later describe technology foresight as "a systematic means of assessing the scientific and technological development which could have a strong impact on industrial competitiveness, wealth creation and quality of life." Basically, in foresight, there were twenty main elements that needed to be tested on developing a framework, which was explained and elaborated by Saghafi et al. (2008) in their work titled "A Proposal Framework for E-Government Foresight Based on Zachman Architecture Model in developing Countries", as shown in Table 3. They also identified the critical dimension and conceptual for e-government framework, shown in Table 2, and it elaborated on the critical and dimensional aspect of the e-government's framework. However, the elements of foresight were defined in Table 3 which asserted the research precision.

Following that, Voros (2003) designed a four element foresight framework that "gathered information and scanned the strategic intelligence (input) comprising three steps: analysis, interpretation and prospect (foresight); two folded - tangible/intangible (output) and the decision making order for strategic action (strategy)" (Figure 4).

On the proposed research, the technology foresight would be utilized to identify the important aspect on service co-creation towards connected governance between government and citizens. Concerning a longer and balanced aspect on science and technology application of ICT, social impact in the culture of the future allows essential co-creation of value in e-government.

Critical analysis of co-creation

Consequently, a survey conducted by United Nations in 2010, showed that South Korea (an Asian country)

Table 2. Critical analysis of conceptual and dimension on e-government foresight.

Dimension	Element								
	Janseen	Popper	UNIDO	Upgrade	Keenan	Martin	Saritas	Havas	Ec
Rationale	*	*			*				*
Objectives	*	*			*	*	*	*	*
Review existing strategies arrangements	*			*	*	*	*	*	*
Orientation	*	*		*	*	*	*	*	*
Level	*	*	*	*	*	*	*	*	*
Time horizon	*	*	*	*	*	*		*	*
Coverage	*	*	*	*	*		*	*	*
Participation	*	*	*	*	*		*	*	*
Consultation	*				*				*
Duration and cost		*	*	*	*	*	*		*
Method	*	*	*	*	*		*	*	*
Organization and method	*	*	*	*	*	*	*	*	*
Dissemination	*	*			*	*			*
Implementation	*		*	*	*	*	*		*
Evaluation		*			*	*			*
Vision				*			*		
Decision making process				*					
Evaluating existing experience				*			*		

Table 3. Definition of the main elements of foresight.

Main element in foresight	Definition
Rationale	Arguments for conducting foresight should be determined. Rationale will tend to emphasize how things can be done better with the help of foresight.
Objective	Declare the achivements of foresight, which may change over time, but it is not unusual
Review existing	Studies done on how foresight will be complemented or challenged
Level	International, national or institutional
Time horizon	Focus on how far a peer has gone
Coverage	Sector/ issue/ problems that seek to cover
Participation	Breadth of actor engagement
Duration and cost	Last foresight and cost
Consultation	Depth of actor engagement
Methods	Method and techniques used at various stages
Organization and management	Of foresight
Dissemination	The results of foresight to be diffused beyond those immediate actor participants
Implementation	Shows results on the follow-up action
Approach	Either normative or exploratory
Evaluation	Assessment of the outcome
Target	All stakeholders involved
Output	Depends on the method used
Methodology	Important activity in the foresight
Resource	Financial, information, knowledge and human resource

topped the bi-annual table, by leading the world on how government has used ICT to partner citizens and businesses for better access, which mainly focus on public service. The few reasons outlined were "focused on finding out better ways to improve citizens' participation and launched an information disclosure system, which share administrative information on citizens' claims, and the e-people systems, which handle citizens'

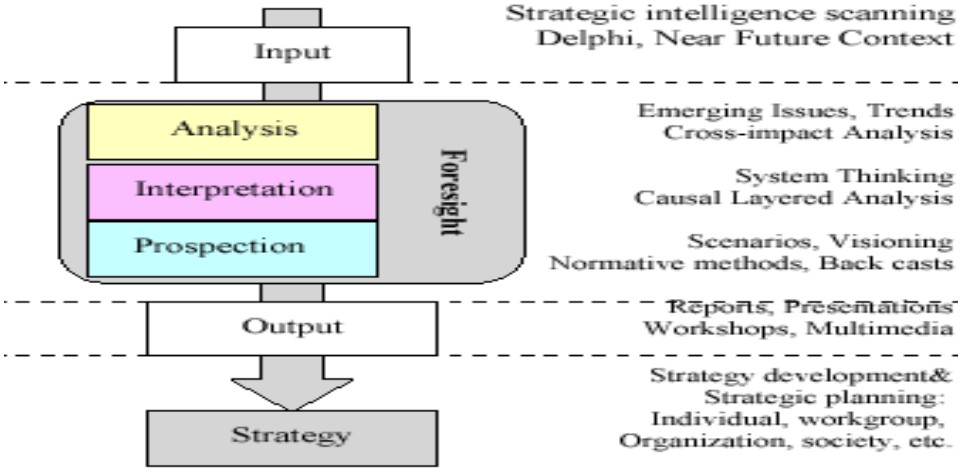

Figure 4. A generic foresight process framework (Voros, 2003).

complaints against the government" (Hicks, 2010). Besides that, on the same survey, it showed that Australia was the only other country in Asia Pacific trait which measures "the capacity and the willingness of the public sector to deploy ICT for improving knowledge and information in the service of the citizens" (Hicks, 2010).

Gradually, based on the study and the facts collected, critical analysis on various models for e-government development is reviewed with service co-creation, as the subject of the elements is put to the analysis to identify the level of scopes covered in the e-government models. This is in line with the idea to dig the capacity and the willingness of the public sector to deploy ICT for improving knowledge and information in the service of the citizen. Studies conducted on various conceptual framework, dimension and definition, are elaborated.

There are several e-government models developed by experts. Consequently, there are several categories of groups for an e-government model such as: described models, maturity models, process models, e-government framework, critical flow model, comparative models and e-advocacy models (Abdollahi et al., 2007). Eleven models were identified and categorized into the appropriate group and were presented in Table 4. This table was customized from the research conducted by Keng et al. (2005) and Abdollahi et al. (2007) and was combined with the added information.

Based on the investigation of different models, the main parameters in each model were summarized in Table 5 and customized from Keng et al. (2005) and Abdollahi et al. (2007), where the service dimension was studied and the result was shown. This study was based on the level and importance given to the service factor as it focused on the research outcome, where further exploration to test the reliability and precise result emerged. Studies showed that, service subsets all the dimensions mentioned in the analysis, which makes it an important aspect to truly focus on a connected government idea. This is as a result of the nature of the e-government's future that is looked into, where co-creation would be the main aim of the next successful government.

Moreover, according to the models studied, service dimension was not applied in most development of these models. This may be due to several reasons: early stage of e-government framework which focused on technical aspects, different criteria set on dimensions, and time line of the development concerned with the ICT impact. Detail elaboration on this fact would be necessary to give a new dimension to it, in which services directed to citizens by 'connected government' would be the goals set in foresight. However, six models were identified and embedded in the service dimension as the part of dimension. UN public service model was identified as a complete model which encompassed five stages that were basically covered by web services: emerging and enhancing web presence, and focusing on the interactive and transactional functions, which covered the overall process that touched the key dimensions mentioned. It is a new approach for the seamless web, and is being looked into by the next or future e-government currently. Based on the measured dimension, it indicates that UN model would be an essential product that would be able to produce an acceptable foresight planning which would suit the appealing service co-creation of the value.

CONCLUSION AND SUGGESTED WORKS

The results of technology foresight have significant effects on policy implementation and revision. It shows that a need on service urges the re-engineering of framework that would co-create value and deploy ICT to reach its maximum ability. A statement, outlined by Salleh (2006) as "Malaysia's vision of 2020 programs on

Table 4. Analysis of e-government models.

Model		Description
Gartner	Maturity model	A four-stage model involving web presence, interaction, transaction, and transformation
Broadcasting	Dissemination model	Useful governance information which is in the public domain into the wider public domain through the use of ICT and convergent media.
Interactive-service		A consolidation of the earlier presented digital governance models which open up avenues for direct participation of individuals in the governance processes. The various services offered by the government become directly available to its citizens in an interactive manner.
Delloite	Maturity model	Six-stage model of e-government are to serve citizens as customers and to build a long term relationship with citizens.
Misra and Dingra	Process model	The model consists of 6 stages which focus on performance and innovation in the ever changing world: closed, initial, defined objectives, goal and vision, and realized.
Heeks		Consists of 5 stages: Building e-governance awareness and commitment, building e-governance strategic capacity, building e-governance implementation capacity and building e-governance pilot projects.
Wimmer	Framework	Propagates the necessity of a holistic approach with at least three key characteristics: different user groups, distinct government processes, and the support of government activity with modern IT.
Bhatia		This model consists of 5 dimensions: Leadership, human resource development, policy and institutional reform, technology and financing.
Garcia and Pardo		These strategies are: Information and data strategies, information technology strategies, organizational and managerial strategies, legal and regulatory strategies, and institutional and environmental strategies.
Layne and Lee	Process model	Based on technical, organizational and managerial feasibility, e-government is regarded as an evolutionary phenomenon. The four stages, as discussed previously, are catalogue, transaction, vertical integration and horizontal integration.
Hiller and Belanger		Five-stage model – information, two-way communication, transaction, integration and participation.
UN	Public service model	Five stages: Emerging web presence, enhanced web presence, interactive web presence, transactional web presence and seamless web presence.

e-government, has a futuristic approach; however, no foresight technique was employed". This triggered further research, enclosed in the service co-creation factor that would improve the service co-creation and usage of ICT to cater for information and knowledge of the citizens. An unreciprocated question came up from the United Nation (2010) report, and challenges the future of e-government, particularly the Malaysia's e-government, which is the current challenge that instils the usage of integral interaction with ICT. As a solution provider to public service, access to information, utility, usability purpose and service capability were delivered at the right time, mostly by citizens' participation on the future of Malaysia's 'connected governance'. The future government is being asked to do more with less transposition of e-government that would emphasize on the performance of the public service, which fortifies the public service outcomes, engagement and accountability (Hicks, 2010). In concluding these reviews, an important aspect on identifying the value that caters for the co-creation among citizens and the e-government is vital and needed in order to overcome and act as a solution for successful administration.

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Table 5. Analysis of different dimensions on e-government models.

Dimension	Model											
	Gartner	Broadcasting	Interactiv e-Service	Delloite	Misra and Dingra	Heeks	Wimner	Bhatia	Garcia and Pardo	Layne and Lee	Hiller and Belanger	UN
Strategy					*	*	*	*	*	*	*	*
Human resources					*	*		*		*	*	*
Information and data	*		*	*		*	*		*	*		*
Technology	*	*	*	*	*		*	*	*	*	*	*
Technical infrastructure	*	*	*	*	*		*	*	*	*	*	*
Security	*		*	*			*			*		*
Finance					*		*	*			*	*
Logistics							*		*			*
Culture					*	*	*		*	*		*
Management					*			*	*	*	*	*
Marketing							*	*		*		*
Service		*	*			*		*			*	*

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