THOUGHTS WITH IMPACT - PART 2

Critical Thoughts

from a Government Perspective

A Series of Published Papers

THOUGHTS WITH IMPACT - PART 2

Critical Thoughts

from a Government Perspective

Dr. Ali M. Al-Khouri

A Series Of Published Papers in International Journals and Conference Proceedings

Critical Thoughts from a Government Perspective
Emirates Identity Authority
Abu Dhabi, United Arab Emirates

First Version Printed in 2008
Second Version Printed in 2012

ISBN978-9948-16-737-2

Preface

This book is the second in a series. It represents a collection of research articles that have been published in several prominent international journals and conference proceedings.

Many publications about the GCC governmental sector are typically written from either a purely academic perspectives or present on a small subset of available research, thereby failing to capture critical management issues and considerations. Therefore, this collection of papers not only embodies insights based on extensive research but also the collective insights of numerous senior government practitioners.

In doing so, my aim is to illustrate a broad picture that is grounded in the realities of day to day issues faced by public sector managers. These papers address various areas of considerable importance for public sector leaders and so they have been grouped into four distinct categories: strategic management, organisational performance, e-government and national identity.

Lastly, these papers have been written from a philosophical "mind-set"; that if we need to improve our organisations and thereafter our nations, we need to be transparent when we share knowledge and practices.

My sincere goal is that these papers will help augment recent public sector development efforts in the GCC, contribute to the advancement of research on the GCC and serve as knowledge building tools for those interested in learning about public sector management practices in GCC countries.

Dr. Ali M. Al-Khouri

2012

Contents

Paper

1

PUBLIC VALUE AND ROI

in the Government Sector[1]

Ahmad N. Al-Raisi & Ali M. Al-Khouri

ABSTRACT: Assessing the returns of public sector investments in Information Technology (IT) has been the subject of a round of debates between practitioners and the academic researchers. The range and complexity of government Information Technology (IT) investments and broad community of benefit owners makes assessing investment returns a daunting prospect. This paper provides a short review of existing literature on Public Return on Investment (ROI) and the general approaches to measurement of such returns. It also presents some examples of successful Public ROI programs and practices in the United Arab Emirates (UAE). The intention of this paper is to share experience and knowledge with the wider research and practitioner community in different governments.

Key words: *Public Value, ROI, Government Projects.*

[1] Al-Raisi, A.N. & Al-Khouri, A.M. (2010) "**Public Value and ROI in the Government Sector**," Advances In Management, Vol. 3, No. 2, pp.33-38.

1. INTRODUCTION

THE substantial scale of expenditure and the scope of government sector investment in IT are receiving increasing scrutiny in many of countries. Governments are criticised for not accurately measuring the full value of their IT investments, and hence wasting government funds on unnecessary technology. It is often repeated in the literature that governments at large are unable to convincingly demonstrate a return on investment that is widely understood or based upon well-grounded measures [1]. This might be linked somehow to the myths regarding the use of ROI in government, which might be preventing many agencies from the development of comprehensive approaches to evaluating their initiatives, such as:

- Government will never require the use of ROI;
- Absences of revenues and profits make the concept of ROI inappropriate;
- Little or no hard data in government organisations;
- ROI methodology inappropriate for essential government services.

The global environment is indeed playing an immense role in changing government organisations practices and acceptance of new concepts that were only limited to private sector organisations. It is understood that every government IT project will have its own unique goals, value propositions, and stakeholders, but assessing these returns remains a core problem in IT planning and decision making [2].

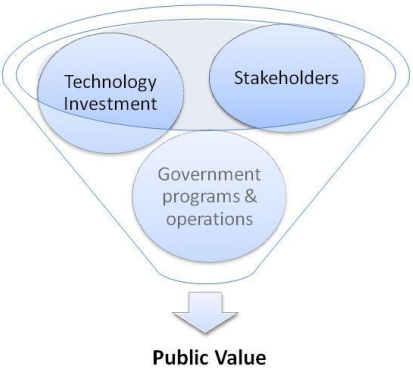


Fig. 1 Project constituents and public value

Traditional ROI approaches concentrated on cost-benefit analysis. These methods can be seen as limited when it comes to measuring risk, indirect benefits and intangible benefits [3]. It is widely argued that government IT initiatives that have been cost-justified by traditional economic and financial return methods are unlikely to achieve their targets.

The concept of public value and public ROI are new terms used in the government sector to justify IT investments. The new practices of ROI analysis in public sector encompass all of the direct and indirect effects of government IT spending i.e., "public value of IT. The definition of pubic value of IT involves the study of value primarily along three dimensions: constituent service, operational efficiency and political return, as the next section will provide further elaboration on this.

2. REVIEW OF THE FIELD

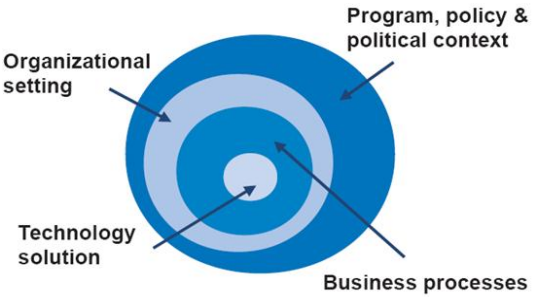


Fig-2: Complexity layers surrounding government IT initiatives

Investment decisions in the public sector, whether they involve IT or not, should necessarily take place in a context of political and policy influences (see also Fig-2). No matter how solid or technically sophisticated an ROI analysis may be, it is seldom the sole determinant of an investment decision especially in the government sector.

Nonetheless, and historically, governments have measured the performance of IT initiatives with quantifiable, financially based outcomes, such as reduced transaction costs or cost avoidance. Of course, financial measures should be used in government, but they seldom represent the full range of returns generated from public investments in IT (see also Fig-3).

Fig-3: Pubic ROI elements

So while important, economic returns are only one dimension of a government's effectiveness. The social and political impact an IT initiative can have on the daily life of citizens and other stakeholders is also essential. In fact, Public value creation extends beyond financial savings and service evaluation data to actually increasing public service delivery, integrity and transparency of government process and operations.

It should also be recognised that the range, scale and complexity of government information technology (IT) investments makes assessment of their returns using conventional approaches a complex and challenging prospect. The complexity results from shortcomings in the available methods and models for assessing public returns i.e, intangibility of the benefits generated, the time at which benefits can be measured, and the cross-sectional nature of information technology project.

Measuring the return on IT investment in general is a complex and requires a thorough understanding and knowledge of both the business process and the context in which it is embedded. It is necessary to understand the relationships between the costs, benefits and risks of IT investments, as well as the different contextual factors including organisational, institutional, and environmental. Traditional approaches to return on investment analysis have been criticised [4][5] for being:

a) Based on financial models,
b) Not being able to accurately predict ROI due to uncertainty and difficult decisions involved in IT investments,
c) Do not take into consideration the political position of the organisation, and
d) Have more limitations including the exclusion of social and political returns

Unlike the private sector where the use of ROI is embedded in business decision making, public sector organisations often remain focused on the success of policy initiatives and fulfilling political goals [6][7]. Existing Public ROI methods and models attempt to develop understanding of the benefits and value of the investment, including political, social and economic. They mostly represent generic models and they vary widely in terms of their overall assessment approach. However, three significant shortcomings have been recognised [8]:

a) Incomplete analysis of public value, resulting in too narrow a scope of what can be considered returns to the public,

b) Lack of systematic attention to how government IT investments generate measures of public value, and
c) Weak or absent methods for tailoring a public ROI assessment to the specific context and goals of a specific government IT investment.

While financial measures would remain important, research emphasises the need for more comprehensive approaches to measure the extent to which government programs impact the world around them [7]. In a response to such need, SAP, the world's largest business software company, developed a holistic approach consisting of three dimensions of performance and public sector entities that can be used to measure public ROI i.e., Financial ROI, Social ROI and Political ROI, as depicted in Fig-4 [9].

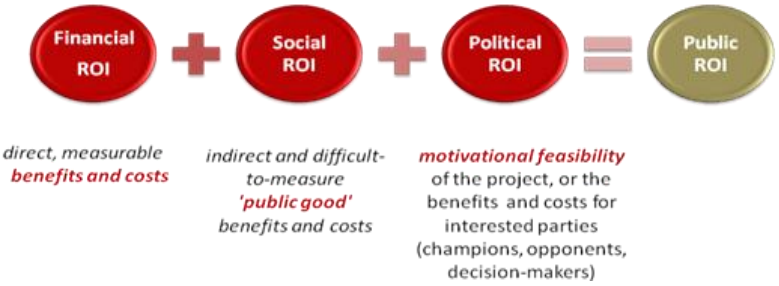


Fig-4: The three dimensions of public ROI

The concept is argued to:

a) Demonstrate trustworthiness to citizens,
b) Ensure governance in the value of operations,

c) Promote positive community programs to business constituents and
d) Gain an advantage in securing public funds.

Although it considers Financial ROI a key dimension of a government's effectiveness, it puts much emphasis on the social and political value of public programs. Further details of the three dimensions are provided in Table -1.

Table1: Financial, social and political ROI

Financial ROI	Social ROI	Political ROI
Traditional, or "classic" measurement of financial gains with quantifiable results.	Impact of government services on a societal level	Political ROI impacts the system of governing and policy decision making.
e.g., are reduced transaction costs (such as in procurement by reducing the cost creating a purchase order from $28 to $21) or less steps in the workflow of approving a budget request (12 steps to 7).	e.g., are citizens safer? Are the children in a particular jurisdiction receiving adequate medical services? Are the poor receiving sufficient food and shelter? In short, Social ROI impacts the quality of life in households and communities.	e.g., does the IT environment support and enable us to deliver government programs that are matched to policies, legislation and mandates? Are we delivering on the promises of our politicians?

The SAP concept has gone through further research by the Centre for Technology in Government for assessing public return on investment (ROI) for IT initiatives. This exercise resulted in the development of a Public ROI framework, as depicted in Table-2 [8].

The framework describes public value in terms of six kinds of impacts governments might have on the interests of public stakeholders.

Table 2: Stakeholder Value Proposition

Financial	Can we afford this? Will it pay for itself? Is it based on expected savings and revenue increases compared to the dollar cost of all expenditures on the new system. Impact on income, asset values, liabilities, entitlements, and other kinds of wealth or risks to any of them
Political	Impacts on informed (i.e., the ability to influence) government actions and policy, government actions or policy.
Social	Impacts on family or community relationships, opportunity, status, or identity.
Strategic	Impacts on innovation and planning, economic or political advantage or opportunities for future gain. Focusing on strategic objectives keeps attention on the full range of benefits to be expected from the investment, and how to measure them.
Ideological	Impacts on beliefs, moral or ethical values, or positions in terms of public trust, integrity, and legitimacy.
Stewardship	Impacts on the public's view of government officials as faithful stewards in terms of public trust, integrity, and legitimacy.

It views Public (e.g., citizens, businesses, and community organisations) as the basis for return for IT investment assessment, rather than the technology development and implementation. It identifies two sources of public returns as value to the public that primarily results from: (1) improving the government itself, and value that results from, and (2) delivering specific benefits directly to

citizens. The next section will present some insights from the United Arab Emirates related to the concept and application of public value in government projects.

3. REFLECTION FROM THE FIELD- UAE CASE

In common with governments around the world public sector organisations in the UAE are under pressure to improve the efficiency and effectiveness of their processes and delivery of public services. The concept of customer service is being brought into the centre of the value proposition equilibrium in government systems.

An important paradigm shift taking place in the UAE public sector organisations in recent years is the shift from an activity-based to a result/outcome-based focus. This is guided by the government's vision to excel at customer service, promote innovation and creativity in public sector [10] and make a tangible difference to the society that it serves(see also Table-3).

Practices in the UAE government sector are becoming similar or aligned to those in the private sector. There is great interest in improving performance measurement in the UAE government through the adoption of total quality management (TQM), zero-based budgeting, and employing balanced scorecard methodologies.

It is recognised that these approaches need to be tailored to fit the needs of government. As an example zero-based budgeting is

generally an activity-based approach. The UAE government is developing a hybrid methodology of activity and result-based approaches. The UAE government is using the former to control overall government spending and link it with top level strategic goals in each organisation and its programs. The result-based approach provides a broader, more diverse perspective of the value to citizens and/or to the society that IT investments can generate.

Table 3: Paradigm shift to a Result-Based Approach

Activity-Based	**Result/outcome-Based**
No business need of the program	Program linked to specific **business needs**
No assessment of performance issues	Assessment of **performance** effectiveness
No specific measurable objectives	Specific **objectives** for behaviour & business impact
No effort to prepare program participants to achieve results	Results expectation communicated to **participants**
No effort to prepare work environment to support change	Environment prepared to support **change**
No effort to build partnership with key Managers	**Partnership** established with key managers and clients
No measurement of results or benefit-cost analysis	Measurement of results and **benefit-cost analysis**
Planning and reporting is activity focused	Planning and reporting is **outcome focused**

The second paradigm shift is observed in the increasing interest of the UAE government of the concept of public private partnerships

(PPPs) to finance and deliver various government infrastructure projects and services. Such steps have produced innovation and flexibility in public sector organisations. Private sector involvement has not only provided additional investment funding to government but also made a significant stimulus to the economy by generating business opportunities and encouraging local and foreign investments.

We should also recognise that several forms of partnerships with the private sector are beginning to emerge in the public sector with the objective of making strong Public ROI returns. One example is the increasing number of public private sector consortiums, with government organisations having the majority of equity shares in such establishments.

These consortiums work together with government to provide services, without completely transferring public assets to the private sector. Such partnerships are seen to play a fundamental role in achieving growth and create new jobs opportunities.

Another example are the government alliances with private sector companies in promoting the adoption of IT solutions that have been developed for a specific government function through the same supplier to other countries.

The government entity shares 20-to-30% of the contract value when signed. This amount is then waived in most cases as a contribution from the UAE government to the country interested in the solution.

Such partnership projects are seen as a key element for improving bi-lateral relations with other countries.

On the other hand, the UAE government has implemented many successful Public ROI programs in the recent years. These programs though may be considered small, they provided the government with a "self-funding" source for larger scale efforts. Table-4 provides an overview of some of the recent projects implemented in the UAE, and considered as most successful ROI stories in the region.

With a remarkable financial income generated from such government initiatives, financial returns are being invested on projects and initiatives benefiting the society and/or in internal organisation development. The exponential revenues generated from auctioning/ selling special numbered car plates , for example, are all donated to charity.

Government programs in the UAE public sector as illustrated from the examples provided above incorporate different dimensions of Public ROI returns. However, from our knowledge, public ROI is often not clearly thought through when government programs are first initiated. For example, many of the government IT projects worldwide when announced or implemented do not meet public expectations, and lead to hot public debates.

The challenge of making a clear business case for IT projects is also linked to the limitation of existing knowledge and tools required for delivering complex programs and assessing resultant public value.

Though some schools of thought argue for a holistic approach to ROI analysis, our experience suggests government should follow a more simple approach to understanding the value of the project at hand. We say this, because in most of the large government programs that we have participated in, it was difficult to identify the unit of measure in the public sector, mainly because the unit of measurement is not always financial, depending on the various levels of government.

Social and political returns are often the basis for investment justification and business cases. These returns normally reflect the mandated government performance standards and the multi-dimensional benefits organisations need to deliver to constituents. Such benefits are however often difficult to quantify and measure making comprehensive assessment of ROI difficult.

Table 4: Projects with high level of ROI on all three dimensions of performance in UAE

Project	Desc.	Spending returns
Salik toll system (www.salik.ae) Operated in Dubai	Electronic toll collection system on highway roads (A motorist pays Dh4 each time he drives through the gate) Aimed at reducing congestion at key and arterial/bottleneck points of traffic, encouraging motorists to use alternative routes i.e., other newer roads which have been built to handle such traffic	Sustaining the development of transport Infrastructure Programs
Electronic Number Auction (www.numbe-rs.ae) Abu Dhabi Police GHQ	An electronic auction that provides an easy method of auctioning prime and desirable licence plate numbers to the general public The auction generated world record e.g., sold the Top Ten most expensive license plates in the world, including the Guinness record-breaking world's most expensive Plate "1" which sold for $14 million in Abu Dhabi in Feb. 2008.	100% of revenues go to charities Building one of the largest hospitals in the region to provide free treatment for those who suffer injuries from car accidents
SA'ED Project An independent company, operated by Abu Dhabi Police GHQ.	Abu Dhabi police outsourced entity 1st of its kind in the Middle East to offer a **hi-tech integrated vehicle accident management system** Electronically: filling of insurance claims, reporting incidents to insurance companies, and issuance of repair permits of damaged vehicles. Equipped with safety protection, 1'st aid, advanced electronic communication devices that are connected with the company and police operation rooms.	100% cut in administration and operational cost, as well petrol staff salaries. >60% faster response rate i.e., max 15 minutes for reaching the accident site, and document it. Police Traffic patrols are more focussed on security
Fast Service Counters	Dedicated offices and/or service lines provided at many of the public sector organisations (e.g., visa applications at immigration departments) for additional fees, but faster processing Processed normally instantaneously on spot or within 1hour (Regular and normal processing is more than 3 days).	Funding internal improvement projects and infrastructure.

However, measurement of financial returns is becoming a strategic dimension of evaluation of government IT projects, as large government programs have considerable long or short term revenues and/or reduction of operating cost. It is important to heed that the government sector in the UAE has focused to a large extent on financial measures for fiscal accountability but lacked measures of performance, benefits realisation and operational accountability until recently.

Recent government policies promoted more responsible performance management and outcome measurement in the public sector both on operational and financial levels.
In a review of some of the recent government programs in the UAE, the value proposition is observed in two dimensions; improving service delivery and operational effectiveness and efficiency. However the business case and project justifications fail to place clear attention or evaluation effort to these dimensions in project planning through to project implementation.

As explained earlier, this can be due to the complexities in quantifying the outcome related benefits of public sector IT projects. The following section provides a generic high level model for realising public value in government IT programs.

A. *Public Value Chain – a simple approach*

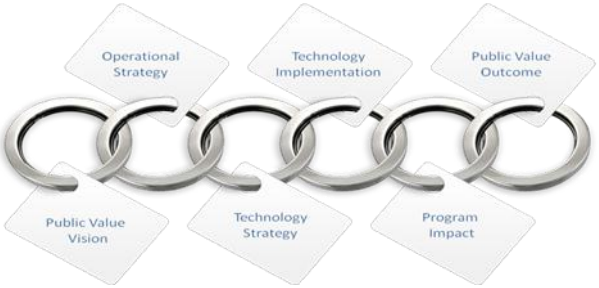


Fig-5: Public value chain

It can be seen that where the public value vision is in place in a government organisation's mission and strategy public value needs to be clearly translated into a comprehensive set of performance measures that should in turn provide the framework for strategic measurement and management. Operational and technology strategies need to be guided by such strategic performance measures. In fact it should be embedded in the heart of such strategies.

The program design and implementation phases should include a measurement system that focuses on outcome "*value*" and a modular approach to the delivery of benefits. The impact and value outcome are likely to yield a clearer more compelling measurement of public value and benefits. Clear articulation of outcomes and measures should lay down the foundation for both long-term improvements in program performance, return on investment, public accountability and public service delivery.

4. CONCLUSION

Government organisations require contemporary approaches for assessing public value that matches their greater scope and complexity; an approach that can build the needed public support and guide development. It is important that governments conduct further research to determine the usability of existing concepts, models and methodologies for developing and measuring returns from IT investment for the public sector.

Knowledge about public value will contribute to guide other forms of investment and contribute to longer term government improvement, and provide a foundation for organisational learning and effective public sector management.

ACKNOWLEDGMENT

The authors would like to thank Mr. Paul Ellis from PA consulting, and Mr. Wella AlAmin from Ernst and Young, for their feedback and comments.

REFERENCES

[1] Cresswell, A.M. The role of public return on investment assessment in government IT projects, Proceedings of the 2006 international conference on Digital government research, 2006.

[2] Wirick, D. Public-Sector Project Management: Meeting the Challenges and Achieving Results. John Wiley & Sons, New Jersey, 2009.

[3] Roulstone, B. and. Phillips, J. ROI for Technology Projects: Measuring and Delivering Value. Butterworth-Heinemann, Oxford, 2008.

[4] Arlotto, P.W., and Oakes, J.L. Return on Investment: Maximizing the Value of Healthcare Information Technology Healthcare Information and Management Systems Society, Chicago, Illinois, 2003, pp. 1-74.

[5] Benaroch, M., and Kauffman, R. "Justifying Electronic Banking Network Expansion Using Real Options Analysis," MIS Quarterly (24:2) 2000, pp 197-225.

[6] Dufner, D., Holley, L.M., and Reed, B.J. "Can Private Sector Strategic Information Systems Planning Techniques Work for the Public Sector," Communications of the Association for Information Systems (8) 2002, pp 413-431.

[7] Forrer, D.A., and Anderson, T.A. "The Dichotomy of Measurement: Information Technology Return on Investment in the Public Sector," Proceedings of the Twelfth Annual Conference of the Production and Operations Management Society, Orlando, Florida, 2001, pp. 1-10.

[8] Cresswell, A.M., Burke, G.B. and Pardo, T.A. Public ROI – Advancing Return on Investment Analysis for Government IT. Center for Technology in Government, University At Albany, 2006. Available from: http://www.ctg.albany.edu/publications/reports/advancing_r-oi/advancing_roi.pdf

[9] SAP (2005) SAP Spearheads "Public ROI" Initiative to Define Value of IT for Public Sector Organizations. SAP [Online]. Available from: http://www.sap.com/about/newsroom/press.epx?PressID=3093

[10] UAE Cabinet [Online] http://www.moca.gov.ae.

[11] Phillips, P. P (ed.) (2002). Measuring ROI in the public sector. Alexandria, VA: ASTD, 2002.

Paper

2

When STRATEGIC FOCUS is Needed: Strategy Development at Emirates IDentity Authority [2]

Ali M. Al-Khouri

ABSTRACT: This article presents a strategy development process followed at Emirates IDentity Authority (Emirates ID); a federal government organisation in the United Arab Emirates (UAE), tasked to implement the national ID program for all national and residents population. It is concluded with some lessons learned from both the previous strategy, as well as the new strategy development exercise.

Key words: *Emirates ID, Strategy Development, National ID.*

[2] Al-Khouri, A.M. (2011) "**When Strategic Focus is Needed in Organizations**", Proceedings of the 1st International Conference on Changing Perspective of Management: Revisiting the Existing and Explore the Novel Ideas, Nepalese Academy of Management, Nepal, 10-12 March 2011, Vol. 2, No. 1, pp. 336-340.

1. INTRODUCTION

THE Emirates IDentity Authority (Emirates ID) is a Federal Government Entity (FGE) in the United Arab Emirates (UAE) that has been mandated by the federal government to enroll all UAE citizens and residents into a unified population register and supply them with a value added ID Card. Emirates ID had undergone a preliminary strategy development exercise in early 2007 which resulted in clear goals designed to address the organisation's initial infrastructure, technology, and organisational requirements.

Given a foreseen shift in the 's operating model, Emirates ID's leadership team decided to undergo a second strategy development exercise in order to prepare the for the challenges that lay ahead (i.e., technological, structural, etc.), while maintaining alignment between its strategy and the UAE Federal Strategy.

2. THE APPROACH

2.1 Strategy Development Framework

The strategy development framework depicted in Figure 1 was applied in order to arrive at the new strategic direction, and to link it with the organisation's day-to-day activities.

This framework started with articulating the high level strategic direction embodied by the Vision and the Mission, and Strategic

Intents of the Federal government. This high level strategic direction was then cascaded down through the organisation in a structured manner in the form of strategic objectives, key success factors, initiatives, as well as activities for the departments and functional units.

This structured framework ensured explicit linkages between every level of the strategy; from vision all the way down to activities; hence providing a coherent road map to deliver Emirates ID's mandate. This also provided clarity for staff as to how their work directly contributed to the achievement of an element of the strategy.

2.2 Project Approach

The above strategy development framework was applied through the project approach (shown below) to set the new strategic direction. The project approach consisted of the three distinct phases as shown below in Figure 2:

Figure 2: Project Approach

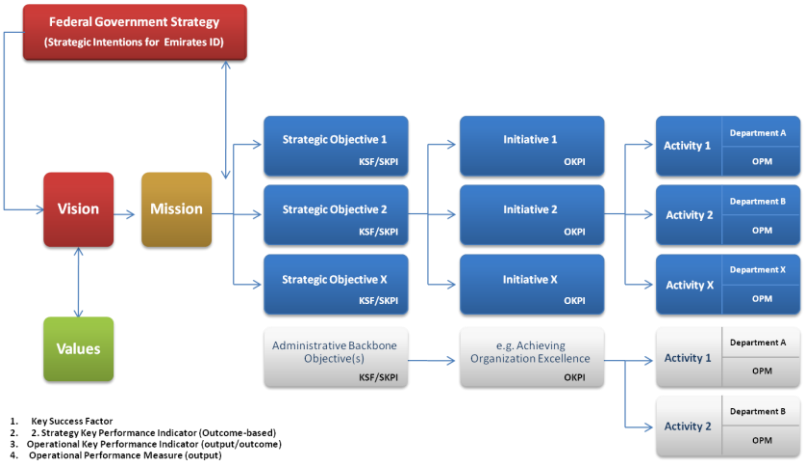


Figure 1: Strategy Development Framework

2.2.1 Diagnostics

This phase started with a thorough review of the organisation's current strategy, as well as discussions with the leadership team to understand the Strategic Intents based on which the orgnisations was formed. Furthermore the strategy development team gained insight into the leaderships vision for the organisation, on how that vision should be realised and challenges that may be faced in achieving the vision.

An important element of this phase was to articulate the current, and foreseen, operating model in order to better understand the dynamics of the interaction between the services and the customers. An external assessment (i.e. benchmarking) was done in order to compare existing services with those of similar international

organisations; considered to be pioneers in the issuance of value added ID cards. This exercise helped the project team envision the potential evolution of the ID card and associated e-Services value chains, so as to better understand and account for future direction in the next phase of the project.

Next, an intense internal assessment was conducted. This assessment entailed studying organisational enablers (i.e. people, processes, technologies, etc.) to understand their readiness to support a change in strategic direction. Having conducted both an external and an internal assessment, the strategy development team was now able to develop a SWOT analysis that was used at a later stage in the Development phase to leverage both in developing the Strategic Objectives, as well as in the definition of initiatives needed to achieve the Strategic Objectives.

2.2.2 Development

Using the output from the first phase (Diagnostics) coupled with the Strategic Intents of the Federal Government; the strategy development team worked in close collaboration with leadership team to develop the high level strategic direction for the organisation consisting of its Mission, Vision, Strategic Intents and Strategic Objectives. The result was four Strategic Intentions that were cascaded into five distinct Strategic Objectives cumulatively capturing the entire organisation, while maintaining alignment with the UAE government's intentions for the organisation.

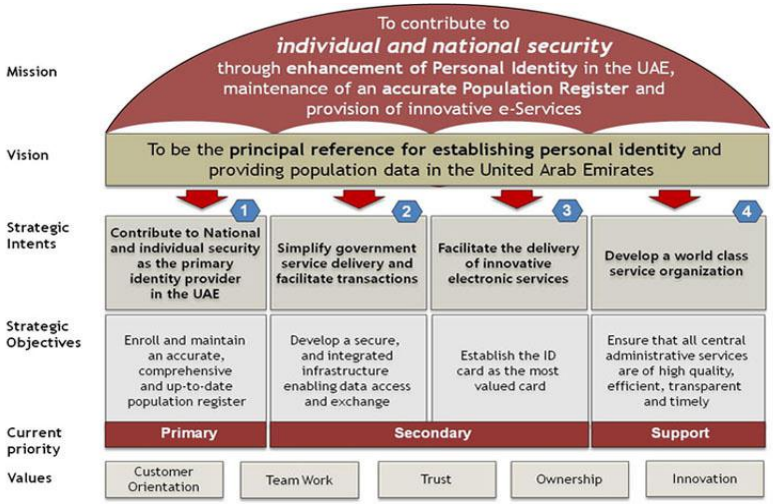


Figure 3: Emirates ID's Strategic Direction

For every Strategic Objective, a series of measurable Key Success Factors (KSFs) – strategic enablers - were identified in order to guide progress towards achieving the respective Strategic Objective to which they belong. In total, sixteen KSFs were established and assigned Key Performance Indicators (KPIs) which would measure the progress in achieving each KSF; hence, the overall Strategic Objective to which it belongs.

Strategic Intention	Strategic Objectives	Key Success Factors	Strategic KPIs
1 **Contribute to National and individual security as the primary identity provider in the UAE**	**Enroll and maintain an accurate, comprehensive and up-to-date population register**	■ Accessibility to enrollment services	■ Daily enrollment
		■ Ability to manage flow	■ Daily enrollment as a % of maximum capacity (i.e. utilization) ■ % of target population enrolled ■ % of total population enrolled
		■ Accuracy of data	■ % of registered customers updating status (over a defined period of time)

Figure 4: Sample KSFs and Related KPIs

Next, taking into account the gaps identified (during the Diagnostics phase), the shift in operating model requirements, as well as the KSFs; twenty distinct initiatives were identified which would cumulatively address all organisational gaps and operating model requirements, with the aim of ultimately delivering all of the Strategic Objectives.

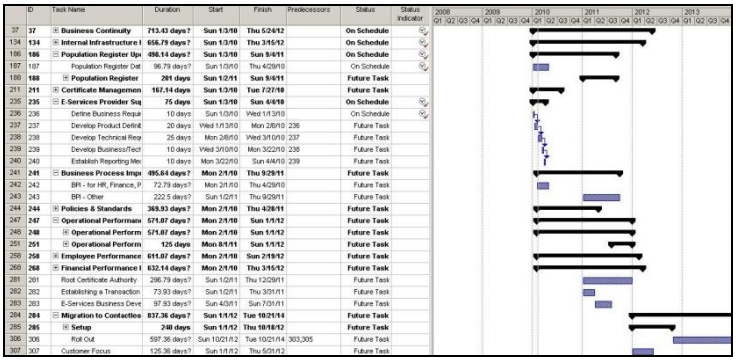
This structured strategy development process ensured that all proposed initiatives were linked to potential gaps and KSFs, which were in turn linked to Strategic Objectives.

Strategic Objective	Enroll and maintain an accurate, comprehensive and up-to-date population register	
Key Success Factor / SKPI	Gaps	Initiatives / Sub Initiatives
■ Accessibility to enrollment services – Daily enrolment applications / issuance	■ Lack of defined plan outlining population forecasts for enrollment by area by time	■ **Enrollment and Renewal Planning** – **Access Channel Enhancement:** Establish additional enrollment channels to enable more rapid enrollment – **Enrollment Incentivization Plan:** Develop and execute a marketing plan designed to attract and enroll a consistent flow of enrolees – **Staffing Ramp up:** Deploy a clear plan for recruiting, hiring and retaining front and back end staff need to support future enrollment targets – **Core Enrollment System Upgrades:** Carry out necessary software and hardware upgrades required to expand daily enrollment capacity – **Enrollment Support System Upgrades:** Update support system required to expand daily enrollment capacity - i.e. online/offline registration, etc.
■ Ability to manage flow – Daily enrollment n/ issuances as a % of capacity – % of target population enrolled	■ Outdated plan for ensuring consistent flow of population into registration centers ■ Understaffing in registration centers will prevent ability to enroll expected daily volume in the future ■ Software and hardware limitations will constrain capabilities to cross check expected future volumes with MOI database	
■ Accuracy of data – % of registered customers updating status	■ Lack of integration mechanisms and automated processes to permit continuous updating of the population register - either by government entities, or the general population	■ **Population Register Accuracy:** Implementing a plan for managing automated and user drive updates and implement integration layer to allow for secure update/query access

Figure 5: Linking Strategic Objectives, KSFs, Gaps, and Initiatives

2.2.2 Implementation Planning

In this phase of the project, high level activities (with a strong focus on detailed activities for Information and Communications Technologies), planned timelines, estimated budgets, and accountabilities were detailed out for each initiatives. Furthermore, KPIs were designed and set to measure progress against achieving initiatives and associated activities. This exercise resulted in an elaborate four-year work plan linking day-to-day activities within departments and functional units to the overall strategy.



	ID	Task Name	Duration	Start	Finish	Predecessors	Status	Status Indicator
37	37	Business Continuity	713.43 days?	Sun 1/3/10	Thu 5/24/12		On Schedule	
134	134	Internal Infrastructure I	656.79 days?	Sun 1/3/10	Thu 3/15/12		On Schedule	
186	186	Population Register Up	486.14 days?	Sun 1/3/10	Sun 9/4/11		On Schedule	
187	187	Population Register Dat	96.79 days?	Sun 1/3/10	Thu 4/29/10		On Schedule	
188	188	Population Register	291 days	Sun 1/2/11	Sun 9/4/11		Future Task	
211	211	Certificate Managemen	167.14 days	Sun 1/3/10	Tue 7/27/10		Future Task	
235	235	E-Services Provider Sup	75 days	Sun 1/3/10	Sun 4/4/10		On Schedule	
236	236	Define Business Requi	10 days	Sun 1/3/10	Wed 1/13/10		On Schedule	
237	237	Develop Product Definit	20 days	Wed 1/13/10	Mon 2/8/10	236	Future Task	
238	238	Develop Technical Req	25 days	Mon 2/8/10	Wed 3/10/10	237	Future Task	
239	239	Develop Business/Tech	10 days	Wed 3/10/10	Mon 3/22/10	238	Future Task	
240	240	Establish Reporting Me	10 days	Mon 3/22/10	Sun 4/4/10	239	Future Task	
241	241	Business Process Impr	495.64 days?	Mon 2/1/10	Thu 9/29/11		Future Task	
242	242	BPI - for HR, Finance, P	72.79 days?	Mon 2/1/10	Thu 4/29/10		Future Task	
243	243	BPI - Other	222.5 days?	Sun 1/2/11	Thu 9/29/11		Future Task	
244	244	Policies & Standards	369.93 days?	Mon 2/1/10	Thu 4/28/11		Future Task	
247	247	Operational Performan	571.07 days?	Mon 2/1/10	Sun 1/1/12		Future Task	
248	248	Operational Perform	571.07 days?	Mon 2/1/10	Sun 1/1/12		Future Task	
251	251	Operational Perform	125 days	Mon 8/1/11	Sun 1/1/12		Future Task	
258	258	Employee Performance	611.07 days?	Mon 2/1/10	Sun 2/1/12		Future Task	
268	268	Financial Performance I	632.14 days?	Mon 2/1/10	Thu 3/15/12		Future Task	
281	281	Root Certificate Authority	296.79 days?	Sun 1/2/11	Thu 12/29/11		Future Task	
282	282	Establishing a Transaction	73.93 days?	Sun 1/2/11	Thu 3/31/11		Future Task	
283	283	E-Services Business Deve	97.93 days?	Sun 4/3/11	Sun 7/31/11		Future Task	
284	284	Migration to Contactless	837.36 days?	Sun 1/1/12	Tue 10/21/14		Future Task	
285	285	Setup	240 days	Sun 1/1/12	Thu 10/18/12		Future Task	
306	306	Roll Out	597.36 days?	Sun 10/21/12	Tue 10/21/14	303,305	Future Task	
307	307	Customer Focus	125.36 days?	Sun 1/1/12	Thu 5/31/12		Future Task	

Figure 6: Work Plan Illustration

As another critical aspect of implementation planning, an initiative management training program was developed with the aim of instilling a common approach, methodology, and reporting processes, to be followed during strategy execution.

3. THE RESULT

This project represented application of a structured strategy development process introducing the element of measurability (through linked KPIs) at every level of the strategy. Moreover, clear linkages between all levels of the strategy were established; from Mission/Vision to Strategic Intents to Strategic Objectives, to Key Success Factors, to Initiatives, and finally, to day-to-day activities (where appropriate) in the organisation.

This ensured that the services of every department were accounted for within the strategy; resulting in awareness of how each department is contributing to the realisation of the strategy, and how its performance in doing so would be measured.

Another key outcome of this project was the prioritisation of organisation's technological needs. In do so, Emirates ID was able to sequence the rollout of the technologies that will serve as building blocks in fulfilling its aim of facilitating the delivery of innovative electronic services.

Finally, this project resulted in the commitment and buy-in from the leadership team, as well as the wider organisation, on the new strategy for EMIRATES ID – which is a 'must have' for any winning strategy.

4. LESSONS LEARNT

4.1 Lessons Learnt from Previous Strategy

Although Emirates ID's previous strategy addressed its initial infrastructure and organisational needs, it did not have as clear linkages between every level of the strategy. This resulted in a sense of 'vagueness' - leaving many in the organisation with no clear link between the strategic direction and their day-to-day activities.

Moreover, the previous strategy included too many un-prioritised initiatives causing an over stretching of organisational resources during execution. This resulted in implementation delays and in some even cases even cancelation.

Finally, the previous strategy did not clearly articulate specific execution and reporting mechanisms needed to ensure efficient implementation. This led to a lack of regular information sharing and in turn the inability for management to make proactive decisions.

4.2 Lessons Learnt from current Strategy Project

A key recipe for the success of this project was the power of a structured process guiding the development of the strategy – ensuring measurement at every step, and linking all the different steps together, while also accounting for the organisation in its entirety.

Another key contributing factor to the success of this project was the continuous involvement and contribution of key internal

stakeholders across multiple levels of the organisation. This ensured a swift buy-in process and solid commitment to the new strategy.

The final factor contributing to the success of this project was a detailed and accurate work plan which brought the strategy 'to life' by providing a mechanism that linked the strategy to the day-to-day activities of every department within the organisation.

This was reinforced with a comprehensive initiative management training program aimed at aligning all initiative managers to a common approach to initiative execution, as well as common reporting timelines and mechanisms that needed to be adhered to on an ongoing basis.

ACKNOWLEDGMENT

The author would like to thank Mr. Marc Hormann and Mr. Dennis DeWilde from OC&C Strategy Consultants.

Paper

3

Targeting Results: Lessons Learned from the UAE National ID Program [3]

Ali M. Al-Khouri

ABSTRACT: This article presents the approach followed in the United Arab Emirates (UAE) national ID scheme to register its population for the new smart ID card it launched in 2005. It presents how the organisation reengineered its operations to achieve its strategic objectives. It also presents some of the experienced challenges, and how they were dealt with. Some key management consideration areas were also listed for the purpose of sharing knowledge and experience in the field.

Key words: *National ID, ID Card, population enrolment, process reengineering.*

---

[3] Al-Khouri, A.M. (2012) "**Targeting Results: Lessons Learned from the UAE National ID Program**", Global Journal of Computer Application and Technology, Vol. 2, No. 1, pp. 830-836.

* *Partial content of this article was also published in:*

Al-Khouri, A.M. (2010) "**Facing the challenge of Enrollment in ID Card Programs,"** Proceedings of the BIOSIG 2010, Darmstadt, Germany, September 09 – 10.

Ali M. Al-Khouri (2010) "**Accelerating enrolment in National Identity Programs**", Proceedings of the Smart Event 2010 - World e-ID Conference, Sophia Antipolis/Nice French Riviera, September 21-24.

Al-Khouri, A.M. (2011) "**Process Reengineering to Enable Rapid Enrolment**," Proceedings of the 2011 International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia, January 22 – 24.

1. INTRODUCTION

GOVERNMENTS around the world have been very much attracted to National ID programs. These programs are globally justified on the basis of building an identity management system to achieve primarily two objectives: support national security and improve access to services [1].

More than 30 countries have initiated smart ID card programs in the last decade with a total value of those projects exceeding $24 billion. Besides, more than 15 countries are in the process of upgrading their current ID cards to biometric based systems.

GCC countries have been among the first countries to launch biometric based smart ID card initiatives. Due to nature and complexity of such schemes, these initiatives have been challenged to meet its specified projects scope, timelines, and budgets. Table 1 below shows the progress of smart ID card schemes in GCC countries and the percentage of population registered so far.

Our observations of national ID card projects show that many countries are struggling with the enrolment of population in their ID schemes. Apart from the technical complexity of such projects, the most significant challenge lies in the fact that these programs include biometric acquisition which entails the presence of individuals. Some countries capture only two fingerprints, others capture a full set of fingerprints including palm prints and writers, while others use a variety of biometric identification systems such facial, iris, and fingerprints.

Table 1: ID card projects in GCC countries [2]

Country	Program Start Year	Total Population	Registered population	% to total population	Biometrics
Saudi Arabia	2004	28,686,633	1.2 million	4.2%	2x Flat prints
UAE	2005	8,200,000	1.8 million	22.0%	Rolled 10 prints, palm & writer prints
Kuwait	2009	2,691,158	200,000	7.4%	Rolled ten prints
Bahrain	2005	1,039,297	800,000	77.0%	2x Flat prints
Qatar	2007	833,285	100,000	12.0%	2x Flat prints and Iris
Oman	2004	3,418,085	3 million *	90%**	2x Flat prints

* biometric capture is not mandatory for females

** not all registered have biometrics in the database.

The practice of biometric acquisition was previously limited to forensic and traditional law enforcement applications. For obvious reasons, developments of systems like fingerprints compared to other biometric systems and hence the maturity of the overall technology, did not take into consideration higher levels of customer or service satisfaction since the intended users were in forensic and police jurisdictions.

Therefore, and based on the biometrics and verification procedures, the registration process can be time consuming and inconvenient. A well thought through enrolment plan that captures an understanding of population demographics and cultural elements, and follows a modular approach of gradual registration based on geographical distribution and other segmentation factors, is likely to yield more successful results.

This article presents a case study of the process followed to develop an enrolment plan to register the population of the United Arab

Emirates. It touches upon a broader organisational scope, and presents essential lessons learned and important building blocks for government officials working in this field. Though the project size and targeted population is considered relatively small in comparison to other countries, the presented processes and overall thoughts are believed to contribute and advance existing knowledge.

2. EMIRATES IDENTITY AUTHORITY

Emirates Identity Authority was established in 2004, as a federal government authority tasked to build an identity management system, by enrolling and issuing ID cards to more than 5 million people at the time. The organisation relied primarily on a social marketing strategy to enroll the population and its copious developed strategies only succeeded to enroll less than 20% of the total population over a 5 year period.

This represented a challenge to overcome and a difficulty to justify the heavy budget expenses and no clear return on investment (ROI) upshots. Altogether, this forced the organisation to go through muscular change process to address this problem area.

A four-staged change process was developed to guide the change implementation, as depicted in Figure 1 below. The change process was instigated to enact an organisational mindset change with the aim of developing a service driven and result

oriented organisation. It also aimed to increase accountability, improve efficiency, overall performance and high quality services.

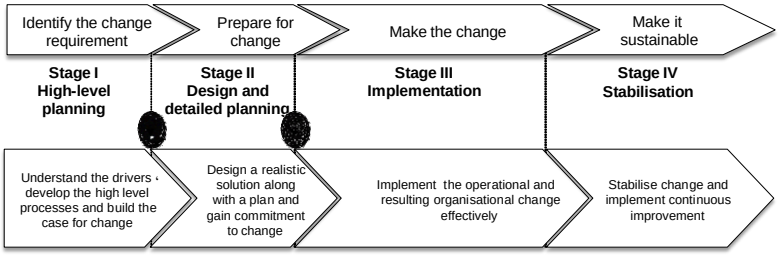


Figure 1: Change management program components

The initial phase of the change process dealt with the identification of the change requirements and building the overall case for change. The second phase was more of a planning phase, and included detailed assessment of the impact of change to the overall organisation. The third phase was about implementing the change according to the plan, and the fourth was more of an improvement and sustainability stage.

The outcome of the first phase was the development of an operating model that captured the fundamental and evolving functions of the organisation. It provided the foundation and flexibility required to execute the organisation's initiatives. As depicted in Figure 2, the primary function that needed to be addressed at first was population enrolment.

As the organisation progresses, the function of enrolment will shrink down to become less than 20% of the overall operation. The

organisation's role will turn gradually into a service delivery function related to authentication and identification. This model is considered to be a valuable knowledge to existing literature in the field, as it is generic and applicable to all ID card programs.

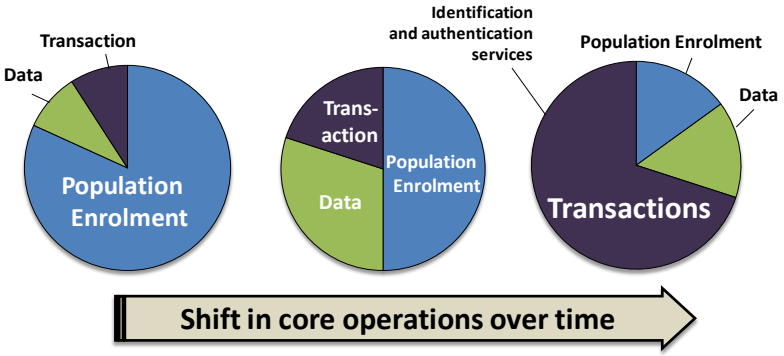


Figure 2: The operating model

Another outcome of the first phase was the development of the core pillars of strategic directions that would determine the success of the overall program. See also Figure 3. They were later used in the development process of the corporate strategy and the design of the consequent initiatives. These pillars included:

Figure 3: The core pillars of strategic directions

- **Effective population enrolment strategy:** develop strategies to increase population enrolment, that incorporates marketing, outreach, program, and staff development efforts to increase enrolment in an effective manner.

- **Integration/Interface with key government organisations:** keeping the population register database timely updated, is essential to the overall success of the program. Connecting to the databases of "data owners" is therefore inevitable. Six government entities were identified: (1) Ministry of Interior: immigration; (2) Health Ministry: birth and death; (3) Labour Ministry (4) Justice: marriage and divorce; (5) Education, and (6) Higher Education.

- **Supporting e-Government:** to develop secure and robust infrastructure to support Governmental electronic services, in relation to the validation and authentication of online identities in electronic transactions.

- **Customer Focus:** to become a customer focused organisation, and complement enrolment strategy through renewed attention to the customers' interface with the organisation.

3. REGISTRATION: THE STUATUS QUO!

Figure 4: Applicants at registration centres

The existing process implied that the applicants needed to fill an application form at a typing centre or on the internet. They then may choose to take an appointment by the available online system, or go directly to the registration centres. The actual registration time varied from 15 minutes to 20 minutes, but waiting queues lasted from at least 4 hours to 8 hours before they get registered.

Reasons for such deficiency included factors related to lack of flow management procedures at registration centres (as depicted in Figure 4), unstudied media campaigns that attracted higher population to registration centres than their actual capacities, untrained staff, etc. The overall process caused public frustration and media criticism.

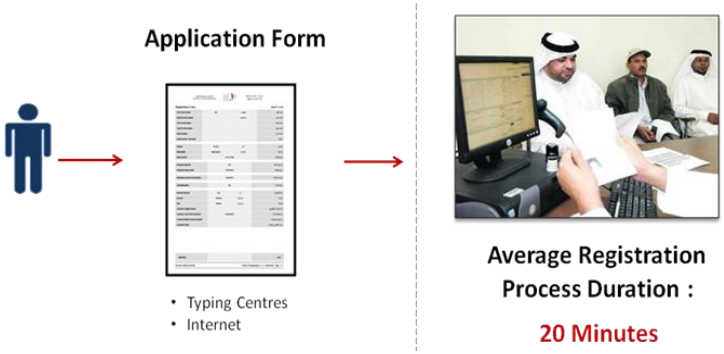


Figure 5: Registration process prior to re-engineering

Some of the quick fixes adopted by the organisation were to cancel the presence of the children to the registration centres, and rely on the supporting documents presented by the parents. The information was verified with the Ministry of Interior's database for validation. The second process change was related to how registration equipment were organised. The registration process at first, required applicants to go through three enrolment stations:

[1] verification of documents and fee collection,
[2] portrait and signature capture and scan in documents, and
[3] fingerprinting. This process provided a smooth management of applicants flow.

For reasons related to lack of resources, management at the time decided previously to merge some functions together, i.e., second and third functions and as depicted in Table 2. This poorly studied change resulted in longer and process "locked in" applicants. As the first process took normally 3 minutes to complete, the new combined process of taking portrait, electronic signature, scan in document, and fingerprinting, took almost 15 to 20 minutes, that created long waiting queues inside these offices. This also led to more data entry errors by operators.

The introduced change here included changing the process to keep fingerprinting as a separate function, and merge all others in a separate workstation. This allowed a better flow management as illustrated in Table 2 below.

Table 2: Example of tactical process changes

+portrait /verification fingerprinting		portrait +verification \fingerprinting		Criteria
2		2		Steps
fingerprinting	Verification and portrait	Portrait and fingerprinting	verification	Time
7	8	12	3	
2		2		Space
√		√		Privacy
equal		equal		Accuracy
equal		equal		Machinery Cost
equal		equal		Human Resources
organised		Not organised		Customer Flow
fingerprinting	Verification and portrait	Portrait and fingerprint	verification	Work Load
Equal	Equal	+	incomplete	
Best Choice		Secondary choice		Decision

These two change tactics provided temporary fixes, and supported better management of flows at registration centres. The next section will shed light on the developed enrolment strategy.

4. THE NEED FOR AN ENROLMENT STRATEGY

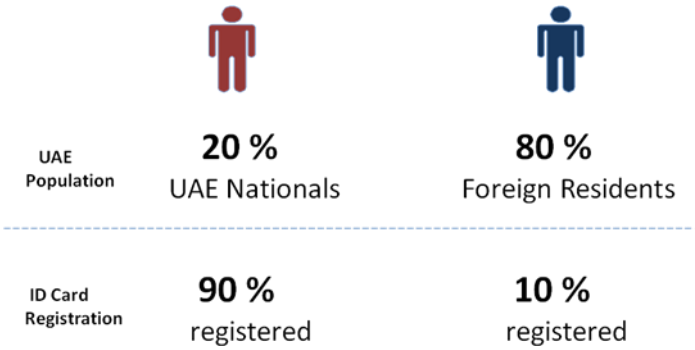


Figure 6: Registration vs. total population

According to the original enrolment strategy, it was envisaged that a total of 5 million people will be registered by the end of 2010. However, and towards the end of 2009, only 20% of this number were registered.

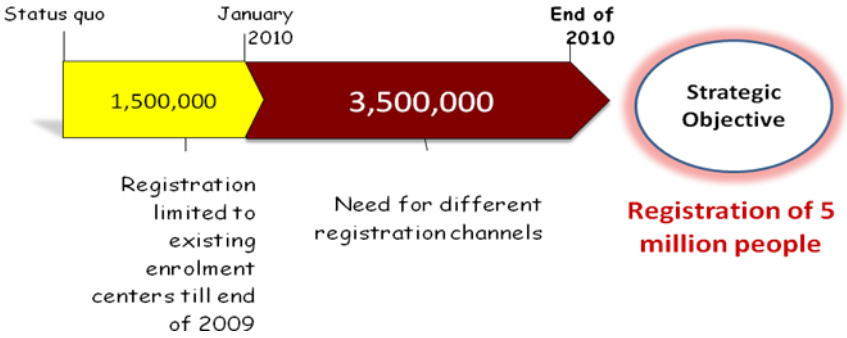


Figure 7: Enrolment plan

A study conducted to evaluate and forecast enrolment, showed that it would take Emirates ID more than 10 years to register the population with existing enrolment rates. As depicted in Table 3, the organisation needed to have a capacity of 20,000 enrolment per day (new and renewal) in order to achieve its objectives in the shortest and practical timeframe.

Table 3: Challenge of enrolment

Equipment and outsourcing	outsourcing	More equipment	available	Existing	
20,000	12,000	8,000	4,500	3,200	Daily registration capacity
4,800,000	2,880,000	1,920,000	1,080,000	768,000	Cards per year
1.6	**2.7**	**4.1**	**7.2**	**10.2**	**Time needed to register 7.8 million people**
12.1	11.5	9.6	8.7	0	Time savings (years)

Another factor that forced the development of an enrolment strategy was the increasing financial cost to the organisation and reprehensible revenues. Figure 8 shows that the cost of the card have gone up more than 30% higher than the fees paid by the applicants, as the cost of the card is dependent on specific annual registration.

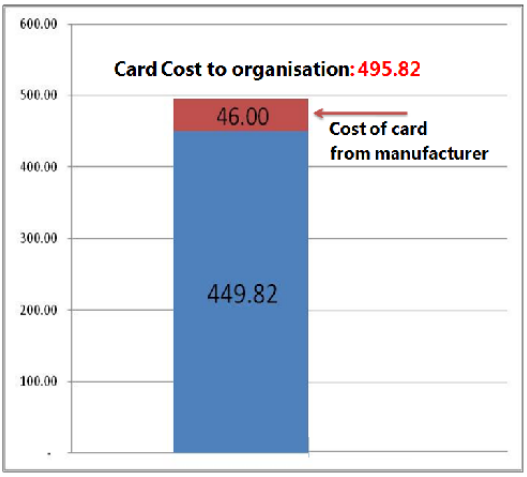


Figure 8: Card cost

This meant that for each card, the organisation issued, it lost around 250 dirhams. In fact, the organisation needed to produce 1.6 million cards a year to make the breakeven point, and as depicted in Figure 9. All together, these factors forced the organisation to rethink its value proposition, and rework the overall enrolment strategy, which is discussed next.

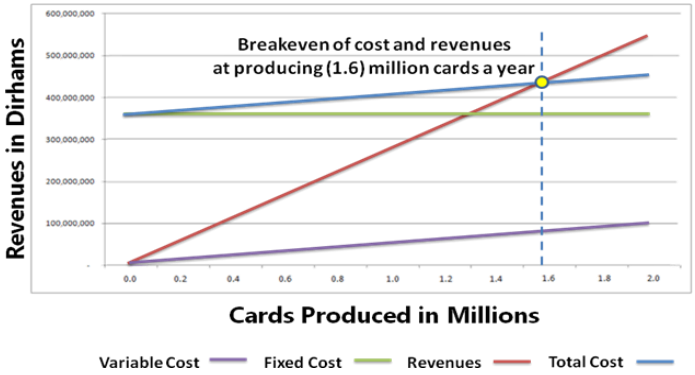


Figure 9: Cost and revenues

5. THE NEW ENROLMENT STRATEGY

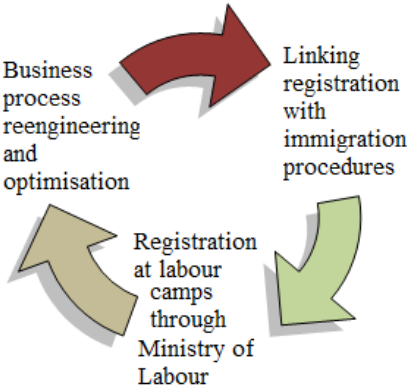


Figure-10: Focus themes of the new enrolment strategy

As indicated earlier, the previous enrolment strategy adopted in the organisation was a marketing based. The fundamental thinking

that guided the development of the new enrolment strategy was to follow a process driven approach. The principles of this approach were based on the relationships between business processes that would promote public participation. The new strategy consisted of three main focus themes:

5.1 The new process: Reengineering of the enrolment process

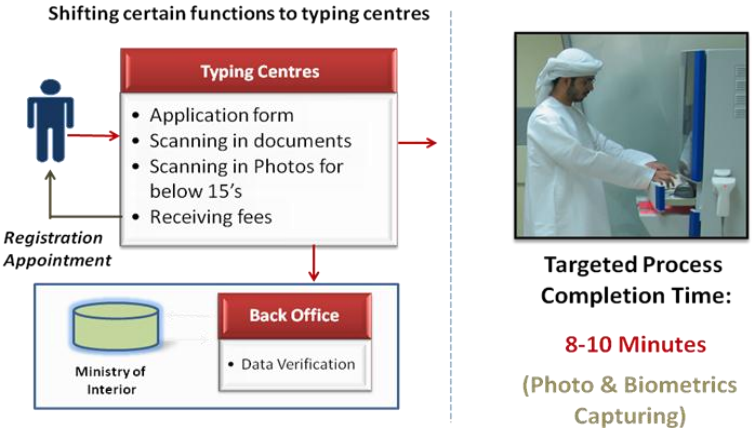


Figure 11: New registration process

The new process divides the registration into three segregated functions. More than 3000 typing centres in the government were equipped with a new application form allowed them to key in personal information, scan in documents, scan in photos for those below 15's, and accept payments, and automatically generate appointments to applicants. All these functions apart from the application form were previously done at registration centres.

Registration centres new role was limited to do portrait and biometric acquisition only.

This implied an 8-10 minute process compared to 20 to 25 minute previously. Applicants' data is then transferred electronically to the internal audit office (back office) which verifies the complete dossier against the Ministry of Interior's database, and authorises or rejects applications. The new process made more than half of the previous procedures invisible to the applicants, as they were shifted to either back end or typing centres.

The new process also had a great impact on the existing registration centres layout. As depicted in Figure 12, the new process was considered as a one stop shopping office, and allowed higher capacity in terms of enrolment rates, and space utilisation.

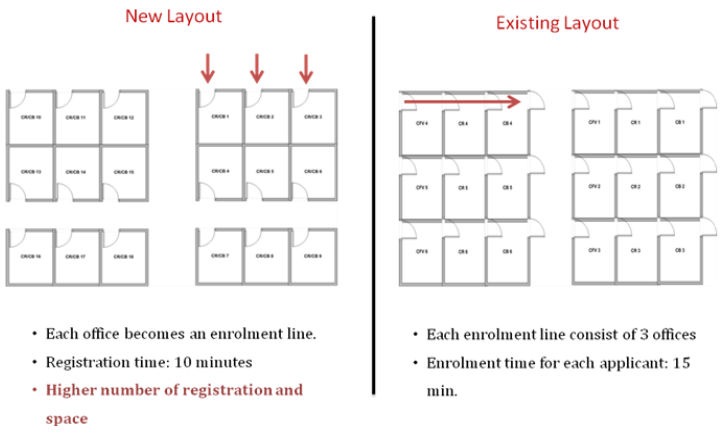


Figure 12: New process impact on registration centres layout

5.2 Linking registration with immigration procedures

The second focus theme of the enrolment strategy was to link the ID registration with the issuance and renewal of residency permits. Taking into consideration that the maximum validity of residency permits is 3 years, then it was assumed that all residents will be enrolled in this timeframe given that all registration sites are operational.

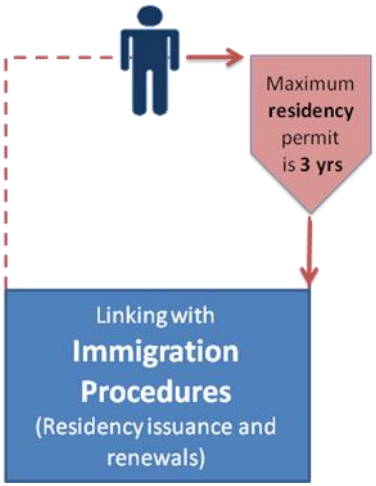


Figure 13: Registration linked to immigration procedures

In order to make the process more convenient to the applicants, new registration centres were envisaged to be built near existing preventative medicine centres; responsible to issue medical fitness certificates to complete the residency procedures. According to statistics, there were around 9,000 to 15,000 daily transactions of new and renewal of residencies in the UAE. This process merge between ID card and residency permit, was envisaged to enforce and increase the daily registration rate remarkably.

It was also noted in this focus area, that the residents during their application for issuance and renewal of residency permits fill different application forms for different entities, e.g., immigration form, labour form, and ID card form. Comparing the three forms, it was fond that they were almost identical. It was then decided to merge the three forms to be a unified form for the three entities, besides the preventative medicine which also issues separate forms.

This step would contribute to prevent double implementation of such procedures and promote data accuracy. The new 3+1 form will also include the feature of central fees collection for all four entities, payable at typing centres. The fees will be automatically transferred to the beneficiary authorities through an electronic clearance system.

Figure 14: Four forms required for issuing UAE residency permits

5.2.1 Registration Process

The registration process starts with the applicant or a representative visiting the typing centre to fill the unified application form. The

form will also include the new functionalities described in section (5.1). Applicants aged 15 and above will go to the preventative medicine centre for medical check up and go through the ID card registration office for portrait and biometric acquisition. Upon the acceptance of the issuance/renewal of residency permit, the immigration database at the Ministry of Interior, electronically notifies the ID card database, which will trigger card printing request, and dispatch it to the applicant through a registered courier.

For the purpose of unification, ID card validity is linked with the residency permit. It is envisaged that once the process is streamlined, and reached to a satisfactory level, the residency sticker and labour card will be replaced with the ID card, as a single identity document for residents.

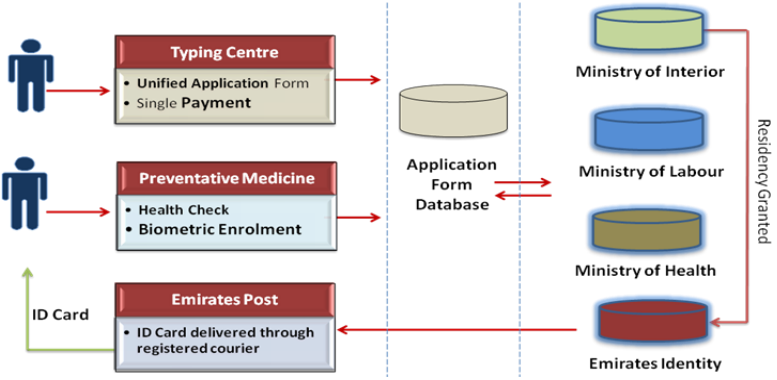


Figure 15: process of registration merged with immigration processes

5.3 Labour Registration

Figure-16: challenge of labour population enrolment

The third focus theme is the registration of labour population through mobile registration devices at labour campus or their workplaces. This will relax the traffic at existing registration centres. Existing statistics refer that the UAE has around two million unskilled labour population.

The registration of this category was planned with the Ministry of Labour to ensure prompt registration and enforcement through their employing companies. Statistics also show that large number of labour camps have been developed in the past five years, with average residents in those camps ranging from 5,000 to 50,000 people.

Having presented the components of the enrolment strategy, the next two sections will briefly discuss the three remaining pillars of the strategic directions presented in section 2.

6. INTEGRATION WITH KEY ORGANISATIONS

One of the most strategic objectives of building an identity management system in the UAE was to make a central identity reference repository for the UAE government about population demographics, timely available census and statistical surveys. This database was also foreseen to provide decision makers with key data to enable informed planning decisions.

Maintaining an up to date and accurate population database is considered an impossible objective without a centralised e-information infrastructure to bring different databases together into one centralised repository. An initiative was developed called citizen data-hub that aimed to connect six key government databases together that were considered the "primary data owners".

The secondary objective of this initiative was to establish dynamic and real-time links between administrative government departments across the country, thus enabling information sharing that ultimately contributes to the better administration of the country and provision of service delivery. See also Figure 17.

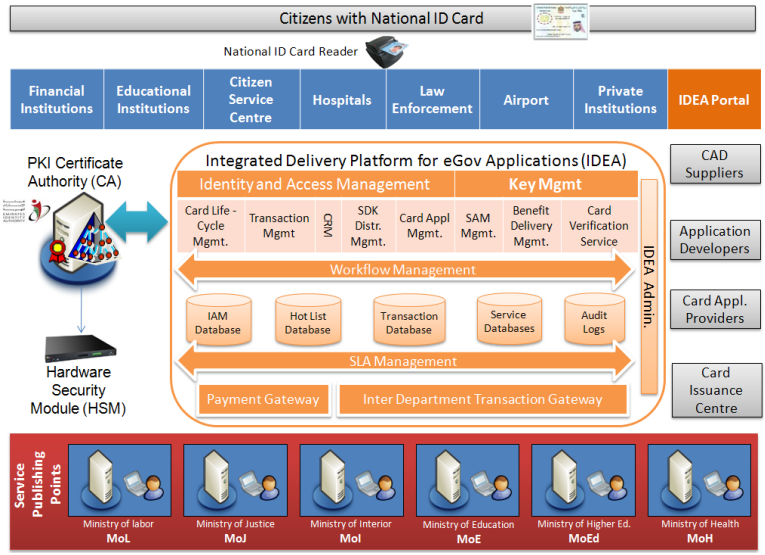


Figure 17: ID Card solutions architecture

7. SUPPORTING E-GOVERNMENT

Development of a national population infrastructure should consist of enabling the basis for online authentication of users. It should address the overall requirements of trust, identity management and privacy and in the context of electronic governance.

The federated identity management initiative was designed to facilitate implementation of e-Government services within the United Arab Emirates. This is envisaged to support advanced development of e-government specifically in areas related to e-inclusion and e-participation, as well as the end-to-end integrated government work processes.

8. CUSTOMER SERVICE ORIENTATION

Given the challenges the UAE ID card program is facing, it is confronted with key building blocks represented accelerating enrolment rates, meeting stakeholders expectations, improving quality of service, etc. The new organisation thinking as explained above shifted more towards a customer driven business organisation.

The aim was to positively embrace a customer focused culture, where core competencies are identified and developed to deliver value for customers. A customer service standard was developed based on guidelines specified in the International customer service institute [3]. This focus area described a management culture that emphasised centrality of the citizen or customer in the process, as well as accountability for results.

This section concluded the change management program and the enrolment strategy overview developed at Emirates ID. The next section presents some key management consideration areas that require management attention.

9. MANAGEMENT CONSIDERATIONS

9.1 Change Management and Communication Plan

Change management as a discipline has grown tremendously over the last few years in the Gulf region. Our close interactions with government organisations in the region show us that a large

number of public sector organisations used consultancy firms to develop and implement structured approach to managing change programs.

Indeed, a carefully planned change management program is imperative to the overall success of any strategic endeavour. Figure-18 shows that the success of a change program is determined by the awareness of the involved individuals or groups of the need and objectives of the change program.

A change program is likely to be associated with vagueness, rumors, distrust even among those involved in the change process. Strong and consist leadership is needed to draw a clear path and set out performance and expectations of outcomes.

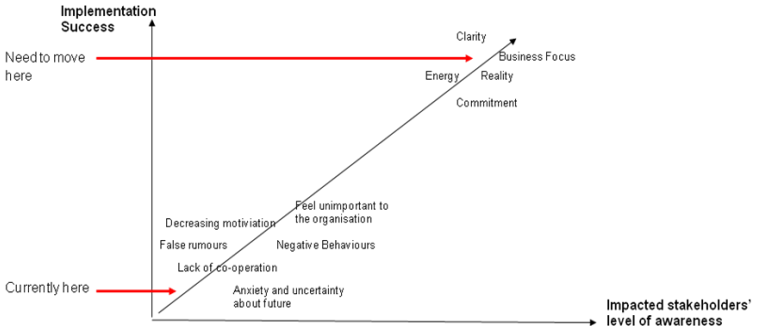


Figure 18: The need for clear communication plan

Management would prefer to implement change and expect least resistance and with the most buy-in as possible. For this to occur, change must be applied with a structured approach so that transition from one type of behaviour to another organisation wide will be smooth.

Management need to carefully assess employees' reaction to an implemented change and attempt to understand the reaction to it. Although change programs are implemented to achieve organisational goals and objectives, certain changes do sometimes produce tremendous amount of resistance at several operational and management levels.

Management is expected to provide support throughout the process of these changes, which are at times very difficult. Managing changes especially in public sector organisations requires a broad set of skills like political, analytical, communication, people, system, and business skills.

9.2 Organisational Development Principles

Due to the enormous pressure on management to create value and bring out tangible results, it is easily found that we get distracted with day to day operations. A commendable framework management need to always keep in mind is the EFQM model (see also Figure 19).

The model was found to sustain a management focus on key governance perspectives. It is a good management assessment tool to measure the strengths and improvement areas of an organisation across all business operations, and to define the organisation's capability and performance.

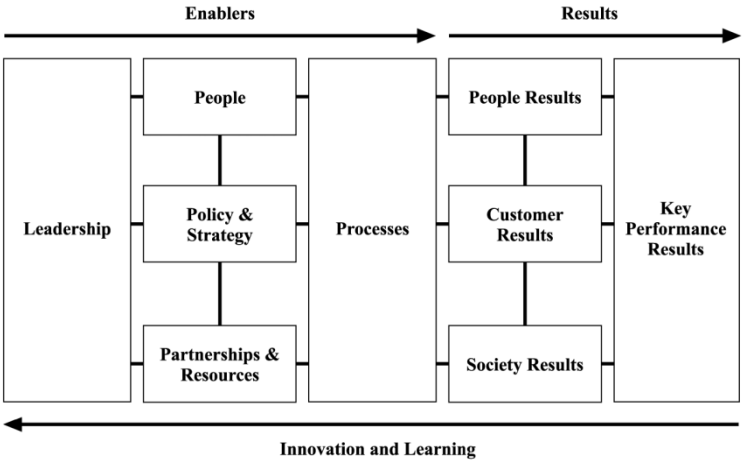


Figure 19: EFQM excellence framework

The three main elements that were considered crucial to the success of the overall organisation strategy were: (1) to become a result driven organisation, and focus on (2) employing and developing highly qualified and trained staff, who should enable and promote (3) creativity, innovation and learning organisation culture. The framework supported management to rethink values, policies, and controls and a restructuring that reflected a renewed sense of mission.

9.3 Management Dash Board

It is important for management to develop a dash board that gives an overview of the strategy and projects status. The use of simple graphical charts and maps, make it easier for management to understand and interpret business information, rather than wading through masses of numbers and spreadsheets.

The management dash board need to be real-time reporting, to support executives and managers take actions at the first sign of a problem, instead of waiting for monthly or quarterly meetings or reports.

The management dashboard need to some degree to include drill-down capabilities, to reveal more associated graphs and breakdowns. Developing an electronic KPI dashboard as an active organisational messaging platform, should increase the visibility of key performance indicators for informed decisions that should in turn improve overall performance.

9.4 Users training

User training is a critical success factor for. The routine nature of work at registration centres caused a shortage of workers with the necessary skills to cope with the rapid growth and expansion of centres. This shortage forced the organisation to continuously hire and train new employees who lack adequate technology skills, and to accept the chore of constantly retraining present employees.

In ID card schemes, fingerprint quality has huge impact on the identification/verification system. Therefore, and to meet these challenges, organisations need to develop a system to manage end-user training, and focus to enhance fingerprint capture quality.

9.5 Media and Marketing Strategy

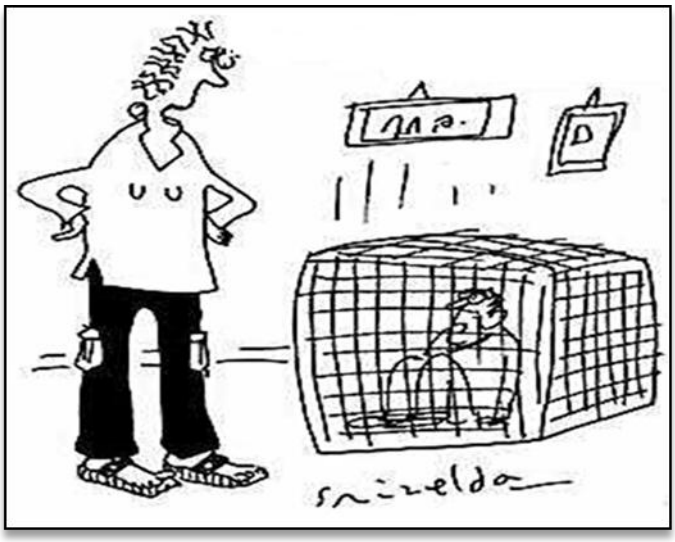


Figure 20: Common views of public about ID card schemes

National ID schemes have been a very much subject to controversial debate on international levels [4-8]. It is seen by privacy advocates to be a 'massive invasion' of their liberty and freedom rights, and promotes the concept of setting up 'big brother' or 'big government'. It was therefore important for the organisation to develop a social media marketing strategy to better understand community interests by running customer and market surveys within the social communities, and promote engagement and social participation into the project value proposition.

The second component of the media strategy was related to building visibility about the program through information sharing and interactions. The communication strategy included specific aspects that considered the cultural diversity of the target society (eg. multiple language communication, information leaflets etc).

10. CONCLUSION

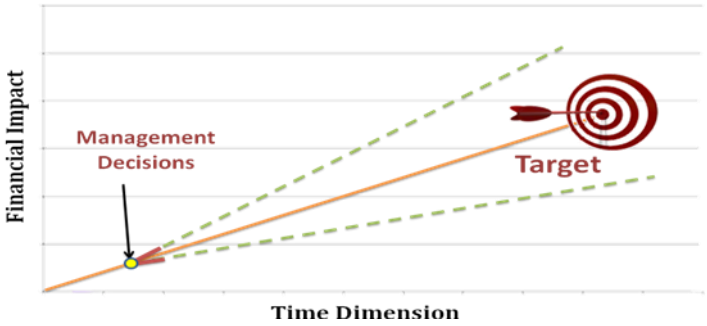


Figure 21: Impact of unfocused management decisions

Without a clear blueprint and plan, organisations are more likely to drift and run in different directions. Management critical decisions that are not based on solid understanding of impact and well-deliberated calculations will most probably yield to an unknown outcome [see also 9, 10]. Public sector projects are to a great degree involve risk and uncertainty.

This article was written in an attempt to reveal some of the challenges experienced in the implementation of a strategic and large scale government program. National ID schemes and due to

their size and complexity need scrupulous planning to achieve their audacious goals. Population enrolment in such schemes is considered a challenging chore. The presented case study expounded how the UAE government reacted to this challenge.

Though it could be argued that population size in the UAE is lower than many other larger initiatives in other countries, the presented approach in this article is believed to provide a virtuous thinking path to address similar issues. Besides, the presented management consideration areas are assumed to be important knowledge building blocks for those in the field to address fundamental organisational and project management rudiments.

REFERENCES

[1] Al-Khouri, A.M., 2007, "UAE National ID Programme Case Study," International Journal of Social Sciences, vol. 1, no.2, pp.62-69.

[2] 6th GCC ID Cards Interoperability Committee Meeting, Riyadh, Saudi Arabia, November, 2009

[3] The International Customer Service Institute [Online] http://www.ticsi.org/.

[4] Agar, J., 2001, "Modern Horrors: British Identity and Identity Cards," appears in Documenting Individual Identity: The Development of State Practices in Modern World, J. Caplan & J. Torpey (eds.), Princeton & Oxford, pp. 101-20.

[5] Neumann, P. G. & Weinstein, L., 2001, "Risks of National Identity Cards," Communications of the ACM 44, p. 176.

[6] Barton, B., Carlton, D. and Ziehm, O., 2007, "Identity management in the

21st century: Balancing safety, security and liberty in a global environment." [Online]. IBM Global Services. USA. Available: http://www-935.ibm.com/services/us/gbs/bus/pdf/g510-7859-00-id-mgt.pdf [Accessed 14 April 2010].

[7] Greenleaf, G., 2008, "Hong Kongs Smart ID Card: Designed to be Out of Control," appears in *Playing the Identity Card*, Bennett, C. and Lyon D. (eds.), Routledge.

[8] Lyon, D., 2006, "The border is everywhere: ID cards, surveillance and the other," appears in *Global Surveillance and Policing: Borders, Security, Identity*, Cullompton: Willan Publishing, pp. 66-82.

[9] French, S. and Liang, Y., 1993, "Decision support systems: a decision analytic perspective," appears in Developments in Operational Research, Norman, J. (ed.), Operational Research Society, Birmingham.

[10] Payne, J.W., Bettman, J.R. and Johnson, E.J., 1993, The adaptive decision maker." Cambridge University Press.

Paper

4

Re-thinking Enrolment in Identity Card Schemes[4]

Dr. Ali M. Al-Khouri

ABSTRACT: Many countries around the world have initiated national ID card programs in the last decade. These programs are considered of strategic value to governments due to its contribution in enhancing existing identity management systems. Considering the total cost of such programs which goes up to billions of dollars, the success in attaining their objectives is a crucial element in the agendas of political systems in countries worldwide. Our experience in the field shows that many of such projects have been challenged to deliver their primary objectives of population enrolment, and therefore resulted in failing to meet deadlines and keeping up with budgetary constraints.

The purpose of this paper is to explain the finding of a case study action research aimed to introduce a new approach to how population are enrolled in national ID programs. This is achieved through presenting a case study of a business process

[4] Al-Khouri, A.M. (2011) **"Re-thinking Enrolment in Identity Card Schemes".** International Journal of Engineering Science and Technology, Vol. 3, No. 2, pp. 912-925.

reengineering initiative undertaken in the UAE national ID program. The scope of this research is limited to the enrolment process within the program. This article also intends to explore the possibilities of significant results with the new proposed enrolment approach with the application of BPR. An overview of the ROI study has been developed to illustrate such efficiencies.

Key words: *National ID; BPR; ROI.*

1. INTRODUCTION

IN today's dynamic global business environments, organisations both in public and private sectors are finding themselves under extreme pressure to be more flexible and adaptive to such change. Over the past two decades, organizations adopted business process reengineering (BPR) to respond to such business agility requirements.

This is based on the belief that process is what drives the creation and delivery of an organization's products and services (Evans, 2008). The literature demonstrates that BPR can yield profound and dramatic effects on lowering costs, quality of service delivery and customer satisfaction (Hammer and Champy, 2003; Jeston and Nelis, 2008; Madison, 2005). Thus, it considers it as an important approach to transform operations, and to achieve higher levels of efficiency and effectiveness. In short, BPR is more of a holistic approach to change with a comprehensive attention to process transformation in light of social issues, business strategy, people performance, and enabling technologies.

Many governments around the world have initiated national ID card programs with allocated budgets exceeding multi-billions of dollars. Many of such programs worldwide have been challenged to achieve their core objective of population enrolment (Al-Khouri, 2010). Taking into consideration the strategic objectives of such programs and high budgets, it is deemed necessary that learnings from various implementations are shared between practitioners in the field to address common challenges and learn from best

practices. It is the purpose of this paper to contribute to the current body of knowledge and present an action based case study research in one of the most progressive countries in the Middle East. It attempts to present a case study of a process re-engineering project that was implemented in the United Arab Emirates (UAE) national ID program. It also sheds light on the staggering results gained from such an exercise.

This paper is structured as follows. First, a short literature review of the BPR concept is provided. Some background information about the project and the triggering needs for process improvement are discussed next. Some reflections and management consideration areas are discussed afterwards, and it ends with some concluding remarks and possible future research areas related to this topic

2. LITERATURE REVIEW: BUSINESS PROCESS REENGINEERING AND NPM

Process reengineering has long history and application as it evolved overtime in various forms to represent a range of activities concerned with the improvement of processes. The reengineering concept goes back in its origins to management theories developed as early as the late eighteenth century, when Frederick Taylor in 1880's proposed process re-engineering to optimize productivity and improve performance. 30 years later, Henri Fayol, instigated the reengineering concept seeking to derive optimum results from available technology resources in a manufacturing environment (Lloyd, 1994).

Some revolutionary thinking was added to the field in the past two decades. For instance, Davenport and Short (1990) presented process re-engineering as the analysis and design of work flows and processes within and between organizations. Extending the work of Porter (1980, 1985, 1990) on competitive advantage, Hammer and Champy (1993) promoted the concept of business process reengineering as a fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in key performance measures e.g., cost, quality, service, and speed (see also Lowenthal, 1994; Talwar, 1993).

The reengineering concept has evolved in the recent years to reconcile with more incremental process management methods such as Total Quality Management; often referred to as TQM (Davenport and Beers, 1995; see also Caron et. Al, 1994; Earl and Khan, 1994). Other researchers have integrated reengineering with other modern management concepts such as knowledge management, empowerment, organization theory, organization control, strategy, and MIS (Earl et al., 1995; Kettinger & Grover, 1995).

Reengineering, in general, questions all assumptions about the way organisations do business and focuses on the how and why of a business process to introduce major changes to how work is accomplished. In fact, it moves far beyond mere cost cutting or automating a process to make marginal improvements (Cash et al., 1994). According to Davidson (1993), successful reengineering efforts ultimately lead to business transformation. New products, services and customer services appear in the form of improved

information flows (ibid).

Several studies pointed out that while the potential payback of reengineering is high, so is its risk of failure and level of disruption to the organizational environment. Introducing radical changes to business processes in an attempt to dramatically improving efficiency and effectiveness is not an easy chore. While many organisations have reported impressive augmentation and accomplishments, many others have failed to achieve their objectives (Davenport, 1993; Keen, 1991). Reengineering in whatever form or name it appears in, seeks to improve the strategic capabilities of an organisation and add value to its stakeholders in some idiosyncratic ways. Strategic capabilities are the means and processes through which value is added, as distinct from the products and services perspectives and their competitive positioning in the marketplace.

In government context, process reengineering has been associated with Public Administration Reform often referred to as New Public Management (NPM), a term used to transform and modernize the public sector. NPM seeks to enhance efficiency of the public sector and the control framework with the hypothesis that more market orientation in the public sector will lead to greater cost-efficiency for governments, without having negative side effects on other objectives and considerations. Dunleavy et al., (2006) defines NPM as a combination of splitting large bureaucracies into smaller, more fragmented ones, competition between different public agencies, and between public agencies and private firms and incentivization on more economic lines (Dunleavy et al., 2006).

It is such concepts that are pushing public sector organizations nowadays to act similar to those in the private sector. Therefore, governments around the world are transforming their mindsets of how they view their citizens and treat them as customers, with much emphasis on leveraging technology to building long-term relationships with their citizens. This has raised expectations of customers' relentless demands in quality and service in this sector.

The new power and freedom of the customer has destroyed many of the organisational assumptions of the early role of government, and placed them as a new powerful stakeholder. So process reengineering in this context is concerned more with facilitating the match between customer needs and organisational capabilities in light of the government roles and responsibilities. Many governments have initiated process re-engineering projects to develop citizen-focused, service oriented government architectures, around the need of the citizens, not those of the government agencies.

By and large, governments nowadays are put under tremendous pressure to strive for operational and financial efficiencies, while building an environment that encourages innovation within the government, in light of population growth, demographic changes, technological and knowledge 'explosions', and increased citizen expectations (Gordon and Milakovich, 2009). The following section outlines the research methodology and it contribution the body of knowledge.

3. RESEARCH METHODOLOGY

The research methodology adopted in this study was a mixed approach of action and case study research. The phenomenon measured in this study was considered to be too complex, and needed to be constructed and measured experimentally, and particular attention was paid to the organisational (and local) idiosyncrasies that permeate all true natural settings.

Action research is defined as "a type of research that focuses on finding a solution to a local problem in a local setting" (Leedy & Ormrod, 2005, p. 114). Action research is a form of applied research where the researcher attempts to develop results or a solution that is of practical value to the people with whom the research is working, and at the same time developing theoretical knowledge. Through direct intervention in problems, the researcher aims to create practical, often emancipatory, outcomes while also aiming to reinform existing theory in the domain studied.

Case study research, on the other hand, is a common qualitative method (Orlikowski & Baroudi, 1991; Alavi & Carlson, 1992). Although there are numerous definitions, Yin (2002) defines the scope of a case study as an empirical inquiry that (1) investigates a contemporary phenomenon within its real-life context, especially when, (2) the boundaries between phenomenon and context are not clearly evident (Yin, 2002).

Action research was found particularly appropriate to investigate and describe the situation, the issues at hand and its context to effect positive change in the situation. Clearly, the case study

research method is particularly well-suited to this research, since the objective of our study is the systems in the organization, and our "interest has shifted to organizational rather than technical issues" (Benbasat et al. 1987).

The study development was primarily facilitated by the senior role of the researcher in the examined organization. The study was based on both primary and secondary data. Data were gathered from business documents, technical specifications, annual reports, observation, and both formal and informal discussions with key stakeholders in the organization.

3.1 Study Contributions: National Identity Management Systems

Many governments around the world have initiated national Identity management systems. The nature and operating model of these systems make it extremely vulnerable to considerable challenges. The customer base for such programs is basically all resident population in a country setting, and such programs require the physical presence of people to complete the registration process i.e., require the capturing of biometrics.

There are more than 130 countries that have already implemented such systems and many other countries are seriously considering the implementation of such programs. The huge amount of program cost and the complexity of its infrastructure technologies further contribute to it being challenged.

Our previous studies in the field (Al-Khouri, 2010; Al-Khouri, 2007)

presented to us that these programs are challenged to meet their primary objective of population enrolment. This would in turn have a serious impact on the original implementation time frames and the allocated budgets set by governments. It is also noted that existing literature include very little data about practices about this important and critical field. In fact what makes this study of high contribution is related to the fact that we are not aware of any previous research in this area, which points out the significance of this study. It is our attempt therefore to contribute to the existing body of knowledge and share experiences of such implementations and associated critical insights. This should serve as guidelines for framing their practices in the implementation of similar projects world over.

3.2 Research Limitation

It is comprehended that case studies and action research are usually restricted to a single organisation making it difficult to generalise findings, while different researchers may interpret events differently. The research in this study restricted to a single organisation, thus a major limitation of this research is the sample size that limits generalizability.

Having said that, the next section provides an overview of the case study organisation and high level results achieved through business process reengineering of core functions.

4. EMIRATES IDENTITY AUTHORITY

The Emirates Identity Authority (Emirates ID) is a federal government authority established in 2004 to develop and manage the implementation of a national identity management infrastructure in the United Arab Emirates. The organization began to rollout the program in mid 2005 and managed to enrol a population of 1.1 million over a 4 years period. The registration process was widely criticized by the population for being "hectic" and gained the organization with some negative reputation in the media. Long waiting times, complex registration procedures, high turnover rates, increasing costs; all indicated performance setbacks. The organization was in a real dilemma and a change from status was needed.

In late 2009, the Vice Chairman of the Board of Directors at Emirates ID articulated the need for a radical change program to examine lagging performance results. The new appointed Head of Executive Board Committee and the Director General established ambitious goals for drastic improvements throughout the organization, and they paid attention in particular to selected business areas related to the intake and the production cycle capacities at registration centres; where criticism was most. Specific goals included reducing applicant registration and waiting times by at least 50 per cent. The new management team decided to take a system-wide view of the organization and perceive its business as a factory with production lines environment that harnesses the potential of teams.

The workforce at production line processes were evaluated and rewarded based on their performance. In a little over one year, the

organization achieved monstrous results; increased intake capacity by 300%, reduced registration time by 80%, reduced applicants waiting time by 1000%, reduced staff turnover by 60%, lifted customer satisfaction by over 52%, increased revenues by 400%, and cutting 300% of overheads. Due to the substantial size and details of the work conducted in the organisation, the discussion in this article was limited to the process re-engineering project performed part of the overall change program, as the next section details.

5. THE PROCESS RE-ENGINEERING PROJECT

As explained earlier that biggest motive for business process reengineering stemming from key challenges faced by the organization in achieving its objective of enrolling all citizens and residents into the UAE Federal government's "Population Register" program. Key drivers for these challenges were limited daily intake capacity, complex enrollment processes and lack of robust mechanisms to ensure a regular flow of enrollment applications. Hence and once leadership decided that a radical change was needed, it was clear that an enrollment process re-engineering was required. Prior to kicking off the re-engineering project, the team leading the project reviewed leaderships guiding principles for deploying the change process. The four guiding principles mandated by leadership were:

1. Increased efficiency,
2. Cost optimization,
3. Incremental capacity, and
4. Enhanced customer experience.

These guiding principles thus become the pillars on which the future population enrollment strategy needed to be built on. So, in order to deliver upon each of these guiding principles, the management team studied various options and revamped the end-to-end enrollment process with a specific focus on elimination of bottlenecks and redundant processes. The following subsections will outline key changes implemented addressing each of the guiding principles.

5.1 INCREASED EFFICIENCY

The registration process was the obvious reengineering opportunity. Much time was devoted to assessing risks and benefits of various design alternatives. The most important consideration was that the new system needed to be customer centric and driven by customer needs of faster and more convenient registration process. Common complaints from people previously were that of going through long, cumbersome and highly time consuming procedures at registration centres. Accordingly, the new redesigned process yielded the following outcomes:

- Reduction of enrollment processes from a 6 step to a 4 step process, and
- Standardization of biometrics capture technology from maximum of 3 unit workstations to a standard 1 unit workstation (See also Fig. 1).

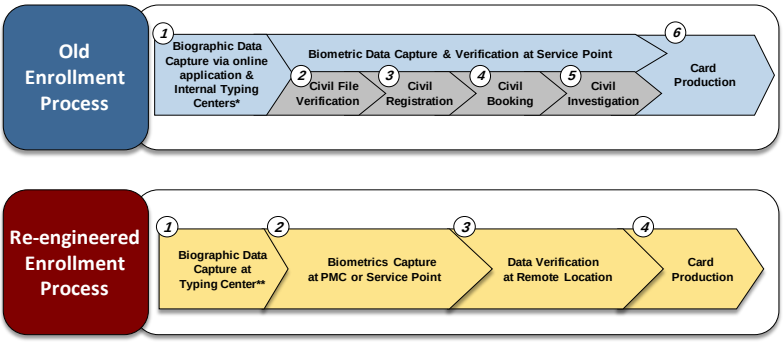


Fig. 1. Old registration process vs new process.

As a result of the above change, the average theoretical time for enrolling each applicant was reduced by 23 minutes per application. Key drivers for this change were a 10 minute reduction in average time to fill-out an ID card application and a 13 minute reduction in average time for biometrics capture and data verification. A key consideration in making the time comparison between old versus new process was that in the past applicants completed their ID card applications online and in the new design, they would pay to have an application completed for them by an authorized typing center.

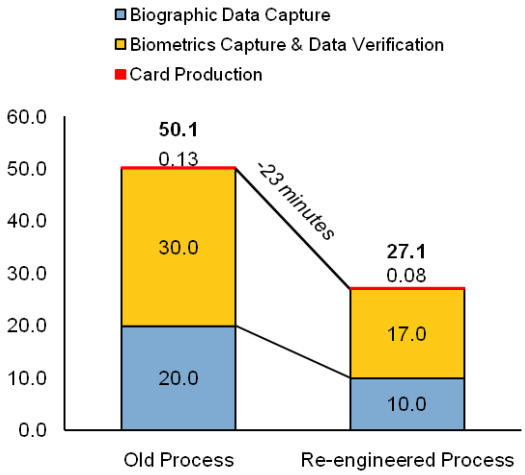


Fig. 2. Time savings in new process.

5.2 Cost Optimization

- Shorter processing time per application leading to higher utilization rate and hence increased productivity of enrollment workstation operators.

As a result of the above change, average theoretical overhead (labour) for biometrics capture and data verification was reduced by 30 AED per application. Key drivers for this change was the hypothesis that existing staff would be utilized for biometrics capture and data verification processes. The implications of the above hypothesis was that the average labour cost associated with each workstation operators would remain unchanged at an average cost of 22,000 per month; however each employee would be able to process a greater numbers of applications per day given the 23 minute reduction in lead time. In addition typing centers and

outsourcing costs were excluded in order to produce an assessment purely focused on process re-engineering.

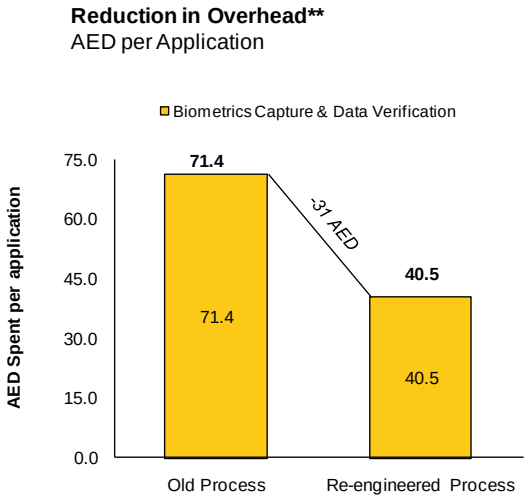
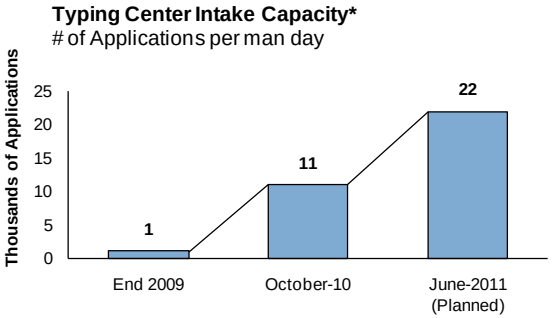


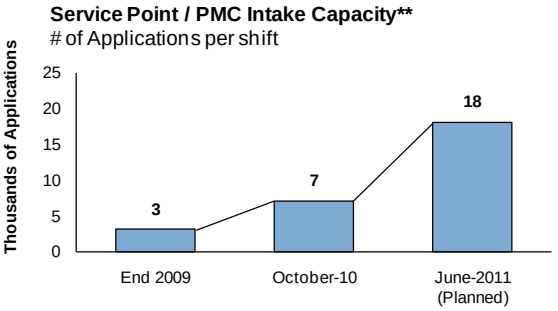
Fig. 3. Cost savings with reengineering.

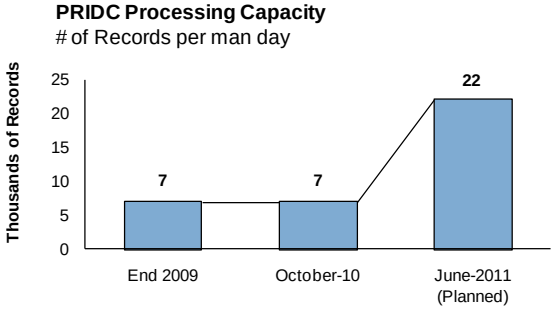
5.3 Incremental Capacity

- Achievement of incremental capacity in biographic capture, biometrics capture and card production processes as of Q3 2010, and
- Additional increases in biographic capture, biometrics capture. Population register processing capabilities and card production processes planned by Q3 2011.

As a result of deploying increased capacity across sub steps of the enrollment process, Emirates ID had the potential of raising end to end daily enrollment throughput to approximately 22,000 applications per day by Q3, 2011.


Typing Center Intake Capacity*
# of Applications per man day
Thousands of Applications
25
20
15
10
5
0
1
11
22
End 2009
October-10
June-2011
(Planned)


Service Point / PMC Intake Capacity**
# of Applications per shift
Thousands of Applications
25
20
15
10
5
0
3
7
18
End 2009
October-10
June-2011
(Planned)


PRIDC Processing Capacity
# of Records per man day
Thousands of Records
25
20
15
10
5
0
7
7
22
End 2009
October-10
June-2011
(Planned)

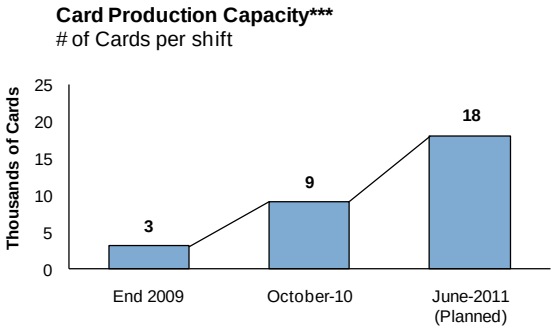


Fig. 4. Capacity development.

5.4 Enhanced Customer Experience

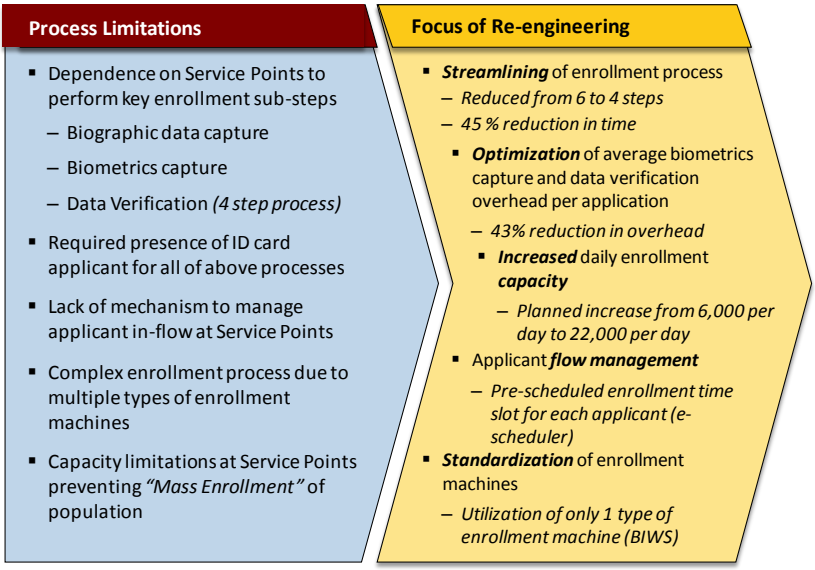
In addition to the tangible elements quantified in earlier sections, there were also a number of intangible enhancements that greatly benefit both Emirates ID and its customers. Some of these are mentioned in the diagram below:

Intangible Elements of Enrollment Processes	Old Process	Re-engineered Process
▪ Presence of applicant for biometrics capture only – Submission of biographic information may be completed by applicant representative – Data verification done at off-site location	✗	✓
▪ Automation of processes leading to on-line "paper trial", enhanced security, simplified data retrieval and greater "Business Intelligence"	✗	✓
▪ Ability to manage flow of applicants to enrollment locations (Service Points / PMC's) – Scheduling of appointments for biometrics capture	✗	✓
▪ "Unified form" (planned) for multiple federal government applications – Simplifying biographic capture process – Benefiting applicant and government entities	✗	✓

Fig. 5. Customer service enhancement areas.

5. KEY RESULTS FROM PROCESS REENGINEERING

Once the entire process re-engineering program was completed, Emirates ID was expected to deliver on each of the four guiding principles outlined by leadership listed earlier.



* Does not account for cost of 3rd party contracts which were not part of original re-engineering project

** based on deployment of ~400 BIWS machines currently in inventory (including converted machines)

Fig. 6. Key results from reengineering.

Having done so, not only Emirates ID was prepared to deploy its Mass Enrollment strategy, it was also able to reap the benefits of cost and time savings per applicant enrolled. A high level study of cost and time savings based on potential future scenarios led to the following results.

5.1 Scenario 1: Linkage of Residence Visa Applications

The first scenario extrapolated cost and time savings based on linkage of all residence visa applications to the Emirates ID card. If such a linkage were activated across the UAE at the beginning of Q3 2011, Emirates ID was expected to have a constant flow of 15,000 applications per day. Extrapolating this enrolment forecast through the end of 2012 reveals that at that point in time, Emirates ID would have enrolled over 9 million people in its Population Register, and in doing so would save approximately 227 million AED in labour cost and over 117,000 man hours.

	Cumulative Impact of Overhead and Time Savings (Linkage of Residence Visa Applications)									
	2010		2011				2012			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Average New Enrollments / Man Day *(Thousands of People)*		7	7	7	15**	15**	15**	15**	15**	15**
Additional Enrollment *(Millions of People)*		0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0
Cumulative Enrollment *(Millions of People)*	2.3	2.8	3.3	3.7	4.7	5.7	6.7	7.7	8.7	9.7
Est. Total Overhead Savings *(Millions of AED)*		14	29 *	43	74	104	135	165	196	227
Est. Total Time Saving *(Thousands of Days Productivity)*		7.4	14.8	22.2	38.0	53.9	69.7	85.5	101.4	117.2

NOTE : Based on labor cost saving of 31 AED per application and wait time reduction of 23 minutes per application

* *Breakeven on cost of 200 BIWS machines acquired in 2010 to enable re-engineered process (by Q2 2011)*
** *All visa applicants required to enroll for Emirates ID card*

Fig. 7. ROI scenario 1.

5.2 Scenario 2: Linkage of Residence Visa Applications & Key Govt. Services

The second scenario extrapolated cost and time savings based on linkage of all residence visa applications plus key government services (e.g. driver's license, vehicle registrations, etc.) to the

Emirates ID card. If such a linkage were activated across the UAE at the beginning of Q3 2011, Emirates ID was expected to have a constant flow of 18,000 applications / day. Extrapolating this enrolment forecast through the end of 2012 reveals that at that point in time Emirates ID would have enrolled over 10 million people in its Population Register, and in doing so would save approximately 265 million AED in labour cost and over 136,000 man hours.

	Cumulative Impact of Overhead and Time Savings (Linkage of Residence Visa and Govt. Services Applications)									
	2010		2011				2012			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Average New Enrollments / Man Day *(Thousands of People)*		7	7	7	18**	18**	18**	18**	18**	18**
Additional Enrollment *(Millions of People)*		0.5	0.5	0.5	1.2	1.2	1.2	1.2	1.2	1.2
Cumulative Enrollment *(Millions of People)*	2.3	2.8	3.3	3.7	4.9	6.1	7.3	8.5	9.7	10.9
Est. Total Overhead Savings *(Millions of AED)*		14	29 *	43	80	116	153	190	227	264
Est. Total Time Saving *(Thousands of Days Productivity)*		7.4	14.8	22.2	41.2	60.2	79.2	98.2	117.2	136.2

NOTE : Based on labor cost saving of 31 AED per application and wait time reduction of 23 minutes per application

* *Breakeven on cost of 200 BIWS machines acquired in 2010 to enable re-engineered process (by Q2 2011)*
** *All visa and key government service applicants required to enroll for Emirates ID card*

Fig. 7: ROI scenario 2

6. LESSONS LEARNED

This section presents some of the most prominent lessons learned and consideration areas that played key roles in facilitating the overall project management.

6.1 Leadership and Commitment

The literature has recognized the critical role of leadership in BPR

initiatives. Hammer and Champy (1993; 2003) state that most reengineering failures stem from the "breakdowns in leadership". Leadership role is seen to create a sense of mission among organizational members (Carr & Johansson, 1995; Hammer & Champy, 1993). Caron et al. (1994, p. 247) have also observed that for successful radical change, members of the senior management must be committed to the initiative, and must demonstrate their commitment "by being visibly involved with the project". See also (Gadd and Oakland, 1996; Barrett, 1994; O'Neill & Sohal, 1998).

The significant outcomes of the reengineering initiative at Emirates ID were the results of strong commitment from the Vice-Chairman, and persistent result focused top management. Business process improvement must be aligned with business objectives and clear set of outcomes. Successful implementation of change programs comes with a vision and a plan and an aggressive execution of that plan. Delegation and empowerment of teams is necessary to crease sense of responsibility of the work to be completed in such plans. This should facilitate the creation of the culture for ownership and accountability.

Cyert and March (1992), among others, point out that conflict is often a driving force in organizational behaviour. BPR claims to stress teamwork, yet paradoxically, it must be "driven" by a leader who is prepared to be ruthless. This is why top management macro and micro involvement during the execution is essential to guide and re-unite individuals and departments as conflicts would normally arise.

6.2 Information Technology is not a target on its own

Despite the findings of hundreds of studies which indicated it as one of the major failure reasons of initiatives, some management teams have the tendency to focus on Information Technology as a primary enabler to business needs and requirements. Top management focus to this area is crucial, as they would need to intervene at different stages to re-communicate objectives and get everybody on the same page and ensure compliance with business objectives. Hammer and Champy (1993) suggest that organizations think 'inductively' about information technology. Induction is the process of reasoning from the specific to the general which means that manager must 'learn' the power of new technologies and 'think' of innovative ways to alter the way work is done. This is contrary to deductive thinking where problems are first identified and solutions are then formulated. A practical approach in this area is to systematically benchmark and evaluate best practices, using relevant organizations, and consider the extent to which the processes need redesigning.

6.3 Getting everybody on the same page

It was difficult times to push both second and third line management teams to shift from their comfort zones and the traditional way of doing work, to think of their departments and units as components of a larger production line where performance evaluation would be based on how the entire product line is performed. There was great tendency by them to focus on their own business functions in silo environments.

The radical process reengineering introduced in the organisation required the breaking down of functional and individual job boundaries as the new processes did not have to coincide with the existing departmental structure. Internal departments were expected to be more supportive of each other and share information and best practices.

Through lots of trial and error management approaches to improve teams performance, management teams and thereafter all other employees began to realize and feel the need for change and adaptation to the new status quo. The higher management team in the organisation was needed to adopt a culture of empowerment and learning.

We map this to the story of the five blind men who attempted to define an elephant as depicted in Fig. 8. One man grabbed an ear, another the trunk, a third the tail, the fourth a leg, and the last touched the side. The man who touches the leg concludes that an elephant is thick and round and much like a column or pillar. Another man puts his hand on the trunk and concludes that an elephant is slender and flexible and must be something like a snake. The last man pushes on the elephant's side and determines that it is broad and unmovable like a large wall. Obviously what the diagram is showing here that there is no shortage of perspectives one could develop. The moral of the story is that everything is relative. Each of the blind men told the truth based on their experience with the elephant, but no one man's truth could exclude another's. No truth took precedence, even in the face of completely opposite claims.

Fig. 8. Blind men and an Elephant.

This lesson is critically important for management to comprehend when introducing change in their orgnaisations. Individuals at many instances were found to work and focus on their own work within a functional area of the organization. Unless they see and comprehend that their work is part of a larger system, it would be very much challenging to get and keep everybody on the same page. For business process reengineering to succeed, lots of training and on job coaching was required to psychologically shift their mindset to the new status quo.

One improvement that helped teams to work more homogeneously was the change of work environments where all support departments were moved to a single and larger facility that

facilitated improved communication between them. The second improvement was the result of the new reengineered layouts of the registration centers. The layout was radically redesigned to better suit the new registration process flow and enabled more transparency due to the glass-partition-walls of management offices and the open space layout. This also contributed to improving customer service and satisfaction.

6.4 People and Performance Management

Perhaps one of the most important success factors for any change program is the people element. It is important that top management make tuning decisions to create the space for change. If an organization wishes to change the way it operates, it must turn to its people to make it happen. People are the agents of change. Creating business plans and strategies are important, but they are only tools to guide the actions of people.

This should pave the way for the implementation of performance-based evaluation. The shift to performance based evaluation, management empowerment, reward for creativity, and a system-view; all helped Emirates ID to enormously improve its quality and performance for its customers. The adoption of continuous improvement philosophy led to the development of a solid proactive work environment that puts customer satisfaction and operational effectiveness and efficiency at the top of the organizational priorities.

It is important for an organisation operating in the public sector to continuously revisit its defined vision and mission to revive

organisational mindset of where the organization is going, and to provide a clear picture of the desired future position. Producing key performance measures to track progress should be based on that. Management need to develop a culture for constant improvement and Identification of initiatives that will recuperate performance. Such performance management activities need to be placed in a feedback loop, complete with measurements and planning linked in Deming cycle of "Plan - Do - Check - Act", also known as the Control Circle, or PDCA. See also Fig. 9.

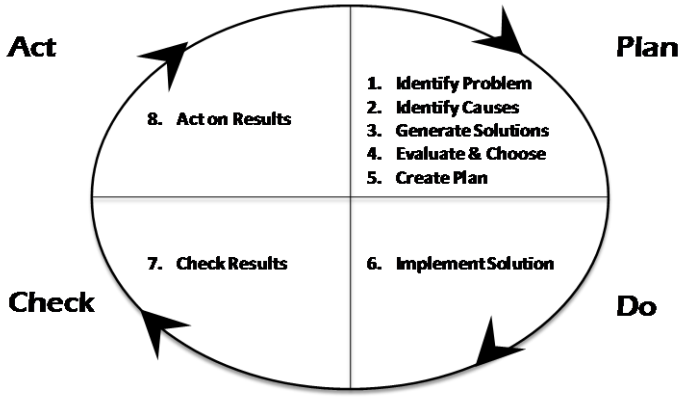


Fig 9. Deming control cycle.

6.5 BPR and TQM: A State of Confusion in Practice

In practice we observe organisations to have mixed or improper definitions for the application of BPR and TQM. TQM as defined in the literature is a strategic approach that is based on the premise of continuous improvement which puts emphasis on the identification

of methods to continuously improve customer satisfaction, product quality, or customer service (Evans, 2004; George, 1998; Kemp, 2005). BPR on the other hand is concerned with the reorganization of the complete process cycle in major parts of the organization to eliminate unnecessary procedures, achieve synergies between previously separated processes, and become more responsive to future changes (Coulson-Thomas, 1993; Davenport, 1993). Both TQM and BPR assume that in order to provide better products and services, organizations must improve business processes.

TQM is more of a systematic approach to improving business processes through a philosophy of continuous improvement resulting in an upward sloping line of linear process improvements. BPR is not about tweaking existing processes but rather combines a strategy of promoting business innovation with radical change in business processes to achieve breakthrough improvements in products and services. See also Fig. 10 below.

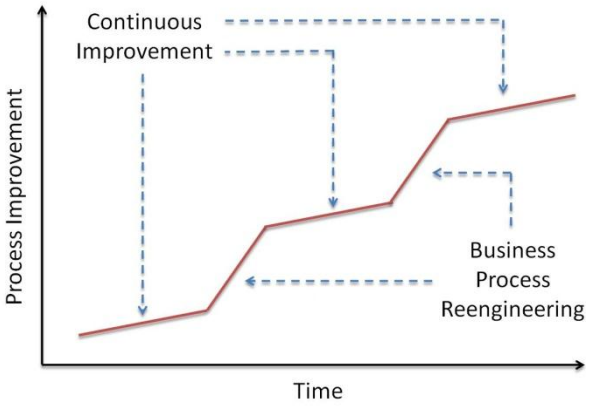


Fig. 10. TQM vs BPR. Adopted from: Hoffer et al. (2011)

It was needed that management teams to distinguish between these approaches. Unlike TQM, for instance, that aims on smoothly and incremental improvements, BPR aims on dramatic and rapid results and is suited for organisations facing gargantuan challenges to optimize the workflow and productivity. TQM targets to improve the existing systems. BPR on the other hand takes an opposite assumption as it is concerned with frame-braking change that attempts to create new systems rather than repairing old systems. BPR puts much emphasis on the enabling role of information technology and pays less attention to documentation. Table 1 provides further details about the differences between each of the two approaches.

Table 1: Comparison BPR and TQM

	BPR	TQM
Description:	Particular approach concerned with rethinking current systems and processes.	Concerned with improving work processes and methods in order to maximise the quality of goods and services.
Type of Change:	Planned, frame-braking	Planned, continuous
Aim:	To redefine existing work methods and processes to improve efficiency.	Keep existing customers by meeting or exceeding their expectations concerning products and services.

Key Driver:	Competitive pressures and intense need to cut costs.	Increasingly competitive market and the need to compete for specific customer demands. May also be driven by specific problems such as high costs or poor quality.
Change Agent:	External consultant	External or internal
Learning process:	Double loop	Single or double loop
Nature of culture change:	Values objectivity, control, consistency and hierarchy	Customer focused values
Change to team based work:	Yes. Requires a shift to team based work because the work is process based rather than task based.	Often requires a shift to team based work

Source: Millett & Harvey, 1999

6.6 Creating Sense of Agility

Agility in public sector context is the ability of an organization to be dynamic in rapidly changing and continually fragmenting operating environments for high quality, high performance, and customer configured service models. Organisations in such environments are needed to develop information capabilities to treat masses of population as individuals and services that are perceived as solutions to their individual needs and requirements.

This should help addressing the requirements of different and constantly changing customer opportunities. Goldsmith & Eggers (2004) indicate that the traditional, hierarchical model of governments simply does not meet the demands of the complex, rapidly changing era we live in, and suggests that the public sector requires agility in its systems, structures and processes. Fig. 11 depicts some pressuring elements pushing public sector organisations to adopt more agile approaches to address such requirements.

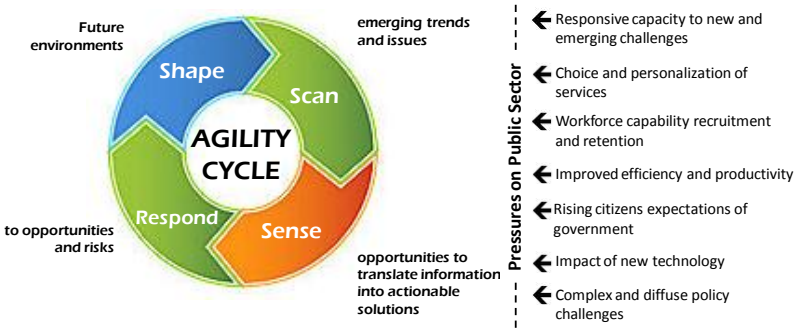


Fig. 11. Need for agility in public sector organizations.

In simple terms, we relate agility in organisations to adaptability and speed. During the BPR project, it was important to develop deep management understanding of various priority elements critical to the success of the overall project such as the organisational structure, jobs definitions, and evaluation and reward systems. This needed to be followed by an understanding of the organisation's talent and capabilities, and creating an organisational culture that supports redeployments and re-skilling. With strong and visible leadership, the organisations needed to focus on building a unified

organisation that defeats silos, and developing capabilities to manage internal change well. The work presented herein attempted to add to the limited body of knowledge of practices in the field and an experience to share and build upon.

Conclusion

National Identity programs around the world have been going through a number of challenges. The most obvious challenge these programs face is seen to be with the quality of the enrolment process in terms of its effectiveness and efficiency of adopted processes. This study recognises the importance of this critical field, and aimed to improve overall understanding and addressing government needs for higher quality and more citizen-focused services in national ID programs.

By implementing and examining the BPR project at Emirates ID, this study provides guidelines for BPR projects in national identity initiatives with a similar context. The business process reengineering at Emirates ID resulted in substantial business benefits and contributed to the simplification of the work of the employees at front lines, increasing the degree of transparency and accuracy in functioning of the enrolment process at registration centers, and most importantly improved overall customer experience and satisfaction.

While there are similarities in how governments may approach reengineering, each government should tailor its BPR efforts to satisfy its unique conditions and operating environment (Kettinger et

al., 1997). We reiterate that managing a reengineering initiative is extremely complex and difficult, and there is (and can be) no guaranteed path to success (Sauer et al., 1997; Galliers & Baets, 1998).

Although the major limitation of this research is the sample size that limits generalisability, the study is rated high on its data richness, and appropriateness for such dynamic area of practice. National Identity schemes all over the world require going through almost the same procedures with only differences related to the choice of biometric technologies adopted in each country. The lessons learned documented in this article provide practical considerations for management in the field. They are considered important building blocks for the BPR exercise to succeed.

References

[1] Alavi, M. and Carlson, P. "A review of MIS research and disciplinary development," Journal of Management Information Systems (8:4), 1992, pp. 45-62.

[2] Alkhouri, A.M. (2007). UAE National ID Program Case Study. International Journal Of Social Sciences, Vol. 1, No. 2, pp.62-69.

[3] Alkhouri, A.M. (2010) Facing the Challenge of Enrolment in ID Card Programs. 'The Biometric Landscape in Europe', Proceedings of the Special Interest Group on Biometrics and Electronic Signatures, BIOSIG 2010, Darmstadt, Germany, September 09 -10, 2010.

[4] Barrett, J.L., 1994. Process visualization: Getting the vision right is the key. Information Systems Management 11 (2), 14–23.

[5] Benbasat, I., Goldstein, D.K. and Mead, M. "The Case Research Strategy in Studies of Information Systems," MIS Quarterly (11:3) 1987, pp. 369-386.

[6] Caron, M., Jarvenpaa, S.L. & Stoddard, D.B. (1994, September). "Business Reengineering at CIGNA Corporation: Experiences and Lessons Learned From the First Five Years,"MIS Quarterly, pp. 233-250.

[7] Carr, D., Johansson, H., 1995. Best Practices in Reengineering. McGraw-Hill, New York.

[8] Coulson-Thomas, C.J., 1993. Corporate transformation and business process engineering. Executive Development 6 (1), 14–20.

[9] Cyert, R. M. and J. G. March (1992), A Behavioral Theory of the Firm, Oxford: Blackwell.

[10] Davenport, T.H. & Beers, M.C. (1995). "Managing Information About Processes," Journal of Management Information Systems, 12(1), pp. 57-80.

[11] Davenport, T.H. & Short, J.E. (1990 Summer). "The New Industrial Engineering: Information Technology and Business Process Redesign," Sloan Management Review, pp. 11-27.

[12] Davenport, T.H. Process Innovation: Reengineering work through Information Technology. Boston: Harvard Business School Press, 1993.

[13] Davidson, W. (1993), ``Beyond re-engineering: the three phases of business transformation'', IBM Systems Journal, Vol. 32 No. 1, Winter, pp. 65-79.

[14] Dunleavy, P., Margetts, H., Bastow, S. and Tinkler, J. (2006) New Public Management Is Dead--Long Live Digital-Era Governance. Journal of Public Administration Research and Theory 16 (3) 467-494.

[15] Earl, M., Khan, B., 1994. How new is business process redesign. European Management Journal 12 (1), 20–30.

[16] Earl, M.J., Sampler, J.L. & Short, J.E. (1995). "Strategies for Business Process Reengineering: Evidence from Field Studies," Journal of Management Information Systems, 12(1), pp. 31-56.

[17] Evans, J.R. (2004) Total Quality: Management, Organization and Strategy. South-Western College Pub.

[18] Gadd, K., Oakland, J., 1996. Chimera or culture? Business process re-engineering for total quality management. Quality Management Journal 3 (3), 20–38.

[19] Galliers, R.D., Baets, W.R.J., 1998. Information Technology and Organizational Transformation. Innovation for the 21st Century Organization. Wiley, New York.

[20] George, S. (1998) Total Quality Management: Strategies and Techniques Proven at Today's Most Successful Companies. Wiley.

[21] Goldsmith, S. & Eggers, W.D. (2004) Governing by Network: The New Shape of the Public Sector. Washington DC: Brookings Institution Press.

[22] Gordon, G.J. and Milakovich, M.E. (2009) Public Administration in America, 10 edition. Wadsworth Cengage Learning, USA.

[23] Hammer, M. and Champy, J. (1993) Reengineering the Corporation: A Manifesto for Business Revolution. New York: HarperCollins.

[24] Hammer, M. and Champy, J. (2003) Reengineering the Corporation: A Manifesto for Business Revolution. HarperCollins Publishers, NY.

[25] Hoffer J.A, George J.F, Valacich J.S (2011) Modern Systems Analysis and Design. Sixth Edition. Prentice Hall: New Jersy.

[26] Jeston, J. and Nelis, J. (2008) Business Process Management: Practical Guidelines to Successful Implementations. Second Edition. UK: Butterworth-Heinemann.

[27] Keen, P.G.W. Shaping the Future: Business Design through Information Techology. Boston: Harvard Business School Press, 1991.

[28] Kemp, S. (2005) Quality Management Demystified. McGraw-Hill Professional.

[29] Kettinger, W.J. & Grover, V. (1995). "Special Section: Toward a Theory of Business Process Change Management," Journal of Management Information Systems, 12(1), pp. 9-30.

[30] Kettinger, W.J. & Grover, V. (1995). "Special Section: Toward a Theory of Business Process Change Management," Journal of Management Information Systems, 12(1), pp. 9-30.

[31] Leedy, P. D., & Ormrod, J. E. (2005). Practical research: Planning and design (8th ed.). Upper Saddle River, NJ: Prentice Hall.

[32] Lloyd, Tom, Giant with Feet of Clay/ Tom Lloyd Offers a Contrasting View of Business Process Reengineering, Financial Times, December 5, 1994; Pg. 8.

[33] Lowenthal, J.N., 1994. Reengineering the Organization; A Step-By-Step Approach to Corporate Revitalization. ASQC Quality Press,Milwaukee, USA.

[34] Madison, D. (2005) Process Mapping, Process Improvement and Process Management. Paton Press.

[35] Millett, B. and Harvey, S. (1999) OD, TQM AND BPR: A COMPARATIVE APPROACH. Australian Journal of Management & Organisational Behaviour, 2(3), 30-42.

[36] O'Neill, P., Sohal, A., 1998. Business process reengineering: application and success—an Australian study. International Journal of Operations and Production Management 18 (9–10), 832–864.

[37] Orlikowski, W.J. & Baroudi, J.J. "Studying Information Technology in Organizations: Research Approaches and Assumptions", Information Systems Research (2) 1991, pp. 1-28.

[38] Porter, M.E., 1980. Competitive Strategy. Free Press, New York.

[39] Porter, M.E., 1985. Competitive Advantage. Free Press, New York.

[40] Porter, M.E., 1990. The competitive advantage of nations. Harvard Business Review 68 (2), 73–92.

[41] Sauer, C., Yetton, P.W. and associates, 1997. Steps to the Future. Fresh Thinking on the Management of IT-Based Organizational Transformation. Jossey-Bass, San Francisco, CA.

[42] Talwar, R., 1993. Business re-engineering—A strategy-driven approach. Long Range Planning 26 (6), 22–40.

[43] Yin, R. K. Case Study Research, Design and Methods, 3rd ed. Newbury Park, Sage Publications, 2002.

Paper

5

Improving ORGANISATIONAL PERFORMANCE through Understanding Human Motivation [5]

Ali M. Al-Khouri

ABSTRACT: This article explores some thoughtful considerations for management related to understanding and improving the overall performance of individuals and teams in organisations. It reflects thoughts and learnings from several implementations of small and large projects in public sector. It also sheds light on various theories, tools and frameworks and how they can be used to improve overall organisational performance.

Key words: *competency development; motivation; performance; team building.*

[5] Al-Khouri, A.M. (2011) "**Improving Organizational Performance through Understanding Human Motivation**". Chinese Business Review, Vol.10, No.5, pp. 384-394.

Partial content was also published in:

Al-Khouri, A.M. (2010) "**Improving Organisational Performance**," Proceedings of 18th Annual International Conference on Modern Workforce Challenges, Responsibilities, and Rights in the Global Community, The Association on Employment Practices and Principles (AEPP), 29 September to 01 October 2010, University of San Francisco, San Francisco, CA.

1. INTRODUCTION

IN today's dynamic and rapidly changing workplace and globalised economy, development of organisational performance is associated with the development personal performance, skills, knowledge and experience [1][2][3]. However, the ability to achieve and maintain high performance and productivity in organisations is a key challenge facing management today.

Our experience shows that management need to give higher attention towards understanding individual differences, needs and behaviours, as well as their criticality to enable them to understand and manage organisational complexity. Such understanding is considered important in helping individuals develop effective learning styles that is aligned with organisational objectives and needs.

Our primary learning is touching the subject of perceptions, beliefs and values that motivate our behaviours and impact the overall learning process we may decide to follow. A variety of theories regarding human nature and motivation in particular are explored here, to explain the diversified behaviours, and particularly, what influences people to do what they do. We also reflect our learnings and make sense of the presented theories in relation to our experiences.

2. LEFT BRAIN AND RIGHT BRAIN MANAGMENT

> *If our life experiences and culture shape our mental models of the world then our own unique thinking styles and sensory preferences will shape the way we know the world ..... Our thinking is shaped by our very existence in our world, our thinking styles and sensory preferences, these styles and preferences are the ones we have always been comfortable with and familiarity is comforting.* [4]

A useful theory for management to always keep in mind is the Right-Brain and Left-Brain thinking. Most of us have one side of our brains dominant which influence the choice of thinking and learning styles. Figure 1 illustrates the differences between the two sides of the brain.

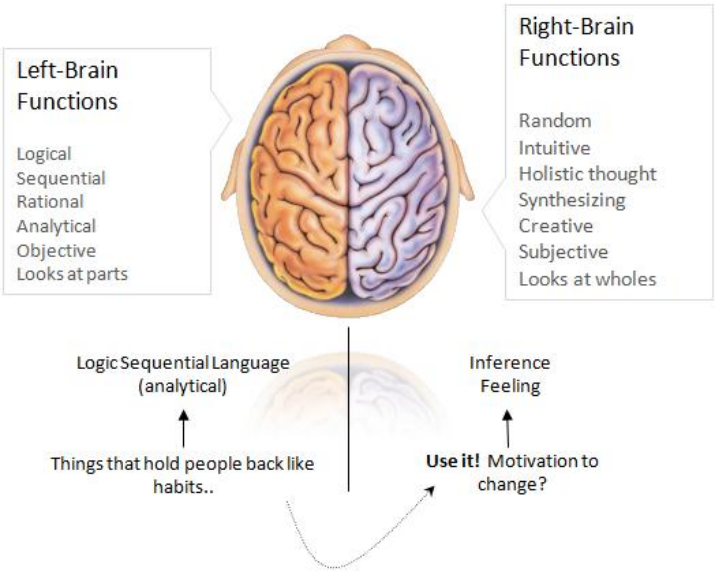


Figure 1: Left and Right Brain thinking model

Numerous management styles can originate from the left or the right side of the brain[5]. The left side has an exasperating devotion to numerical figures, details, analysis, time-bound logic, and sequential thinking, etc, concerning itself with cash flow and the dire consequences of mismanagement of finances. It processes information in an analytical and sequential way, looking first at the pieces, then putting them together to get the whole.

The right side is often based on intuitive, emotional decisions, synthesis, and holistic thinking i.e., it processes information in an intuitive way, looking first at the whole picture then filling in details. While this approach can yield immediate success in the short run, it often comes at the risk of long-term sustainability and growth.

Our experience in projects also shows that it is important that we follow a 'balanced-thinking' (i.e., to engage both sides of the brain) to analyse and identify elements that contribute towards the achievement and maintenance of highest performance and productivity levels see also [6]. It was found vital that we constantly promote this way of thinking to enhance the overall performance of projects.

Organisations aiming to improve productivity, with rigorous planned strategies, staff with balanced and mixed thinking skills can produce more efficient and innovative organisational outcomes [7]. The left-brain and right-brain model goes beyond mere issues of management style but it reflects organisational thinking and how it approaches problem solving, and can better addresses the situational uniqueness of projects and conquer the challenges of contemporary projects.

3. BELIEFS AND PERCEPTIONS

Perhaps, the most significant learning from the different projects was about how things like beliefs and perceptions can inhibit us from learning and development or in other words; how our beliefs and perceptions may inhibit us from doing any right brain thinking. Figure 2 demonstrates different motivation layers, showing how behaviour can determine our beliefs, habits, and needs.

Motivation is a hidden power that stems from a deep rooted belief that activates and drives behavior and gives it direction; it is strongest when it comes from our inner values [8]. Thus, understanding motivation should empower us to better understand ourselves and others. This should, in turn, enable us to change and/or further improve our behaviours and performance.

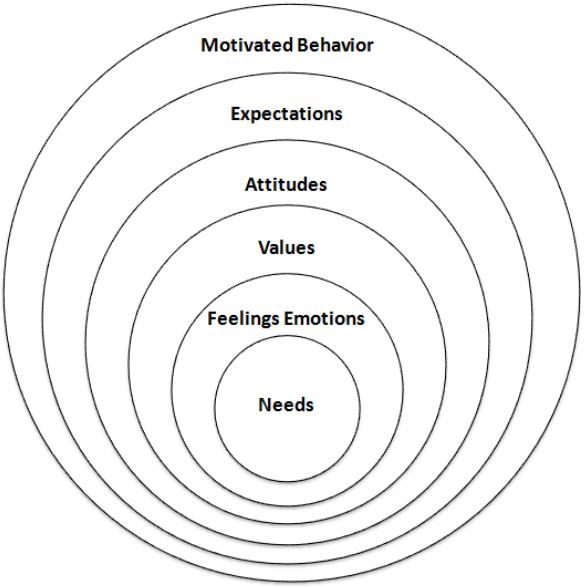


Figure 2: Motivation Factors

To it is also important for management to understand the association between our unconscious mind and how it may determine particular motivated behaviours i.e., how beliefs may be part of our unconscious mind and play the role of regulating many of our behaviours and actions we take in life. We correlate this to Freud's topographical model [9] that represents the configuration of the mind. The model makes three classifications of the human mind:

- **Conscious:** awareness of one's environment and one's own existence, sensations, and thoughts i.e., part of the mind that holds what we are aware of. We can verbalize about our conscious experience and think about it in a logical fashion.

- **Preconscious:** memories or feelings that are not part of one's immediate awareness but that can be recalled through conscious effort

- **Unconscious:** part of mind containing elements of psychic makeup, such as memories or repressed desires, that are not subject to conscious perception or control but that often affect conscious thoughts and behavior.

Figure 3 uses an iceberg metaphor to facilitate the understanding of Freud's topographical theory. It shows that more than 90% of an iceberg is beneath the water (preconscious and unconscious) whereas only 10% of it is visible (conscious).

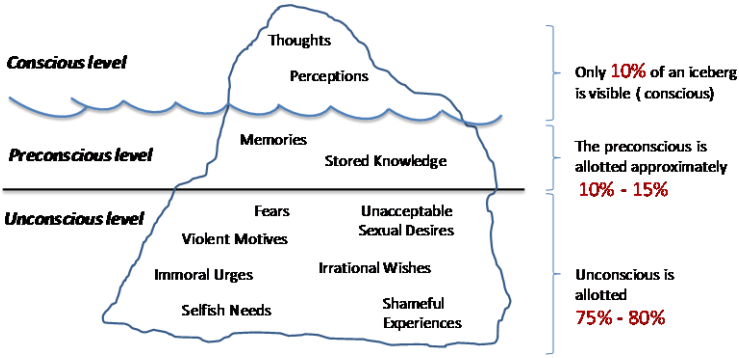


Figure 3: Mental iceberg of Freud's view of the human mind

Using Freud's topographical model of the mind, we can see that a substance may pass back and forth between the conscious and preconscious mind. Subsequently, substances from these two levels can easily slip into the unconscious mind. Rationally, the unconscious substances (e.g., unconscious fears and previous experiences) can very much direct our behaviours and instinctively make several decisions for us.

It is our unconscious mind that effects what we can or cannot accomplish. By challenging and changing some of our beliefs and perceptions, we can utilise our abilities and potentials towards escalating our talents, achieving our goals and attaining significant success in almost every dimension of our progressive life. The following section explores various theories that represent the most common held views as to what motivates behaviour, and we reflect on each based on our experience.

4. THEORIES AND PRACTICE

> *"We all have preferred unconscious and conscious habits of thought that influence how we make decisions, communicate, learn and interact with others…. Our mental models and maps are 'configured' by the very nature of our experiences; they are 'configured' by our cultures. The western concept of time is very linear, whereas the Australian Aboriginal notion of time is very holistic! Neither are right or wrong they are just different".* [10]

A survey of global employers in 2005 [11] revealed that:

- More than 50% of employees lack the motivation to keep learning and improving;
- 4 in 10 people cannot work cooperatively;
- Only 19% of entry level-applicants have enough adequate self-discipline for their jobs;
- 70% of all change initiatives fail due to people issues-inability to lead, lack of teamwork, unwillingness to take initiative, inability to deal with change, etc.; and
- Primary derailleur of top executives: a lack of impulse control.

In today's competitive knowledge-driven organisations, leadership is more important than ever, and requires more than just possessing the right technical skills. Today's leaders need to recognise their own feelings and those of others to motivate themselves and effectively manage relationships, increase morale and motivation, improve productivity, promote greater cooperation and team work and increase retention of top talent.

4.1 Theory X and Theory Y

We have always believed that the main success factor for us in both our own personal life and at work is the ability to develop a positive environment. The different learning lessons from our projects indicate that in order to build such an environment, we need first to treat people as individuals and appreciate their personal differences. All of us are individuals. We have different personalities. We think differently, we have different needs, wants, values, expectations, and goals. We each change over time as well. Therefore, we need to recognise people as individuals and to work with their individual differences.

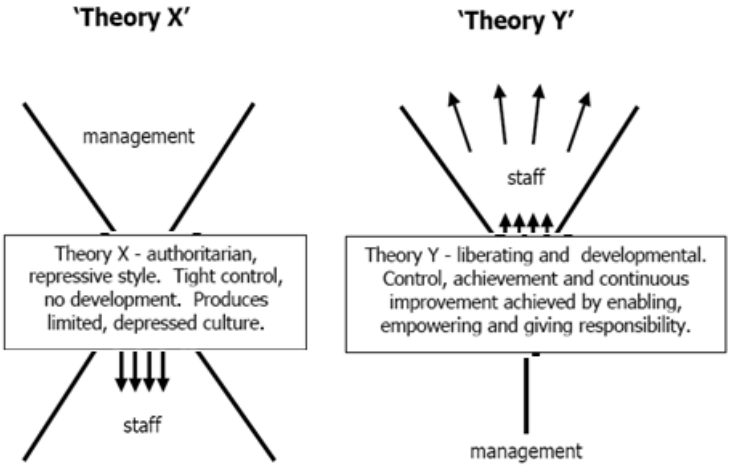


Figure 4: Theory X & Theory Y

Our personal philosophies often influence the motivational approaches we normally select to deal with such differences. Such philosophies or attitudes towards others can be mapped to Theory X and Theory Y [12]. See also Figure 4.

People in Theory X have negative perceptions of other people's potential and attitudes, whereas those in Theory Y have an opposite view, and assume that other people can be self-directing and seek responsibility. Table 1 provides further examples of the perceptions of the two theories.

Table 1: Theory X & Theory Y perceptions [3]

Theory X	Theory Y
The average employee is lazy, dislikes work, and will try to do as little as possible	Employees are not inherently lazy. Given the chance, employees will do what is good for the organisation.
To ensure that employees work hard, managers should closely supervise employees	To allow employees to work in the organisation's interest, managers must create a work setting that provides opportunities for workers to exercise initiatives and self direction.
Mangers should create strict work rules and implement a well defined system of rewards and punishments to control employees	Managers should decentralise authority to employees and make sure employees have the resources necessary to achieve organisational goals

Figure 5 also presents a continuum containing positive and negative motivations. Positive leadership styles encourage development of employees and higher levels of job satisfaction. Negative leadership styles are based on the manager's ability to withhold items of value from employees. The result of negative leadership may be an environment of fear, where managers are viewed with distrust and seen as dictators rather than as leaders or team players.

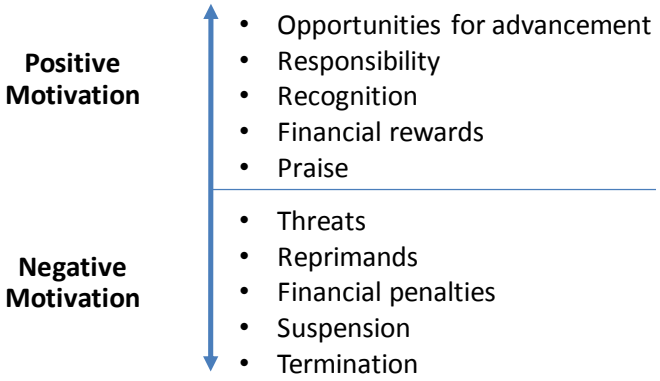


Figure 5: Positive vs. Negative Motivation [13]

As we have stated this earlier, our perceptions, attitudes and behaviours are normally driven and *motivated* by our needs, beliefs and values. The same applies to others around us. If we want to understand ourselves and/or others, we need to look at such motivators which would probably help us modify our perceptions and thereafter our behaviours. Many methods have been developed to explain why people choose to follow particular behaviours.

Two categories of motivation theories are covered next; content and process theories. Content theories are concerned with *what* motivates behaviour. Process theories are concerned with *how* the content of motivation influences behaviour. The next section starts the discussion with a content theory; Maslow's theory.

4.2 Maslow's Hierarchy of Needs Theory (Content Theory)

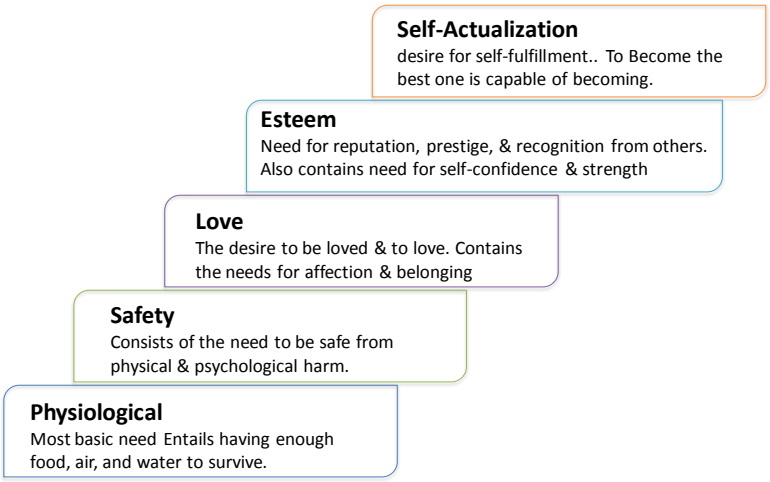


Figure 6: Maslow's Hierarchy of Needs [14]

Maslow's theory is one of the very common tools used to understand human needs. It mainly identifies five basic levels of needs as illustrated in Figure 6 namely; physical, safety, social, esteem and self-actualisation needs. The principle argument of the theory is based around the following four premises:

(1) individual's needs are arranged in a hierarchical order that starts from the most basic needs (water, food, shelter) to the most complex (esteem and self-actualisation);

(2) only an unsatisfied need can influence behaviour, where a satisfied need is not considered to be a motivator;

(3) a person will at least minimally satisfy each level of need before feeling the need at the next level; and

(4) the level of satisfaction of needs always fluctuates i.e., if satisfaction is not maintained for a need, it will become a priority need again. Once a need is satisfied, it will cease to influence behaviour.

To us, the theory represented a workable motivation framework that we utilised in analysing specific attitudes and behaviours to identify a particular need level an individual may attempt to satisfy, which gave us the opportunity in turn to assist and or/guide the individual to satisfy those needs.

4.3 Herzberg's Two-Factor Theory (Content Theory)

Another relevant needs theory is called the two-factor theory. It principally uncovers two sets of factors:

(1) motivators: factors that produce satisfaction and motivation; and

(2) maintenance, or hygiene factors: factors that lead to dissatisfaction.

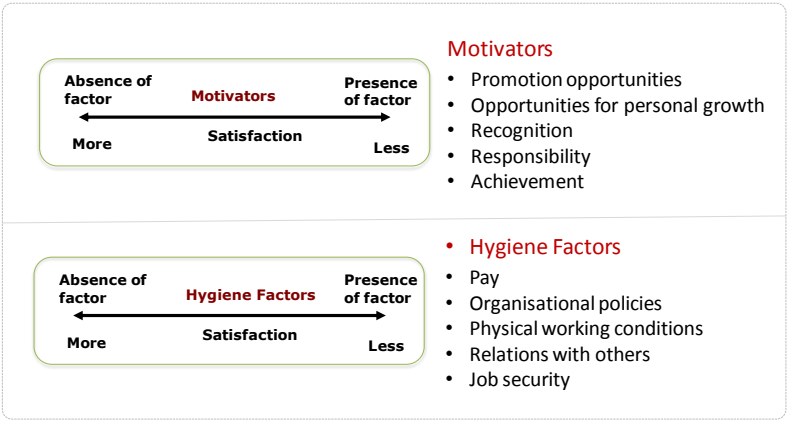


Figure 7: Herzberg's Two-Factor Theory

As illustrated in Figure 7 above, the Hygiene factors range from causing no dissatisfaction, if they are present in any given environment, to causing high dissatisfaction, if they are not present in sufficient quality [14][15]. Motivators, if present in, can provide low to high satisfaction, where if they are not present, no satisfaction can result (ibid.). Figure 8 Shows overlapping features shared by both Maslow's and Herzber's theories where:

(1) Hygiene factors are predominantly related to lower level needs; and

(2) Herzberg's motivators target higher level needs.

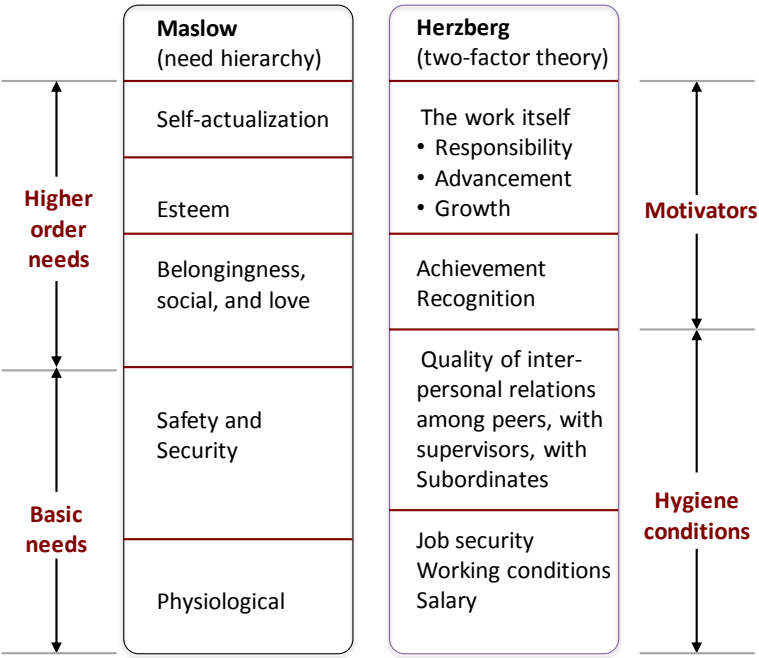


Figure 8: Maslow vs. Herzberg

The theory in our view can be used to focus on ensuring presence and quality of maintenance factors as a foundation on which to build motivation. For instance, managers have the power to make subordinates jobs more rewarding by granting them more responsibility, praising their accomplishments, making them feel that they are succeeding, and so on.

4.4 Vroom's Expectancy Theory (Process Theory)

Figure 9: Expectancy Theory [16]

Vroom's theory also referred to as Valence-Instrumentality-Expectancy Theory, explains why people choose a particular behaviour to satisfy their needs. See also Figure 9. It states that before choosing a behaviour, an individual will evaluate various possibilities on the basis of how much work is involved and what the reward is. Motivation is a function of how badly individuals want something and how likely they think they are to get it. It occurs in direct proportion to perceived or expected rewards.

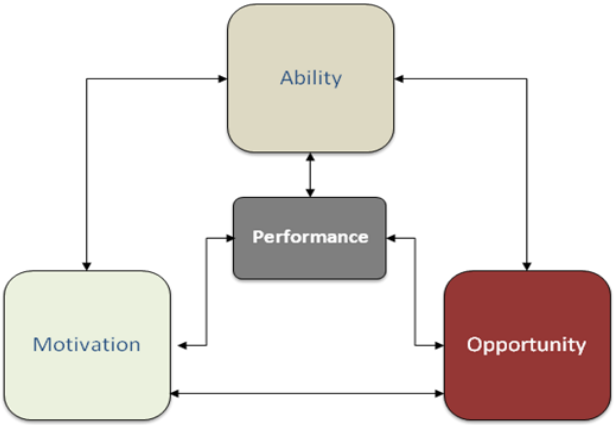


Figure 10: Performance dimensions

The strength of a tendency to act in a certain way depends on the strength of an expectation that the act will be followed by a given outcome and on the attractiveness of that outcome to the individual [17]. This is to say that behaviour is heavily influenced by perceptions of possible outcomes (see also Figure 10).

If an individual expects a certain outcome, possesses the competence to achieve it, and wants it badly enough, he or she will exhibit the required behaviour. If a person expects that a specific behaviour will produce an outcome that he or she perceives as undesirable, he or she will be less inclined to exhibit that behaviour. In this light, a person who knows the other person's expectation and desires can tailor outcomes associated with specific behaviours to produce motivation.

5. SOME FURTHER REFLECTION

There has been so much debate about the applicability of the presented theories in today's world specially that some of them have been developed as early as 1920's [3][18][19]. From our own personal perspectives, we see those theories still valid today as tools and frameworks for understanding human motivation.

For example, we agree with Maslow that only an unsatisfied need can motivate a person's behaviour. We are never satisfied with what we have as we always want more; thinking that what we do not have will seemingly make us happier. This is our nature.

Some of the presented theories also do not believe that human beings are pushed and pulled by mechanical forces, either of stimuli and reinforcements (behaviorism) or of unconscious instinctual impulses (psychoanalysis) [20]. It rather promotes the idea of focusing on human potentials, with the belief that they continuously and characteristically strive for an upper level of our capabilities (ibid.).

In our opinion, the theories explored here provide sound theoretical frameworks to better analyse and understand the basis of individuals' perceptions, behaviours, and attitudes. Table 2 shows some examples of our interpretations and understanding of the presented theories. Such understanding should enable us to enhance and improve our own thinking styles, motivation, and overall performance.

Table 2: Theories & Further Reflection

Theory	Examples
Theory X & Theory Y	• perceptions of how people view human behaviour mainly at work and organisational life
Maslow's Need Theory	• Confirms that human needs are an important part of human nature. • Identity trial model vs. self-actualisation
Herzberg's Theory	• Provide the foundation to build motivation and influence behaviour
Vroom's Expectancy Theory	• A framework to understand why people choose particular need (behaviour influence by perception of outcome)

We argue that performance improvement is more of a function of ability and motivation. Ability depends on education, experience, and training. Motivation is more related to our thoughts i.e., we are the product of our own thoughts. The aim of motivation is to improve the quality of our thoughts. Thus motivation, for organisations need to be considered essential to learn best and maximise effectiveness.

For management, effective performance improvement needs to deal with the performance of the organisational system as a whole. It requires an analysis of the deeper, underlying systemic blockages for performance in organisations and/or broader systems by the actors [21]. Such interventions should involve well managed learning processes which should in turn lead towards continuous performance-driven competence development.

Leading in successively larger contexts (from individuals to groups to organisation-wide efforts) requires successively larger sets of

competencies in terms of knowledge, skills and abilities. To create the conditions and space necessary for such an objective, it is important for management to foster change processes within the organisation to allow competency development.

Figure 11 shows a competency framework that we used to develop core personal competencies. The framework looks at two prime competencies; personal and social. Personal competencies are those that determine how we manage ourselves, where social competencies are those that determine how we handle relationships.

It sets out the skills, abilities, and personal qualities that leaders need to develop. We used this framework to develop leadership competencies and further identify training and development needs.

	Personal Competence	Social Competence
Awareness	**Self-Awareness:** *Knowing one's internal states, preferences, resources, and intuitions* • **Emotional awareness**: Recognizing one's emotions and their effects • **Accurate self-assessment**: Knowing one's strengths and limits • **Self-confidence**: A strong sense of one's self-worth and capabilities	**Social Awareness**: *Awareness of others feelings, needs, and concerns* • **Empathy**: Sensing others' feelings and perspectives, and taking an active interest in their concerns • **Organisational awareness**: Reading a group's emotional currents and power relationships • **Service orientation**: Anticipating, recognizing, and meeting customers' needs
Actions	**Self-Management**: *Managing ones' internal states, impulses, and resources* • **Self-control**: Keeping disruptive emotions and impulses in check • **Trustworthiness**: Maintaining standards of honesty and integrity • **Conscientiousness**: Taking responsibility for personal performance • **Adaptability**: Flexibility in handling change • **Achievement Orientation**: Striving to improve or meeting a standard of excellence • **Initiative**: Readiness to act on opportunities	**Social Skills**: *Adeptness at inducing desirable responses in others* • **Developing others**: Sensing others' development needs and bolstering their abilities • **Leadership**: Inspiring and guiding individuals and groups • **Influence**: Wielding effective tactics for persuasion • **Communication**: Listening openly and sending convincing messages • **Change catalyst**: Initiating or managing change • **Conflict management**: Negotiating and resolving disagreements • **Building Bonds**: Nurturing instrumental relationships • **Teamwork & Collaboration**: Working with others toward shared goals. Creating group synergy in pursuing collective goals.

Figure 11: Competency Framework [10]

6. CONCLUSION

Human nature can be very simple, yet very complex. An understanding and appreciation of this fact is essential to effective employee motivation and therefore effective management and leadership of result oriented organisations. The content of this article was prepared to raise management awareness and provide them with some fundamental pieces of knowledge about behaviours in organsiations and how much they are determined by perceptions and personalities.

The different learning lessons from the projects and the work we carried out to complete this paper, played a major role in clearing out what is to be 'set of foundations and pivotal ingredients' for self motivation, assertive communication [22], personal empowerment, enhancing personal behaviours [23], and interpersonal relationships.

The presented theories are considered important tools and frameworks for management to understanding human motivation. The presented lessons, overall, should assist in formulating an effective learning contract for management to understanding the rudiments for building complementary teams, concerned with methods, systems, and procedures and at the same time with direction and results.

To acquire a functional balance, management need to exercise the weaker side of the *organisational brain*. For example, a team with left-brain skills should include individuals with right-brain

minded, who could participate creatively in problem solving, and facing the challenges of contemporary projects.

Unless they are internally motivated, employees in organisations with superior systems and procedures and detailed job descriptions, may suffer performance challenges if things are excessively mechanical and formal. Management role lies in accomplishing organisation wide shared common vision, purpose, and sense of mission.

ACKNOWLEDGEMENT

The author would like to thank Ray, C., Cliff, E., Thomson, A., and McCarthy, P. from Warwick University for their feedback and input on the overall content of this paper.

REFERENCES

[44] Covey, S.R. The 7 Habit of Highly Effective People: Restoring the Character Ethic. UK: Simon & Schuster, 1989.

[45] Covey, S.R. The 8th Habit: From Effectiveness to Greatness. UK: Simon & Schuster, 2004.

[46] Jones, G.R., George, J.M., & Hill, C.W.L. Contemporary Management (2nd ed.). Boston: McGraw-Hill, 2000.

[47] Potts, M. Whole Brain in Leadership, 2002 [Online]. UK: Jasper associates. Available from: http://www.aja4hr.co.uk/testing/whole_brain.asp [Accessed 3 July 2009].

[48] Heller, R. Right and left-brain management styles, 2002 [Online] http://www.management-issues.com/2006/12/22/opinion/right-and-left-brain-management-styles.asp [Accessed 1 August 2009].

[49] Leonard, D. & Straus, S. (1997) 'Putting your company's whole brain to work', Harvard Business Review, , 1997, 75(4), pp. 111-121.

[50] Cohen, E. Left-Brain Staff Management Strategies for Right-Brain Firms, STEP Magazine, 2008 [Online]. http://www.stepinsidedesign.com/ST-EPMagazine/Article/28887 [Accessed 1 August 2009].

[51] Lock, C. Motivation [Online]. Internet Marketing Resource Center, 2001. Available from: http://www.i-m-r-c.com/article/lock8.htm [Accessed 3 March 2009].

[52] Person, E., Figueira, S. & Fonagy, P. (Editors) On Freud's 'Creative Writers and Day-dreaming'. USA: Yale University Press, 1995.

[53] Herrmann, N. (1996) The Whole Brain Business Book. New York: McGraw-Hill, 1996, cited in: Potts [4].

[54] eDison. Emotional Intelligence, 2005 [Online]. UK: eDison Personal Development LTD. Available from: http://www.edisonuk.com/emotional_intelligence.htm [Accessed 26 March 2005]

[55] McGregor, D. The Human Side of Enterprise. New York: McGraw-Hill, 1960.

[56] Newstrom, J. W., & Davis, K. Organizational Behavior Human Behavior at Work. (11th ed.). New York: McGraw-Hill Higher Education, 2002.

[57] Maslow, A.H. (1943) 'A theory of human motivation'. Psychological Review [Online], 50, pp.370-396. Available from: http://psychclassics.yorku.ca/Maslow/mo-tivation.htm [Accessed 5 March 2009].

[58] Herzberg, F. One More Time: How Do You Motivate Employees?, USA: Harvard Business School Press, 1987.

[59] Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). The motivation to work (2nd ed.). New York: John Wiley & Sons.

[60] Vroom, V. H. Work and motivation. New York: John Wiley & Sons, 1964.

[61] Blumberg, M. & Pringle, C.D. (1982) 'The Missing Opportunity in Organisational Research: Some implications for a Theory of Work Performance', Academy of Management Review, 1982, 7, pp. 560-567.

[62] Keuning, D. Management: A contemporary Approach. London: Pitman Publishing, 1998.

[63] Mullins, L.J. Management and Organisational Behaviour (4th ed.). London: Pitman Publishing, 1996.

[64] Simons, J.A., Irwin, D.B. & Drinnien, B.A Psychology - The Search for Understanding [Online]. New York: West Publishing Company, 1987. Available from: http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip-/maslow.htm [Accessed 1st May 2009].

[65] Hagmann, J., Peter, H., Chuma, E., Ngwenya, H.J., Kibwika, P. and Krebs, K. Systemic competence development - An approach to develop the facilitation capacity to manage systemic change and

performance enhancement, 2009. [Online]. www.picoteam.org [Accessed 1 Feb 2010].

[66] Wertheim, E.G. The Importance of Effective Communication, 1998 [Online]. USA: Northeastern University, College of Business Administration. Available from:http://web.cba.neu.edu/~ewertheim/interper/commun.htm [Accessed 1 August 2009].

[67] Kagan, M. Do Something That Scares You Everyday, 2004 [Online]. Available from: http://www.extraordinary-jobs.com/V2l42.htm [Accessed 3 March 2009].

Paper

6

Succeeding with TRANSFORMATIONAL INITIATIVES [6]

Practical approaches for managing change programs

Ali M. Al-Khouri

ABSTRACT: According to exiting literature, most change programs fail to manage and/or meet the expectations of stakeholders; leading to the failure of larger strategic organisational and transformational initiatives. Undoubtedly, change management necessitates introspective planning and responsive implementation but a failure to acknowledge and manage the external stakeholder environment will undermine these efforts.

This article presents some practical frameworks for managing the delivery of change that were used collectively in different situations and contributed to the successful implementation of programs. It does not recommend any specific approach to yield successful outcomes, but it considers a range of approaches for practitioners

[6] Al-Khouri, A.M. (2010) "**Succeeding with Transformational Initiatives: Practical Approaches for Managing Change**," Management Research and Practice Journal, Vol. 2, No. 1, pp.1-24.

to take into account to assure seamless integration of programs with the formulation of overall strategy and implementation planning.

Understanding the components of each program is asserted to support organisations to better understand the people and non-technology dimensions of their projects and the need to ensure effective, consultative communications to gain and maintain support for the program of change.

Key words: *People Management, Change Management Tactics*.

1. INTRODUCTION

THE global business environment is changing faster than ever. We are living in an era where organisations constantly need to be increasingly dynamic merely to survive and cope with the rapidly changing global economic climate. In the past, organisations assimilated change at times of stability.

The relentless pace of change of today's business world created greater anxiety, conflict and risk but also presents amplified opportunities to those organisations able to anticipate and respond. The literature is full of publications that attempted to explain what this means for organisations and business strategies. Advancements in the field of information technology in this 'Age of Access' (Wacker & Taylor, 1997), political change, government legislation, financial options and global markets, are all examples of such change forces.

The only constant in business is change, and the role of management is to continually monitor and anticipate change in their operating environment and plan and implement a rolling program of initiatives to respond to strategic challenges.

This article puts forward a principle thinking that transformational programs have higher success rates if the overall program strategy is carefully designed and aligned with change management disciplines. With this objective, it presents some practical

approaches* that management should employ when going about change programs.

They represent standardized methods and processes to facilitate efficient and prompt handling of change, and maintaining proper balance between the need for change and stability and avoid the potential detrimental impact of too much change, "change fatigue".

The article is structured as follows. First, a review of the literature is provided to shed light on some general challenges organisations face when implementing transformational programs. Building on the identified challenges in the literature, several methods are then proposed to enhance situational understanding and prompt formulating proactive actions. The article is then concluded with a reflection and some learned lessons.

2. TRANSFORMATIONAL PROJECTS AND THE PEOPLE DIMENSION

Given the challenges of innovation, and implementation, it is not surprising to find very high failure rate among transformational projects, which typically require extensive organisational change. Hundreds of studies have shown that such projects have been disappointing and have not delivered the expected benefits (Cooke, et al., 2001; Heeks, 2003; Huber, 2003; Shetty, 2003; Standish Group, 2003; Tatnall, 2005).

* The discussed approaches were put into practice by the author in several transformational projects where he was involved in the past 10 years.

Among the widely quoted factors contributing to failure is that organisations tend to treat such projects from pure technological perspectives, and not give sufficient attention to other organisational issues especially organisational inertia and resistance to change.

As depicted in Fig. 1, the literature shows that technology can contribute as little as 15 percent to the overall success of projects, where as the remaining 85 percent is dependent on bigger organisational issues related to people and management.

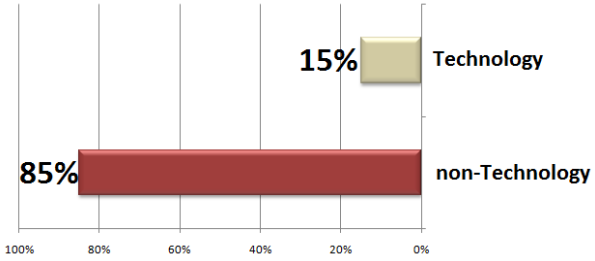


Fig. 1 critical success factors - technology vs. non-technology

Resistance to change both at individual and organisational levels appears to be a common phenomenon. Due to insufficient information, employees may not perceive the need for the change, or even if they do, they may resist the change because of fears related for example, to job security, de-skilling, greater management control, loss of job or of individual control over work (Burnes, 2000; Senge, 1990).

According to a study conducted for Deloitte & Touche Consulting, organisations face a wide range of issues and obstacles during implementation that can remain until they start using the systems (Mullins, 1996). These problems were categorized into three groups: people issues, process, and technology as illustrated in Table I.

The most common problem according to the study is related to people. Table II further elaborates on reasons behind individual and organisational resistance.

Table I: Common problems related to people, implementation, and technology

People related	Implementation process related	Technology related
• Change management • Capabilities of internal staff • Problems with the project team • Training • Allocating and prioritizing resources • Managing and working with consultants • Ownership of problems and benefits • Discipline (commitment to the project)	• Project management • Difficulty reengineering business processes • Transitioning from one stage of the project to the next • Reaching goals and realising benefits	• Software functionality • Setup of reports • Managing upgrades or enhancements to the software • Managing the assorted applications in the ERP packages • Preparing data for use in the ERP system

Table II : Common Reasons for Individual and Organisational Resistance

Common reasons for individual resistance	
Perceptions:	people's own perceptions can lead to a biased view of a particular situation, which fits into a person's own perception of reality, and subsequently, cause resistance to change.
Habit:	people tend to respond to situation in accustomed manner as a guide for decision making. If a habit is well established, then a change program that requires changing such habits may well be resisted.
Loss of Freedom:	If the change is seen as likely to increase control.
Economic implications:	when a change is perceived to reduce pay or other rewards, or a threat to their job security.
Security:	people tend to feel a sense of security and comfortability in the old way of doing things, and retain them. Resistance is likely to happen if the proposed change requires dealing with new and unfamiliar ideas and methods.
Fear of the unknown:	many change programs tend to present a degree of uncertainty which in turn leads to anxiety and fear.
Main reasons for organisational resistance	
Maintaining stability:	when organisations attempt to narrow the definitions of existing duties and responsibilities, already established rules and procedures.
Investment in resources:	When a change requires large resources (people, technology, equipment, buildings) which may already be committed to the execution of other strategies.
Past contracts or agreements:	contracts or agreements with other parties would certainly limit changes in behaviour, and the scope of change being introduced.
Threats to power and influence:	change may threaten the power structure in the organisation of certain groups such as their control over decisions, resources and information. Therefore, managers may well resist such change that threats their power (what they perceive as their territorial rights) in their own positions.

Adopted from: Mullins, 1996.

In light of what was presented above as common sources of resistance, management must anticipate and address the

organisational issues that arise predominantly from shifts in staffing, function, power, and organisational culture (Christensen & Overdorf, 2000; Davenport, 2000; Hammer, 2000; Schneider, 1999). Change programs often fail when organisations attempt to 'sell' change to their employees as a way of accelerating 'agreement' and implementation.

The evidence suggests that successful change programs adopt a more collegial approach assuring that the need for and nature of the required change is understood and accepted and that delivery is managed in a realistic, achievable and measurable way that allows people to not only cope effectively with it but be supportive and effective as agents of delivery.

Change programs need to be managed as an integrated whole and should give considerable attention to consultative communications to gain support for the reasons for the change. This in turn should create a sense of ownership and familiarity among the people affected and encourage effective participation in planning and implementation phases.

In a nutshell, if organisations expect to succeed with their transformational programs, they must have clear and well-developed change-management plan as an integral component of their implementation strategies.

The following sections present some proposed frameworks and approaches to manage change programs; largely determined by the challenge factors presented in this section (i.e., Tables I and II).

3. THE CHANGE MANAGEMENT APPROACH

Change management usually follows five stages:

(1) **recognition** of a trigger indicating that change is needed;

(2) **clarification** of the outcome, or "where we want to be at";

(3) **planning** how to achieve the change;

(4) accomplishment of the **transition**; and

(5) **maintenance** to ensure the change is lasting.

As illustrated in Fig. 2, management need to heed that in a change process, the structure, objectives, and performance measures must be shaped based on the mission and the strategic direction which should in turn, guide the decisions, activities and the outcomes. The outcomes are then measured against the overall mission and strategic objectives as well as performance expectations.

To reap maximum benefits, organisation will need to develop a culture supported by strategic leadership that alley's fears and effective performance management regimes that encourage and reward innovative and creative contributions from employees throughout the organisation.

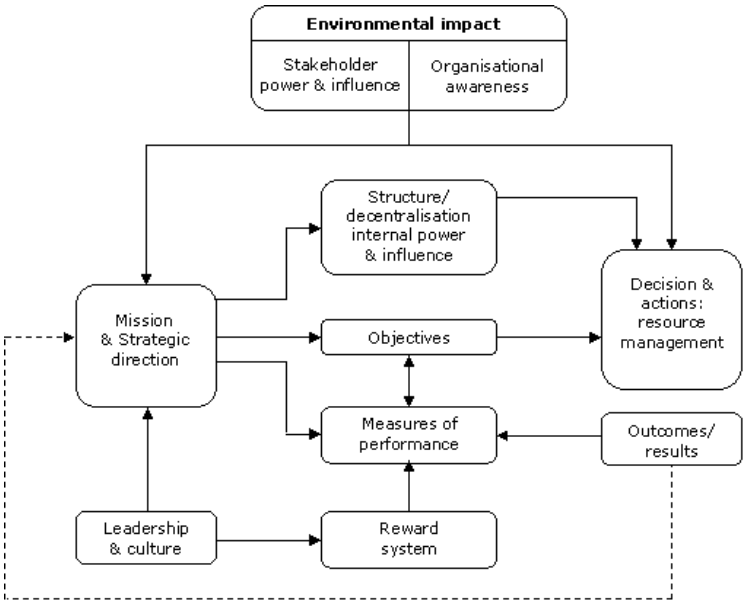


Fig. 2 the strategic change process - Source: Thompson (2003), p. 856

In simple terms, the change management approach recommended in this paper consists of three phases:

(1) identifying the factors influencing the change (recognition and clarification);

(2) planning and executing the change strategy (planning and transition);

(3) evaluating the change program (measurement and maintenance).

Fig. 3 shows a graphical representation of these three items, and the possible techniques that can be used within each of them. Each of these is discussed in detail in the next sections.

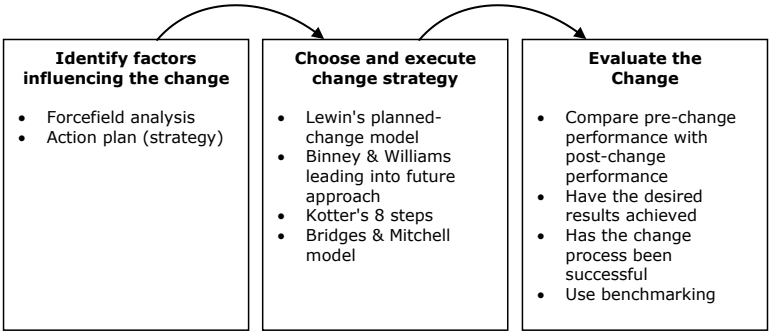


Fig. 3 the proposed change program

3.1 Identifying the Factors Influencing the Change

This phase is concerned with analyzing and understanding the factors that drive the need for change and identifying those factors that may prevent or challenge the organisation from successful implementation. Lewin's (1951) force field analysis model can be used to analyze the driving forces and the restraining forces to the proposed change, in order to determine the magnitude of the gap between the organisation's present and desired states.

See also Fig. 4. It is argued that this approach can provide new insights into the evaluation and implementation of corporate strategies. Lewin's force field analysis is particularly helpful for establishing a holistic view of the change situation in terms of the

driving and restraining forces. This analysis will in turn inform the necessary responses (Thompson, 2003).

Fig. 4 depicts a force field analysis conducted for a new Enterprise Resource Planning (ERP) system that was planned to be introduced in one of the orgainisations.

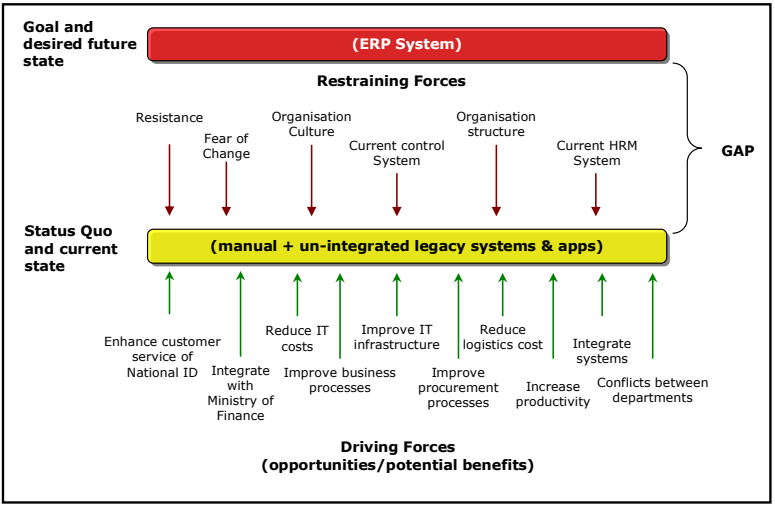


Fig. 4 force field analysis

Looking at the model from the outset, we can obviously spot that the ERP system will affect practically almost all aspects of organisational functions, including the current organisational control systems, structure, culture, and the human resource management system. The new system will also bring alterations in the ways managers' carryout critical tasks of planning, organizing, controlling, and the way they perform their managerial roles.

In summary the change will be wide reaching impacting structure, organisation, infrastructure and people. As such, this change is not only complex but also has the potential of disrupting the status quo. It poses an immense threat, promoting resistance to alter any work relationships and procedures if not managed effectively could reduce the performance of the organisation.

As shown in Fig. 5, management therefore needs to heed the relation between change, politics and conflicts in an organisation setting.

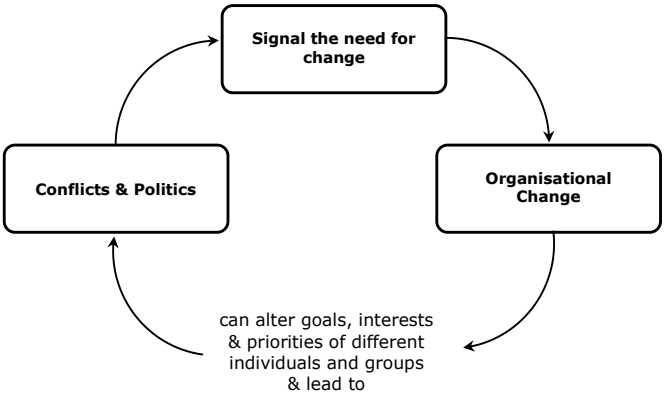


Fig. 5 the relation between organisation conflict, politics, and change - Adopted from Jones et al. (2003), p.595

Undoubtedly, difference in attitudes towards the proposed changes will consequently result in resistance if the employee's interests and power are perceived to be threatened. Managers at all levels usually fight to protect their power and control over resources. People often resist change because change brings

uncertainty. IT systems may be resisted for instance, because end-users may be uncertain about their abilities to use it and interact with it and fears that related efficiency savings will result in fewer jobs.

Going back to the force field analysis of implementing the ERP system depicted in Figure 4, the project team attempted to narrow down the gap between the current and future state. The following guidelines, which in turn provided the structure to enable change agents to anticipate issues and draft an action plan of possible responses in advance:

- Adding/supporting the forces pushing a project,
- Address eliminate, mitigate or weaken existing restraining forces ,
- Anticipate, address, eliminate, mitigate or weaken new restraining forces.

Table III shows a different view of the IT (ERP) system benefits, looking at it from both tangible and intangible viewpoints.

Table III: Tangible and intangible benefits of changing to an IT system

Tangibles	Intangibles
• Improved productivity of process and personnel • Lowering the cost of products and services purchased • Paper and postage cost reductions • Inventory reduction • Lead time reduction • Reduced stock obsolescence • Faster product / service look-up and ordering saving time and money • Automated ordering and payment, lowering payment processing and paper costs	• Increases organisational transparency and responsibility • Increased morale, • Improved job satisfaction, • Embedding a culture of change, • Staff feeling more valued • Accurate and faster access to data for timely decisions, • Can reach more vendors, producing more competitive bids, • Improved customer response • Saves enormous time and effort in data entry • More controls thereby lowering the risk of mis-utilisation of resources • Facilitates strategic planning • Uniform reporting according to global standards

Often the most common solution organisations opt for is to increase or support the forces pushing the project. However, trying to force change through the organisation may cause its own problems. In practice, it is recommended that organisations work on to reduce the restraining forces, instead of increasing the driving forces. Increasing driving forces would simply result in the escalation of the resisting forces against the change.

Obviously, the group supporting the status quo i.e., resisting the change, are usually highly motivated. Imposing change without addressing the causes of resistance will further alienate these groups and further risk successful implementation.

Experience suggests that organisations need to develop an action list to eliminate, mitigate or weaken existing restraining forces. As depicted in Table IV, the action plan may include items such as improving communication so all organisation members are aware of the need for change and the nature of the changes being made.

Empowering employees and inviting them to participate in the planning for change can play a key role in allaying employees' fears and overcome potential resistance (Burnes, 2000; Carnall, 2003; Jones et al., 2003; Thompson, 2003). This action plan can be considered as a starting point and a subset of the overall change management strategy. The next section presents some pragmatic change management models and methods that could be used to shape up the overall change strategy.

Table IV: Action Plan (example)

Key Restraining Forces	**Actions to reduce/eliminate**
• Fear of change • Organisation culture • Current control systems • Organisation structure • Current HRM system	• Communication, and involvement • Improve trust through effective communication • Empower employees
Key Drivers	**Actions to strengthen**
• Increase productivity • Integrate systems • Improve business processes	• Training & Development programs • Continuous improvement

3.2 Planning and executing the change strategy

Carnall (2003) identifies three conditions necessary for effective change: awareness, capability, and involvement as depicted in Fig. 6. Awareness requires that those affected must understand the change, its objectives, the impact on their role. . They then need to be energized and prepared to acquire the capabilities to handle the new tasks and new work situations. The third condition is about their involvement in the change process and their contribution to successful implementation.

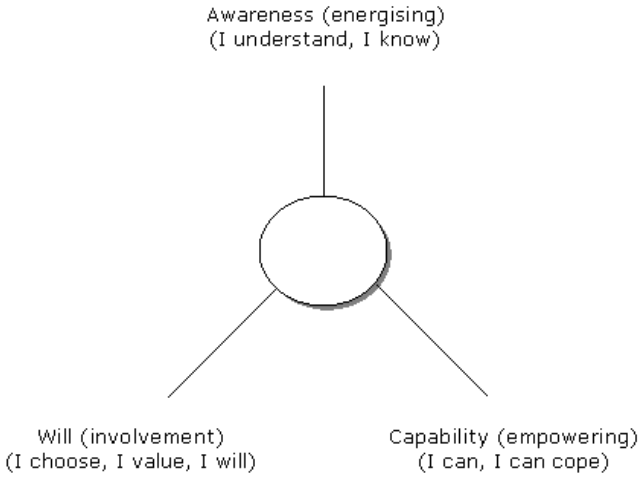


Fig. 6 necessary conditions for effective change

Adopted from Carnall (2003)

The work of Clarke & Manton (1997) elaborates further on the conditions for effective change management. They argue that organisations tend to pay much attention to the process of change, and forget about the key success factors that wave through the change process to successfully manage the change. The key success factors they referred are (also depicted in Fig. 7):

(1) Commitment: recognising change as an integral part of the organisation, and taking ownership of the project particularly at senior management level,

(2) Social & cultural: concerned with the people element of change e.g., behaviour, perception, and attitudes towards change,

(3) Communication: both internal/external,

(4) Tools & methodology: concerned with project management, performance & process measurement, and the underlying knowledge needed to ensure that the change can take place effectively,

(5) Interactions: methods for dealing with interactions within the organisation e.g., managing the balance and transition form the current state to the future state.

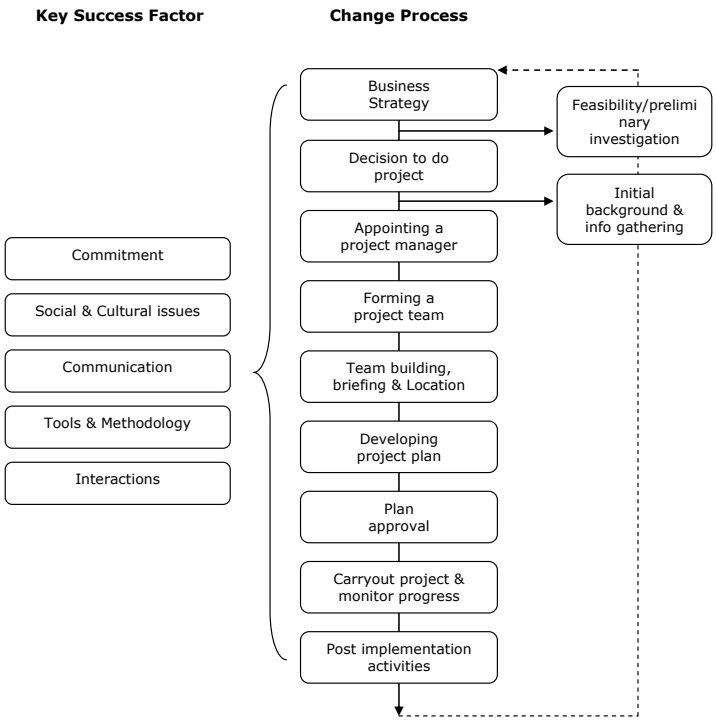


Fig. 7: best practice model for change

Taking into account the issues explored so far in this article, it is clearly important to have a clearly defined strategy for the initiation, planning and implementation of the change program. A change management program must be based on a clear understanding of strategy, outcomes, tasks, and deadlines.

Transformational programs normally require extraordinary project management and leadership, as they can easily become uncontrollable and result in missed deadlines and lost benefits. This is not a mechanical process however and human behavior at work must be taken into account and managed in order to assure success.

Baring in mind Clarke & Manton's (1997) key success factors, the proposed change program elements discussed in the following sections are designed to address key factors such as communication, awareness, involvement, and commitment. Some tools are also presented that are quarreled to facilitate the proposed change process.

3.2.1 Lewin's planned change process

Lewin's planned change process is closely associated with his Force Field Analysis and serves as a general framework on which the change program can be designed and executed. The three staged model of change include: unfreezing the current situation, moving, and then refreezing the new situation (a new status quo). See also Fig. 8.

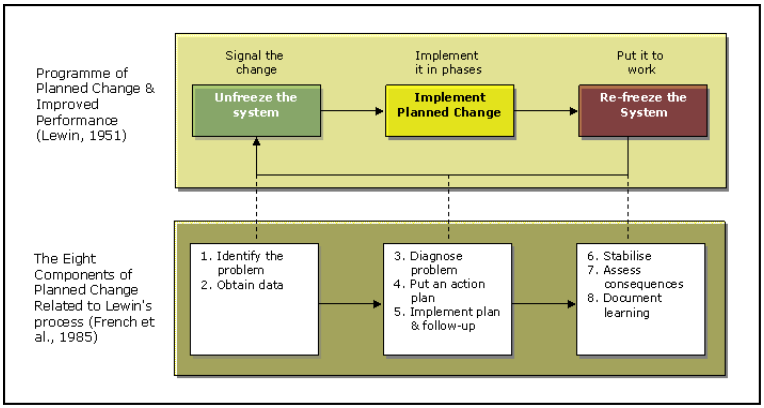


Fig. 8 the planned change process - Based on the program of planned change and improved performance developed by Lewin (1951), and the Eight Components of planned change

The power of Lewin's model does not lay in a formal propositional kind of theory but in the ability to build "models" of processes that can draw attention to the right kinds of variables that needed to be conceptualized and observed. Following are some further elaborations on the three stages.

(1) Unfreezing: The essence of this stage is to reduce the forces that maintain the organisation's behaviour at its present level. It enables a better understanding of the change program and the need for it e.g., through education, training and development program and team building that secures acceptance by helping managers and employees understand the need for the change

(2) Changing (Movement /implementing): having analysed the present situation, the identified solutions are put into action to support the change program e.g., by changing organisation structure, roles or processes and introducing performance management systems that recognize particular progress and individual and team contributions.

(3) Refreeze: stabilizes the change program at a new state of equilibrium in order to ensure that the new ways of working are embedded, maintained and cemented from regression e.g., through new recruitment, induction programs, performance management systems and cultural reinforcement through the creation of new norms and behaviours.

Each of these interventions is intended to make organisational members address that level's need for change, heighten their awareness of their own behavioural patterns, and make them more open to the change process. This model is found sensibly practical for the following reasons:

- allows the process to be understood,
- provides milestones to evaluate progress towards change,
- allows those undergoing the change process to recognize the stage they have reached,
- allows the process of change to be discussed as well as the outcomes, and
- allows a better understanding of the process in each change phase that in turn, makes far easier progress in the future change.

An alternate approach identified in the literature as the central paradox that complements Lewin's Model to working with change through leading and learning was explored by Binney & Williams (1997).

3.2.2 Binney & Williams leaning into future approach

Normally, orgnaisations tend to implement change programs either from the top down or from the bottom up (Binney & Williams, 1997; Burnes, 2004; Carnall, 2003; Cummings & Worley, 1997). The first approach is where top management identify the need for change, put solutions, and then move to implement the change. This approach views organisations as machines to have things done to them.

The emphasis in the second approach is on participation and on keeping people informed about what is going on. This second approach views organisations as living systems where potential for change is realised, generally at levels, and not just driven from the top. A major advantage of this approach is that it reduces uncertainty and resistance to change as it promotes responsiveness and encourage learning.

Experience shows that organisations can use both top down and bottom up approaches in their change programs, to create a middle road between a living organism view of organisation and the machine view as illustrated in Table V.

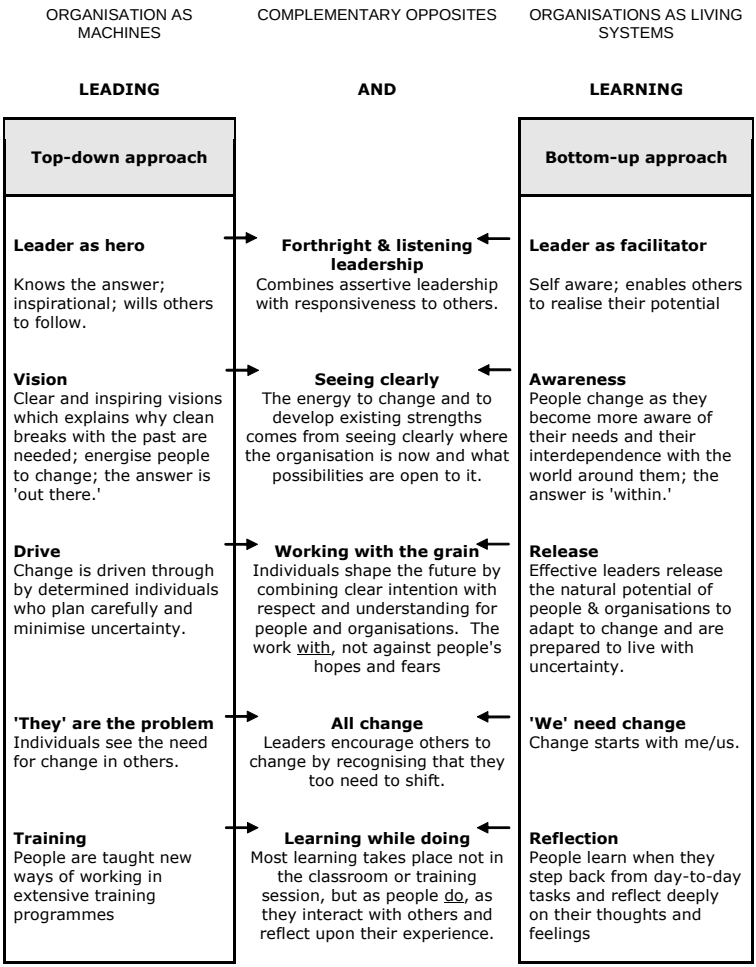
Successful change implementation depends heavily on the management style and behaviour. Managers need to understand through focused education programs that their role should be to facilitate the change and appreciate human differences, and not just use their hierarchical authorities to impose the change.

The proposed change management strategy should fundamentally promote and encourage participative style of managerial behaviour, where non-managerial employees are encouraged to be involved in the change implementation and kept fully informed of the change progress, to increase the likelihood of their acceptance of the change.

Middle managers and first line managers should be the first to be involved in the change program and get their buy-ins, who should

in turn become the change agents and take the responsibility to involve their subordinates. The overall change strategy will be that everybody becomes a change agent, who will motivate and energize each other to change.

Table V: leading into the future approach



3.2.3 Kotter's Eight Stages Process

Kotter's (1996) eight stages is another approach for management to consider in their change management programs. This approach which is melded it with the work of Binney & Williams leaning into future approach, is viewed to be more of a mechanistic approach to change (Binney & Williams, 1997). It was developed based on eight common errors organisations make in transformation programs, as depicted in Table VI.

It is recognised as a well-developed change process, and provides a blueprint for the role and attributes of change agents. It is important to stress here that these eights stages are not checklists but rather processes or interlocking stages in a journey. Each of the stages is associated with a fundamental error that undermines major change management effort as illustrated in Table VI. See also Table A-I in the Annex.

The first four steps in Kotter's process help to break through the status quo and get people to start thinking about the need for change. New ideas and practices carry through in the next three stages. The last stage fully incorporates the changes in the organisational culture, as the change becomes institutionalised. Mismanaging any one of these steps can undermine an otherwise well-conceived vision.

Table VI: Kotter's eight stage approach to change management.

Source: Kotter (1996)

Common Errors:	**Consequences:**
• Allowing too much complacency • Failing to create a sufficiently powerful guiding coalition • Underestimating the power of vision • Undercommunicating the vision • Permitting obstacles to block the new vision • Failing to create short term wins • Declaring victory too soon • Neglecting to anchor changes firmly in the corporate culture	• New strategies are not implemented well • Industry and business do not achieve expected human response • Reengineering takes too long and costs too much for business and industry to participate • Downsizing does not get costs under control • Quality programs do not deliver hoped for results

The Eight Steps:

1. Establishing A Sense Of Urgency
A sense of urgency is crucial in the initial stages of the process. It must primarily overcome any sense of complacency within the organisation.

2. Creating the Guiding Coalition
A core group with enough power to lead the change through the transition state is required to drive the process

3. Developing a Vision and Strategy
A vision needs to be created in order to direct the course of change. In conjunction with the vision, there should be a strategy designed to achieve the vision.

4. Communicating the Change Vision
The new vision and strategies for implementation of the change process need to be continually communicated using all practical means

5. Empowering Broad-Based Action
How to create an environment in which the actions required for change can take place. Critical empowering actions need to be taken to allow change to occur.

6. Generating Short-Term Wins
Positive feedback in the early stages of the project is a critical success factor and plays an important part in sustaining the vision e.g., through the achievement of interim targets; short-term wins.

7. Consolidating Gains and Producing More Change
Systems, structures, and policies may be further adapted to be in line with the vision.

8. Anchoring New Approaches in the Culture
Maintaining the results of change in organisational, group and individual culture is crucial e.g., creating better performance through effective management and leadership development and succession.

3.2.4 Bridges and Mitchell Model

As explained earlier that the announcement of change normally triggers a range of emotional reactions. People may feel that they are no longer valued, lose their identity as employees and fear loosing some of their expertise and sense of control.

Bridges and Mitchell's (2000) model provides a good framework to manage the human dimension of change transition to the new state and theorizes three phases to model change from a transformational leadership perspective. The prevalent advantage

of Bridges' model, is that it accounts for the change in terms of enormity of change already underway, the psychological stressors, and implementation time.

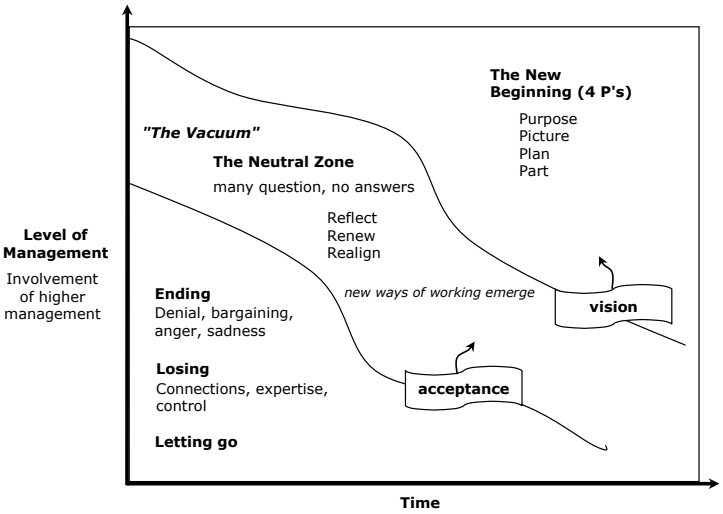


Fig. 9: managing transition - Bridges and Mitchell model (2000)

Depicted in Fig. 9, the model is built around the endorsement of understanding of what change does to employees and what employees in transition can do to an organisation, and how to minimize the distress and disruptions caused by change. It argues that people in successful transition must be allowed to undergo three separate transition states, and they are:

(1) Saying goodbye: The first requirement is that people have to let go of behaviours and the way things used to be,

(2) Shifting into Neutral zone: they then enter the in-between state of transition; the neutral zone, which is full of uncertainty and confusion and is where the creativity and energy of transition are found and the real transformation takes place,

(3) Moving forward: this state requires people to begin behaving in a new way, where they can now be more receptive to the details of the change.

Fig. 10 stages of change management

NOTE: Not sure this works or is necessary

It is clear that change management group and the cross functional team leaders can use this model to manage change transition. They can use this model to assess their teams place in this three-part transition process, to bring them through the particular transition that they face, for instance by:

- explaining the reasons for change on regular basis and why it must happen;
- setting boundaries for teams to develop frameworks;
- setting milestones and tasks to team implementation;
- allowing everyone to see how they add value; and
- picking up worries and concerns and respond to them appropriately.

Table A-II in the Annex provides a more detailed view of the possible actions that may be considered in the change management process.

Having outlined key models and methods for managing change in transformational programs, the next section will address some approaches for evaluating and measuring change results and improvements.

3.3 Evaluation of the Change Program & Improvement Measurement

"To measure it is to know. If you cannot measure it, you can not improve it...."

Lord Kelvin

Having explored the first two components of the proposed change management phases in this article, the third component is concerned with the evaluation of the change process, in order to measure its success in reaching its goals and objectives.

Evaluation and feedback play an equally vital role for the organisation. Establishing a monitoring and evaluation system provides a powerful tool for program managers to determine program strengths and weaknesses. The system should include indicators that measure key components of the strategy. The measurement process could be aligned with Lewin's freeze-unfreeze-freeze model.

One of the greatest difficulties, however, in transformational programs lies in the developing cost and benefit analysis, trying to quantity what the organisation will get out of the investment, or more precisely what the organisation is able to do more effectively as a result of the investment.

In practice it may be compared to measuring what the benefits are of putting electricity into a building, some are clear and tangible such as heat and light. Others intangible such as the emotional security and comfort residents derive from simply

knowing it is there The actual benefits of many transformational projects are enormous but most are very difficult to measure (Burnes, 2004). They range from better quality information, to better systems that enable the organisation to adapt and support the many changes occurring in the environment.

Different measurement tools and techniques can be used to assess the success of the change program, such as output/outcome measures, interim measures, input measures, balanced scorecard, or even benchmarking with other organisation performance on specific dimensions. The force field analysis presented earlier can be used as the basis for measurement since it outlines the potential benefits of the proposed change and future state.

Just to recap the benefits of the example IT system (Table III above), the introduction of the new technology had two main motives; strategic and economic. The strategic aspects included systems integration and process improvement, sharing of information and increased visibility of corporate data, increased productivity, and an improved IT infrastructure. The economic aspect aimed to improve HR and financial management, reduce IT cost, and improve procurements processes. Further examples are provided in Table A-III in the annex.

However, these narrow approaches can be misleading (Carnall, 2003). To avoid narrow or single measure of effectiveness, Carnall (2003) proposes a matrix based on a balanced set of indicators over four quadrants with which organisational effectiveness can be assessed, as depicted in Fig. 11.

Recognizing the quantitative measures as an important analytical approach, the matrix emphasizes the importance of qualitative measurements which are more about experience, intuition such as in judgement of employees' satisfaction, attitudes, management style, adaptability, and management development.

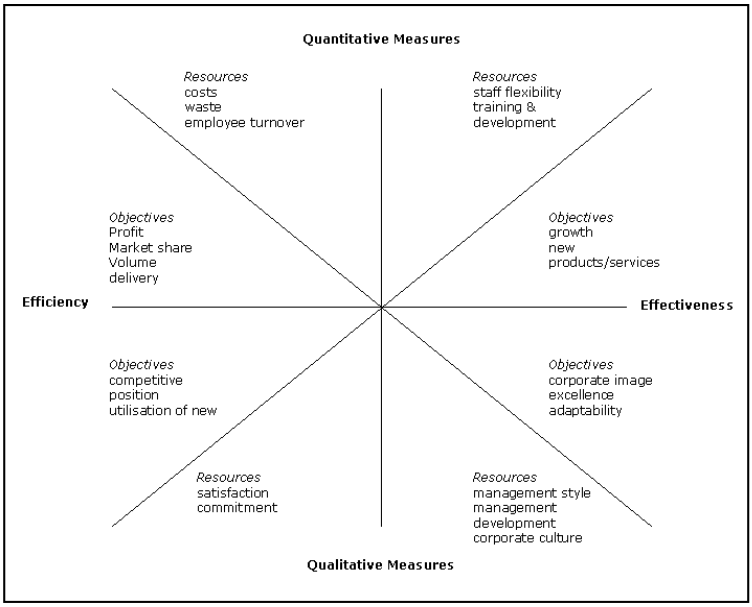


Fig. 11 the effectiveness matrix - Source: Carnall (2003), p.191.

Another measurement approach that may be considered is balanced scorecard as depicted in Fig. 12. Balanced scorecard can be used to measure performance at departmental or organisational level as it uses different perspectives to give a balanced and transparent picture of the current performance and the drivers of future performance (Kaplan & Norton, 1996). This example looks at four main perspectives: financial, customer, business process, and innovation.

It enables organisation to monitor financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they would need for future growth. The balanced scorecard methodology is more than a set of metrics; it is a system of linked objectives, measurements, targets, and initiatives that collectively communicate and measure an organisation's business strategy (Berkman, 2002; Moshonas, 2002).

Key to the success of such measures is the definition of the required headline measures and relative importance that they have to the overall measure of performance and success.

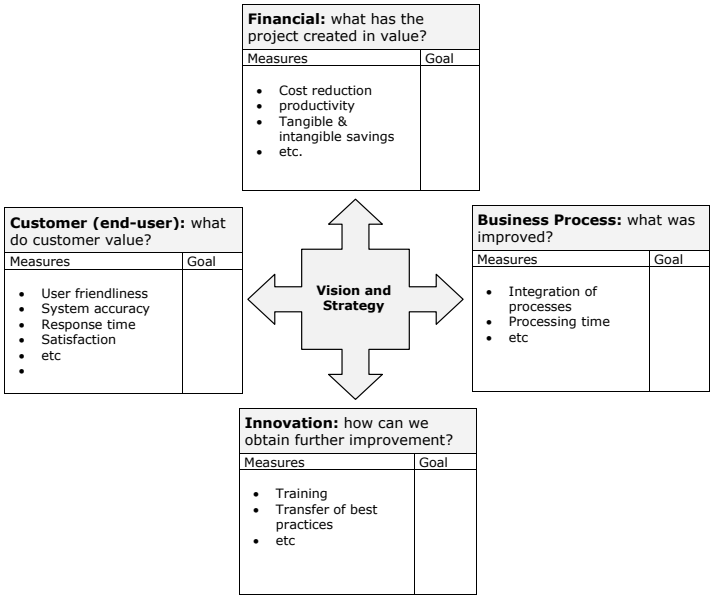


Fig. 12 balanced scorecard example

Observation of organisations in practice suggests that they tend to fail at implementing effective measurement. Too often, the focus is on accepted, technical measures, rather than on the specific needs of key stakeholders and the desired outcomes. If the performance measurement system does not focus on a clear direction, the measurement system itself will enforce the wrong actions and behaviours.

The presented tools above can provide the framework for management to keep the entire organisation focused on the right targets and moving in the right direction.

The next section outlines some views and reflections for management consideration and some key learning points gained from experiences in different transformational programs.

4. Some important observations

> *"The world you see is what you gave it, nothing more than that. But though it is no more than that, it is not less. Therefore, to you it is important. It is witness to your state of mind, the outside picture of an inward condition. As a man thinketh, so does he perceive. Therefore, seek not to change the world, but choose to change your mind about the world."*
>
> ***Helen Schucman (1909-1981)***

To paraphrase Schucman "perception is reality". People tend to formulate opinions about particular events and react to them based on their own judgments and formulated opinions. This can be mapped as shown in the character flow and situational thinking model depicted in Fig. 13.

For instance, when people become angry, their initial reaction to an event (such as failure to produce information or a seemingly unreasonable request) falls into character flow thinking. This makes us follow our own interpretation of the situation without exploring the reasons for that particular event.

This model is a crucial piece of knowledge that needs to be appreciated by the change management teams. Anticipating the reaction of those impacted by change and addressing the causes and consequences of these reactions will help lead people towards a more situational or rational responses and assure acceptance.

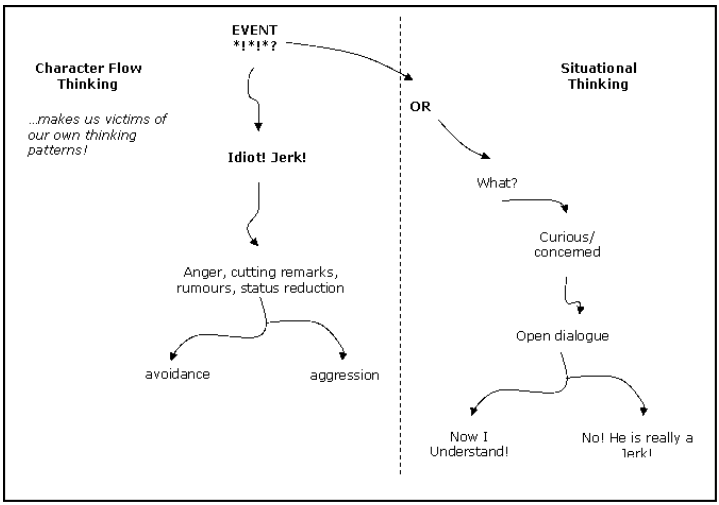


Fig. 13 character flow vs situational thinking

Our personal philosophies often influence the motivational approaches we normally select to deal with such situations. Such philosophies or attitudes towards others can be mapped to Theory X and Theory Y (McGregor, 1960). People in Theory X have negative perceptions of other people's potentials and attitudes, whereas those in Theory Y have an opposite view, and assume that other people can be self-directing and seek responsibility, as illustrated in Table VII.

Table VII: Theory X & Theory Y perceptions

Theory X	Theory Y
The average employee is lazy, dislikes work, and will try to do as little as possible	Employees are not inherently lazy. Given the chance, employees will do what is good for the organisation.
To ensure that employees work hard, managers should closely supervise employees	To allow employees to work in the organisation's interest, managers must create a work setting that provides opportunities for workers to exercise initiatives and self direction.
Mangers should create strict work rules and implement a well defined system of rewards and punishments to control employees	Managers should decentralise authority to employees and make sure employees have the resources necessary to achieve organisational goals

Source: Jones et al. (2003), pp.56.

Undoubtedly, our behavior is determined by our beliefs, habits, and needs. To learn best, we may be required to confront or even modify our beliefs and perceptions. This is to say that motivation is a hidden power that stems from a deep rooted belief in what we try to do; it is strongest when it comes from our inner values (Lock, 2001).

Appreciation of the Dilts pyramid (depicted in Fig. 14) should empower us to better understand ourselves and others and enable us to change and/or further improve our performance and particular behaviors. The model illustrates the factors that motivates particular behaviors, where the lower factors are easier to change and difficult to sustain, and vice versa.

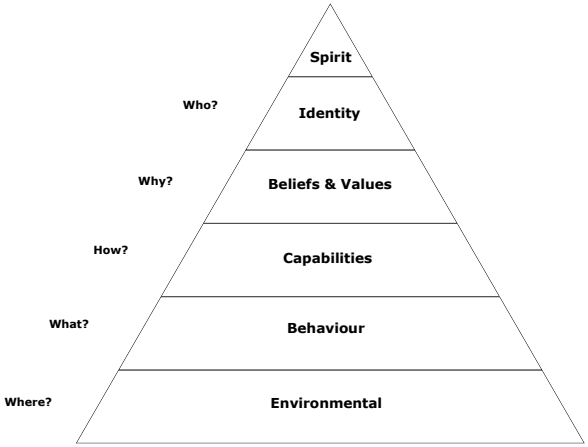


Fig 14 Robert Dilts model

Analyzing beliefs, values, and assumptions of those who are seen as the promoters of the organisation's culture, can be a good starting point towards successful change management. The different learning lessons from various projects implementation, called us as management to turn our assumptions about change management upside down, and open our eyes to facts that we often do not consider, which was largely related to the human dimension in organisations.

We came to understand that the ability of managers to introduce successful change that yields benefits is determined by our own ability to have a clear understanding of how individuals are motivated and how they work as a team and react to one another. People need to be treated as individuals and their personal differences appreciated. All of us are individuals.

We have different personalities. We think differently, we have different needs, wants, values, expectations, and goals. We each change over time as well. Therefore, we need to recognize people as individuals and learn to work with their individual differences. With this last statement, the paper is concluded next.

5. CONCLUSION

> *"Every morning in Africa, a gazelle wakes up. It knows that it must outrun the fastest lion or it will be killed.*
>
> *Every morning in Africa, a lion wakes up. It knows that it must out run the slowest gazelle or it will starve to death.*
>
> *It does not matter whether you are a lion or gazelle. When the sun comes up you had better be running."*
>
> **J. Anklesaria**

The full potential of information and technology will only be realized if the management of change takes into account not only the technical and economic factors, but also the human and social factors in organisations. Change is a very complex, psychological event, as it impacts each person differently and management must accept the individual nature of change (Elliott, 1990).

Most leaders come from backgrounds where technical, financial, or operational skills were paramount, and those skills provide little help when it comes to leading people through transition. Management needs to develop visions and purposes which give direction to their organisations.

Besides this the role of management is not only to plan and implement change, but to create and foster an organisational climate which encourages and sustains learning, risk-taking, and the development of a workforce that will take responsibility for the change to happen and reaches its target. This is where mere management becomes leadership.

Our experience shows that there should be no right or wrong approach to change management. As illustrated this is supported by the literature. The successful implementation of change however is dependent on the willingness and effective cooperation of the whole organisation management and non-management staff.

The proposed change management models and methods in this article helped the author implement change in a number of situations. When using these models and methods, change management teams will need to heed the nature of the environment in which their projects will operate in and adapt accordingly.

For management, the presented models and methods will enrich their understanding and equip them with essential frameworks to support their change programs. There role may be likened to that of a therapist, helping people to address their fears and accept the

change as a good thing for them and the organisation. *This is something we describe as the path of true leadership*.

ACKNOWLEDGMENT

The author would like to thank Aileen Thomson, Angela Clarke, Tony Buckley, Dee Nicholls, Frank Devine, and Willam Furse from Warwick Manufacturing Group for their invaluable contributions to this research, and Mr. Paul Ellis from PA consulting for his review of the document too. The author would like also to express his sincere gratitude to Professor J. Bal from Warwick University for his feedback on the structure and content of this article.

REFERENCES

[1] Berkman, E. (2002, May 15). How to Use the Balanced Scorecard. *CIO* Magazine. Retrieved July 12, 2009, from http://www.cio.com/archive/051502/sco-recard.html.

[2] Binney, G. & Williams, C. (1997). *Leading into The Future: Changing The Way People Change Organisations*. London: Nicholas Brealey Publishing.

[3] Bridges, W. & Mitchell, S. (2000, June). Leading Transition: A New Model for Change. *Leader to Leader Institute*, 16. Retrieved July 12, 2009, from, http://www.pfdf.org/leaderbooks/L2L/spring2000/bridges.html

[4] Burnes, B. (2000). *Managing Change: A Strategic Approach to Organisational Dynamics* (3rd ed.). New York: Prentice Hall.

[5] Burnes, B. (2004). *Managing Change*. (4th edn.). London: FT Prentice Hall.

[6] Carnall, C.A. (2003). *Managing Change in Organisations* (4th ed.). NY, USA: Prentice Hall.

[7] Christensen, C.M. & Overdorf, M. (2000). Meeting the challenge of disruptive change. *Harvard Business Review*, 78(2), 66-76.

[8] Clarke, A. and Manton, S. (1997). A benchmarking tool for change management. *Business Process Management Journal*, 3(3), 248-255.

[9] Cooke, D., Gelman, L. and Peterson, W.J. (2001, May). ERP Trends. *The Conference Board*. New York. Retrieved October 3, 2009, from http://www.con-ferenceboard.ca.

[10] Cummings, T.G. & Worley, C.G. (1997). *Organisation Development and Change* (6th ed.). Cincinnati, OH, USA: South-Western College Publishing.

[11] Davenport, T.H. (2000). *Mission Critical: Realizing the Promise of Enterprise Systems*. Boston: Harvard Business School Press.

[12] DOE - US Department of Energy (2002, June) *Basic Performance Measures for Information Technology Projects* (White Paper). Retrieved November 05, 2009, from http://cio.doe.gov/ITReform/sqse/download/PE-WI-V3-011502.doc.

[13] Elliott, R.D. (1990). The challenge of managing change, *Personnel Journal*, 69(3).

[14] French, W.L. Kast, F.E. & Rosenzweig, J.E. (1985). *Understanding Human Behaviour in Organisations*. New York, USA: Harper and Row.

[15] Hammer. M. (2000, May 1). Reengineering redux. *CIO*, 13(10), 143-56.

[16] Heeks, R. (2003, January). eGovernment for Development. University of Manchester, UK. Retrieved October 3, 2009, from http://www.edevexchange.org/eG-ov/faileval.htm.

[17] Huber, N. (2003, November 5). Hitting targets? The state of UK IT project management. *ComputerWeekly*, 22-24.

[18] Jones, J., Aguirre, D. & Calderone, M. (2003, April). 10 Principles of change management. *Strategy+Business Magazine*. Retrieved July 12, 2009, from http://www.strategybusiness.com/resiliencereport/resilience/-rr00006?tid=230&pg=all.

[19] Kaplan, R.S. & Norton, D.P. (1996). *The Balanced Scorecard: Translating Strategy into Action*. Boston: Harvard Business School Press.

[20] Kotter, J.P. (1996). *Leading Change*. Boston, Massachusetts, USA: Harvard Business School Press.

[21] Lewin, K. (1951). Field theory in social science. In D. Cartwright (Ed.), *Selected Theoretical Papers*. New York, USA: Harper & Row.

[22] Lewin, K. (1974). Frontiers in group dynamics: concept, method, and reality in social science. *Human Relations*, 1, 5-41.

[23] Lock, C. (2001, March) Motivation. Retrieved July 12, 2009, from Internet Marketing Resource Center Web site http://www.i-m-r-c.com/article/lock8.htm.

[24] McGregor, D. (1960). *The Human Side of Enterprise*. New York: McGraw-Hill.

[25] Moshonas, J. (2002, May). Balanced Scorecard Lessons Learned, *DM Review Magazine*. Retrieved July 12, 2009, from http://www.dmreview.com/artic-le_sub.cfm?articleId=5398.

[26] Mullins, L.J. (1996) *Management and Organisational Behaviour* (4th ed.). London, UK: Pitman Publishing.

[27] Schneider, P. (1999). Wanted: ERPeople Skills, *CIO Magazine*, 12(10), 30-37.

[28] Senge, P.M. (1990). *Fifth Discipline: the art & practice of the learning organisation*. UK: Random House Publishing.

[29] Shetty, K.A.V. (2003, November 15). Why most e-government projects fail. *Businessline*, Chennai, p. 1.

[30] Standish Group (2003). Chaos Chronicles. Retrieved October 16, 2009, from The Standish Group Int'l Web site, www.standishgroup.com/pressarticle.php?id=2.

[31] Tatnall, A. (2005, April). Why some projects fail: reducing the risk of failure. Retrieved July 12, 2009, from Victoria University, USA Web site, http://www.business.vu.edu.au/bco6656/20051/PM5ax%20(Why%20Some%20Projects%20Fail).pdf.

[32] Thompson, J.L. (2003). *Strategic Management* (4th ed.). USA: Thomson.

[33] Wacker, W. & Taylor, T. (1997). *The 500 Year Delta*. Oxford: Capstone Books.

APPENDIX

Table A-I

Kotter's Approach with Example Actions

Task	Actions
1. establish a sense of urgency (pressure for change)	• explaining the strategic plan and the impetus for change • Communicate the Force Field analysis to show the driving forces for the change
2. form change management team	• change groups formed at each department level, • involve key opinion-formers: people to who their colleagues look for guidance, • a team approach is essential and should be multi-layered, focusing as much on the middle and front-line staff as on senior management, • to take responsibility for discrete elements of the change program and the establishment of its change agents; sub-groups, • to ensure that change-agents/sub-groups posses the necessary skills to perform and deploy the detailed change plans and activities, • get the buy-in, commitment and win the support of those need for the change to happen i.e., who have the power to dispense or withhold specific resources and information specially that most of the business processes are currently either manual or hard coded in the legacy systems logic.
3. develop shared vision and create a high level plan	• the vision must provide the purpose and direction for change • develop a shared understanding of the current state of the organisation - its strengths and weaknesses • Identify a list of milestones, or major intermediate progress points • develop actions to achieve the strategic objectives and vision • the shared understanding needs to be negotiated, agreed and owned at all levels • Obtaining agreement for change and developing pathways • Individuals who are resistant to change should not be ignored but engaged with.
4. communicate the vision and the high level plan	• communicate the plan & vision, • communication must be improved and vitalized to ensure the success of the strategy, • develop open and consistent communication channels at all levels of the organisation both formal and informal,

	• create clear channels of safe feedback, • provide information about the change, plan, review, and future state, • facilitate ownership of the change process and its outcomes, • promote a culture of collaboration, • encourage an environment of trust - quality of interaction and learning in a group or organisation can only be as good as the depth and quality of relationships between individuals, • encourage dialogues that probe assumptions, and seek to understand disagreements, • develop awareness programs to make staff aware of the need for change and win their commitment, • promote team-working and inter-departmental co-operation, • create willingness to change; involving people and sustaining momentum, • communicate, communicate and keep communicating!
5. empower and make necessary organisational change	• management structures and reporting procedures need to be looked at in advance to provide direction and support since the change may challenge existing power systems, which in turn, increase the chance of facing managerial resistance, • support Change agents, as they will be responsible for supporting others, so too they need to receive support themselves, to motivate them and energize their ability to motivate others, • reinforce desired behaviour: e.g., by increased pay or bonuses to particular types of activity or progress, and recognition, • empower employees by defining boundaries for the issues to be addressed at local, inter-departmental and steering committee level, • give responsibility and accountability for detailed design and implementation to those closest to work,
6. plan and create for short terms wins	• a careful plan for the change program, • must recognize and plan key change events and ensure that they are linked to the organisation's change goals and priorities, • offering small gifts to employees for contributions to the change initiative, • may offer salary bonuses or promotions to employees at key milestones,
7. consolidate improvements and produce more change	• use Lewin's unfreeze/change/refreeze model to Monitoring Progress: where period reviews take place in the light of change plans, • develop training programs: to provide staff with the necessary skills to use the new system,

8. institutional-ize new approaches	• promote continuous learning, • ensure sufficient pre-implementation training of those who will deliver the change, • more training and re-training, • pay attention to the development of new competencies, knowledge and specific skills to support top management, change management leaders, etc., for instance, leadership styles, staff to work as teams, where all are required to be improvers,
9. monitor progress	• identify key performance measure to be monitored throughout the life of the change project, and a mechanism to record progress, • milestones to be tracked to check progress points, • a change program team to follow up and monitor the work groups' progress, give support to the groups and to line management and to ensure that issues which crossed organisational boundaries are properly addressed, • conduct survey to provide: expression of current feelings, attitudes, and perceptions + a baseline from which to measure or assess progress from a human dimension of the change process, • ensure continuous feedback to management, so that leadership is provided throughout the change process and resources made available e.g., to provide resources for change, both financial and human.

Table A-II

Possible actions for change management process

BEGINNING	NEUTRAL ZONE	ENDING
• Ensue that people are emotionally prepared for the beginning phase, • Agree change vision • Regularly communicate the 4 P's, to explain the context of the change, details, and consequences: • Purpose: - why we have to do this; define the drivers for change - understand broader business case • Picture: - what it will look and	• No answers, mostly questions • Importance of effective communication: listening & engagement • Neutral zone is between read and make believe • An opportunity for great creativity • Through dialog, new ways of working emerge • Vision for the future created not imposed	• Often overlooked • Results from the need to understand the investment of people in the past • Understand people's fears & concerns • Encourage expression of current feelings and perceptions. • Offer counselling and support for those affected or are still in the end phase • Pay attention to potential resistance • Be aware of looses that

feel like when we reach our goal, - business workshops, - Q&A	• Reflect, renew and realign with people not for the people • Create the environment to help people launch the new beginning by articulating the new attitudes and behaviours needed to make the change work • Appropriate behaviours: active listening and body language • Value people, discuss expectations, performance management • Energize and empower people • Create the vision with people and for the people • Open, safe communications channels for feedback • Recognize individual differences • Be prepared to change yourself • Often object the process not the change	may well trigger anger and or other emotional reactions • Appreciate symptoms of grieving, while they are giving up the status quo (Promote active listening & acknowledgement (e.g., thank you, you are not alone, etc.) • Don't try to minimize the pain, rather say "I hear what you say, this is hard isn't it?" • Don't make promises that you can't keep • Don't hide from it • Give people time to get over it • Acknowledge and value contributions • Seek feedback: it allows those concerned to begin to think about how a situation can be improved. • Involve (where possible) those who are most closely affected in the change team to get their commitment & support and maintain the momentum • Consider involving key opinion-formers: people to who their colleagues look for guidance
• Plan: - step by step, how we will get there - what it will look and feel like when we reach our goal, - publish milestones - break plan into activity and apportion responsibility ownership • Part: - what you can (and need to) do to help us move forward - define roles - define how individuals and teams are valuable to the process		

Table A-III

Examples of performance measures [12]

Category	Focus	Purpose	Measure of Success
Schedule performance	• Tasks completed vs. tasks planned at a point in time.	• Assess project progress. Apply project resources.	• 100% completion of tasks on critical path; 90% all others
	• Major milestones met vs. planned.	• Measure time efficiency.	• 90% of major milestones met.
	• Revisions to approved plan.	• Understand and control project "churn."	• All revisions reviewed and approved.
	• Changes to business/ user requirements.	• Understand and manage scope and schedule.	• All changes managed through approved change process.
	• Project completion date.	• Award / penalize (depending on contract type).	• Project completed on schedule (per approved plan).
Budget performance	• Revisions to cost estimates.	• Assess and manage project cost.	• 100% of revisions are reviewed and approved.
	• Expenditure vs. budget.	• Measure cost efficiency.	• Project completed within approved cost parameters.
Compliance	• Compliance with business requirements.	• Business alignment	• Zero deviations without proper approvals.
	• Compliance with Interoperability requirements.	• Track progress towards system interoperability.	• Product works effectively within system portfolio.
	• Compliance with other specified standards.	• Alignment, interoperability, consistency.	• No significant negative findings during architect assessments.

Compliance	• Compliance with business requirements.	• Business alignment	• Zero deviations without proper approvals.
	• Compliance with Interoperability requirements.	• Track progress towards system interoperability.	• Product works effectively within system portfolio.
	• Compliance with other specified standards.	• Alignment, interoperability, consistency.	• No significant negative findings during architect assessments.
Redundancy	• Elimination of duplicate or overlapping systems.	• Ensure return on investment.	• Retirement of 100% of identified systems
	• Decreased number of duplicate data elements.	• Reduce input redundancy and increase data integrity.	• Data elements are entered once and stored in one database.
	• Consolidate help desk functions.	• Reduce £ spent on help desk support.	• Approved consolidation plan
Cost Avoidance	• System is easily upgraded.	• Take advantage of e.g., COTS upgrades.	• Subsequent releases do not require major "glue code" project to upgrade.
	• Avoid costs of maintaining duplicate systems.	• Reduce IT costs.	• 100% of duplicate systems have been identified and eliminated.
	• System is maintainable.	• Reduce maintenance costs.	• New version (of COTS) does not require "glue code."
Customer Satisfaction	• System availability (up time).	• Measure system availability.	• 100% of requirement is met. (e.g., 99% M-F, 8am to 6pm, and 90% S & S, 8am to 5pm).
	• System functionality (meets user's needs).	• Measure how well users needs are being met.	• Positive trend in user satisfaction survey(s).

	• Absence of defects (that impact user).	• Number of defects removed during project lifecycle.	• 90% of defects expected were removed.
	• Ease of learning and use.	• Measure time to becoming productive.	• Positive trend in training survey(s).
Business Goals/ Mission	• Functionality tracks reportable inventory.	• Validate system supports program mission	• All reportable inventory is tracked in system.
	• Maintenance costs.	• Track reduction of costs to maintain system.	• Reduce maintenance costs by 2/3 over 3-year period.
	• Standard desktop platform.	• Reduce costs associated with upgrading user's systems.	• Reduce upgrade costs
Productivity	• Time taken to complete tasks.	• To evaluate estimates.	• Completions are within 90% of estimates.
	• Number of deliverables produced.	• Assess capability to deliver products.	• Improve product delivery 10% in each of the next 3 years.

.

Paper

7

Supporting e-GOVERNMENT

Progress in the UAE [8]

Dunkin Westland & Ali M. Al-Khouri

ABSTRACT: This article provides an overview of current international e-Government practices and the role of the national identity management infrastructure program in the United Arab Emirates (UAE) in supporting e-Government development. It describes the benefits of e-Government that various governments worldwide have identified, sheds light on some recent surveys on the delivery of e-Government by some countries, highlights some examples and puts the position of the United Arab Emirates into context. It then discusses the program's use of Identity Management in the strategic initiatives, explains their purpose in the facilitation of e-Government within the United Arab Emirates and describes a general roadmap for implementation.

Key words: *ID Card, Identity Management, e-Gov, PKI.*

---

[8] Westland, D.D. and Al-Khouri, A.M. (2010) "**Supporting e-Government progress in the United Arab Emirates**," Journal of E-Government Studies and Best Practices, Vol. 2010.

* This paper was listed among the major studies in the Middle East on the United Nations website. http://www.unpan.org/PublicAdministrationNews/tabid/651/mctl/-ArticleView/ModuleID/1555/articleId/21470/default.aspx.

1. INTRODUCTION

AMIDST the many promises of the Information Communication Technologies (ICT) revolution is its potential to modernise government organisations, strengthen their operations and make them more responsive to the needs of their citizens. However, the experiences of many countries around the world is that in order to truly reap the benefits of e-government and cope with its growth, governments are required to develop and setup a robust ICT infrastructure.

In a recent United Nations (2010) survey of global readiness for e-Government services, the United Arab Emirates was regarded as one of the leading Arab countries and ranked at 49 in the world in terms of the overall eGov maturity and development. It was ranked at 25 in terms of telecommunication infrastructure.

However, it was ranked 86 at e-Participation, and 99 at Online services. The future e-Government strategy of the UAE's government includes the objective of raising the standing of the United Arab Emirates as a provider of fully connected citizen to government services by providing the enabling infrastructure to facilitate full interaction between government entities, the private sector and citizens.

This paper provides a contextual briefing of current progress in the realisation of e-government in the United Arab Emirates and the use of identity management to support e-government. The following

section provides a short review of existing literature related to e-Government development, strategic drivers and projected benefits.

2. THE CASE FOR E-GOVERNMENT

E-Government can be defined as the use of Information and communication technology (ICT) to provide and improve government services by enabling electronic transactions and interactions between citizens, businesses, and other arms of government (Burn and Robins, 2003).

Most governments have introduced some form of e-Government program ranging from a simple web presence providing information to more advanced implementations providing a range of transactional services of ever increasing sophistication and scope. E-Government strategies worldwide are driven by a desire to improve the efficiency, accessibility and effectiveness of public service delivery (Chesher et al., 2003). Focal benefits to both citizens and the government are summarised in Figure 1 below.

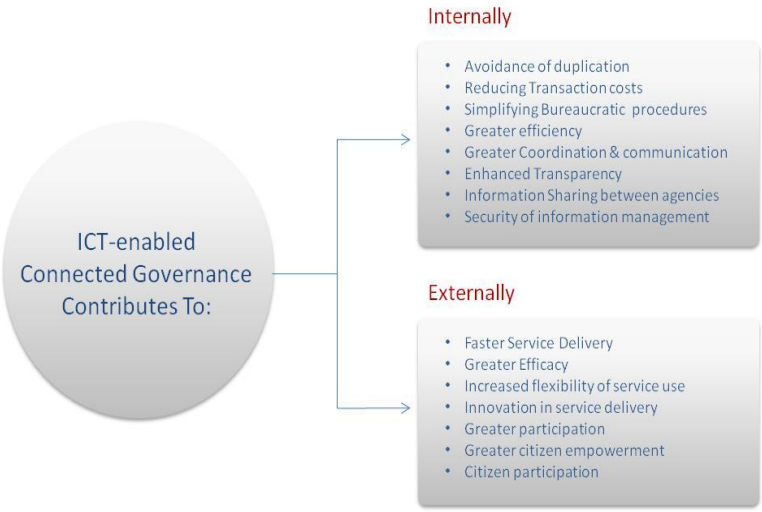


Fig. 1 – Internal and External eGov Contributions
Source: (United Nations, 2008)

In considering the next phase of e-Government development for the United Arab Emirates, it is important that the strategic drivers and projected benefits need to be clearly focused up on. Helpful benchmarks are available from across the world. For example the United Kingdom's e-Government strategy highlighted potential benefits to citizens, business, suppliers and the wider public sector as depicted in Table-1 below (UK Cabinet Office, 2000).

Table – 1: Potential e-Gov benefits

Public Sector *transaction with*	***Examples***	***Benefits***
Citizens	Information Culture Health Education Benefits transactions Taxation	Wider choice of channels, Convenience, lower transaction costs, more personal service, greater awareness of services and policies, greater democratic participation and openness
Business	Support programs Advice and guidance Regulation Taxation	Quicker, faster interactions, reducing transaction costs, and the regulatory burden
Suppliers	e-procurement	Reduced transaction costs, better inventory management, shared data environments
Other public sector bodies	Communication between departments and agencies between central and local government Policy making	Greater accuracy and efficiency, reduced transaction costs. Better use of the knowledge base. More nimble, flexible working arrangements.

Many of these objectives and benefits are clearly resonant with the e-Government objectives of the United Arab Emirates. The additional challenge of managing the provision of public services to a large, mobile and rapidly changing population of foreign residents and temporary workers further increases complexity. Together these should drive the implementation of e-Government within the United Arab Emirates.

3. UAE PROGRESS TOWARDS E-GOVERNMENT IN THE GLOBAL CONTEXT

The UN e-government survey uses a ranked measure of e-Government readiness. The survey recognises five stages of e-government maturity relating to web presence:

Stage I - Emerging: A government's online presence is mainly comprised of a web page and/or an official website; links to ministries or departments of education, health, social welfare, labour and finance may/may not exist. Much of the information is static and there is little interaction with citizens.

Stage II - Enhanced: Governments provide more information on public policy and governance. They have created links to archived information that is easily accessible to citizens, as for instance, documents, forms, reports, laws and regulations, and newsletters.

Stage III - Interactive: Governments deliver online services such as downloadable forms for tax payments and applications for license renewals. In addition, the beginnings of an interactive portal or website with services to enhance the convenience of citizens are evident.

Stage IV - Transactional: Governments begin to transform themselves by introducing two-way interactions between 'citizen and government'. It includes options for paying taxes, applying for birth certificates, passports and license renewals, as well as other similar Government to Customer interactions, and allows the citizen

to access these services online 24/7. All transactions are conducted online.

Stage V - Connected: Governments transform themselves into a connected entity that responds to the needs of its citizens by developing an integrated back office infrastructure. This is the most sophisticated level of online e-government initiatives and is characterised by:

1. Horizontal connections (among government agencies);
2. Vertical connections (central and local government agencies);
3. Infrastructure connections (interoperability issues);
4. Connections between governments and citizens;
5. Connections among stakeholders (government, private sector, academic institutions, NGOs and civil society).

Many studies revealed that the United Arab Emirates has distinguished itself in the customer centric eGovernment development approach it adopted (Al-Khouri and Bal, 2007). Nonetheless, extensive work is needed to address the requirement of "connected" services (United Nations, 2008).

The enhancement of e-Government in the UAE and the region therefore will require a focus on establishing the necessary infrastructure to deliver connected services and the development

of targeted service offerings to deliver related benefits to the citizen and government.

4. THE ROLE OF IDENTITY MANAGEMENT INFRASTRUCTURE IN THE DELIVERY OF E-GOVERNMENT

The Identity Management Infrastructure (IMI) as developed part of the UAE national ID card program has an imperative role as the single source for personal identity provision in the Country. The IMI development is planned to be implemented through three strategic initiatives which directly support e-Government within the United Arab Emirates. These are:

- Issuing Identity Cards to all individuals;
- Public Key Infrastructure; and
- Federated Identity Management

These initiatives, and their fit within the strategic intents of the program, are discussed in the following sections.

4.1 Issuing Identity Cards: Enabling secure remote authentication

Transactional e-Government services rely on some form of user authentication (and indeed authentication of the e-Government Service provider). There are a number of possible solutions for user authentication.

Most organisations providing transactional services use passcode authentication, examples are the UK (Government Gateway) and

Singapore (Singpass). However these provide limited assurance and very limited non-repudiation of the transaction (see for example: Lambrinoudakis and Gritzalis, 2003).

Some countries therefore have moved towards token-based authentication (smartcards) – Belgium and Oman being notable examples. The national ID program provides the United Arab Emirates with this capability too, through the secure and sophisticated design of the ID Card. Strong authentication and non-repudiation of transactions are both enabled by the new smart ID card because each card contains individual secret keys for authentication of the card and for document signing.

The UAE government through this program is introducing a flexible authentication architecture. The Federated Identity Management system described below, combined with the ID Card, will support single factor authentication (passcode), two factor authentication with the ID Card (PIN and token) and even three-factor authentication (PIN, token, biometric). This has two advantages for the United Arab Emirates:

- It does not mandate a particular authentication approach that an e-Government service provider must take. The service provider is free to choose a method which is appropriate to the value of the transaction (although there would seem to be little advantage in using a passcode, given the availability of the ID Card).
- It supports all authentication methods that will be required for the foreseeable future. Whilst two factor, PKI-based

authentication is generally accepted as sufficient for the majority of e-Government interactions[9] - approved digital signatures have legal weight equivalent to a hand-written signature in many jurisdictions - there are occasions where the assurance level provided by biometric authentication is required (either on its own or as part of a three factor authentication). An example is use for border crossing.

4.2 Provision of a federal public key infrastructure

The use of the ID Card for authentication and non-repudiation is supported by a Public Key Infrastructure (PKI). The program runs a PKI for the ID Card. It provides digital certificates to enable use of the ID Card for authentication and non-repudiation.

This is an interim solution and it is intended that the UAE government[10] to roll-out a Strategic PKI during 2010. This strategic initiative will address key areas such as trust, identity management and privacy, within the context of a modern, secure, Public Key Infrastructure- (PKI-) based e-government model. The PKI project will primarily include:

[9] Two factor authentication may either use a card reader connect to a PC, with or without a PIN pad or a separate (air-gapped) card reader. Authentication using connected readers is susceptible to malware but has advantages where signing of documents is required.

[10] Emirates Identity Authority, a Federal Government organization responsible for the implementation of the ID card for all the population of the UAE, is working on the PKI project, with the objective of support eGovernment initiatives.

- A Root Certificate Authority, which is the ultimate trust point for all ID Cards; and
- A Population Certificate Authority, subordinate to the Root Certificate Authority, which creates the digital certificates that each card needs

The Root CA will, by its nature, also provide a solution for other Government PKI uses, such as issuance of SSL and VPN certificates to support secure communication. The infrastructure will have the flexibility to support the establishment of other subordinate Certificate Authorities for these purposes, in addition to the Population Certificate Authority.

4.3 Provision of federated identity management

It is possible for each e-Government service provider to authenticate a user via their ID Card, however it is not necessary for them to implement the functionality to do this. The Federated Identity Management (FIM) initiative is provisioned to provide a single sign-on service for authenticating users, which service providers can make use of.

This means that both federal and local government departments which provide services to citizens via their web-sites do not have to authenticate users themselves. This releases them from the requirement to maintain a database of authorised users or provide functionality, such as certificate validation and authentication applets, to enable them to authenticate a user via their ID Card.

Instead, an e-Government service provider may redirect a user's web browser to the FIM web service for authentication[11]. Then, once the user has authenticated, the service provider can trust the assertion of identity (via a SAML assertion).

This simplifies the implementation of the service provision and places the burden of user authentication on a single organisation; i.e., ID Card Authority. This is appropriate because the authority is the organisation that is best placed to manage authentication. It also ensures that any identity information that the service provider requires will be authoritative and up-to-date because ID Card Authority is the primary source of such information.

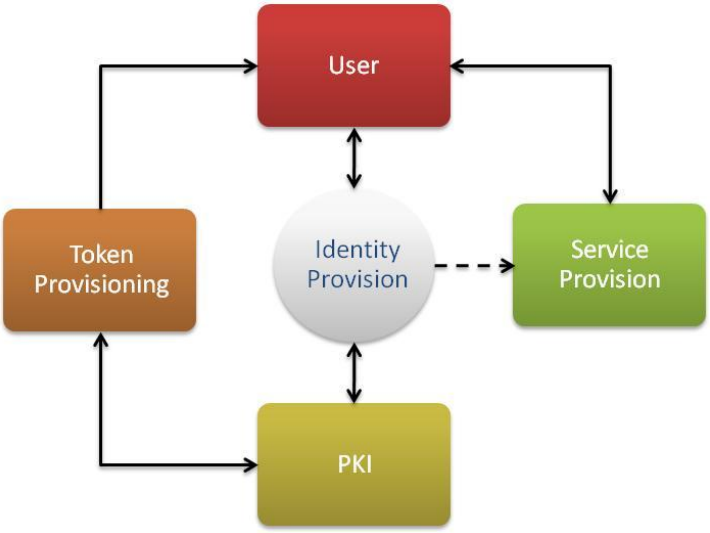


Fig. 2: e-Government enabling components.

[11] The user would not necessarily be aware of this redirection.

Fig. 2 shows components needed to enable e-Government, although it does not include components within the service providers' systems, which are dependent on the nature of the service. The components provided by the ID Card Authority are the Token, PKI, and the interfacing layer.

These components should enable the implementation of the UAE's overall strategic intents to support advanced e-Government development. Fig. 3 shows how PKI, Federated Identity Management and ID Card initiatives map to its strategic intents and to the e-Government maturity model :

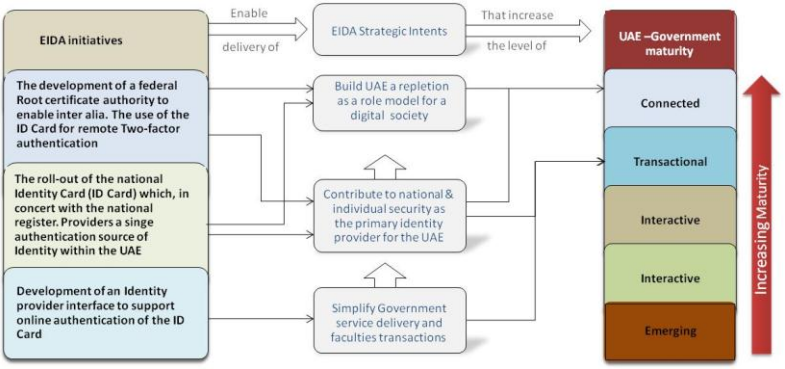


Fig 3: Mapping of EIDA's initatives to its strategic intents and to the e-Government maturity model

5. ID CARDS AUTHORITY'S ROADMAP FOR THE FUTURE OF E-GOVERNMENT IN THE UNITED ARAB EMIRATES

Fig. 4 below depicts a high level implementation plan of the intended UAE Identity Management Development program related

to the roll-out of the e-Government functionality that it supports. ID card roll-out is currently taking place and is projected to reach 8 million by the end of 2013. In parallel to the ID Card roll-out, several initiatives are put in place to develop an infrastructure to support the card's use as a two-factor authentication token for e-Government applications.

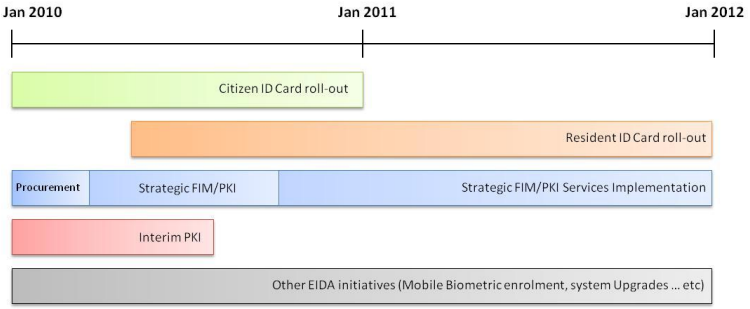


Fig. 4: Emirates ID Roadmap

6. CONCLUSION

Practices related to e-governance are rapidly becoming a key national priority for all countries and a global phenomenon. However, our observation of eGovernment projects in public sector organisations all over the world is that they still lack fundamental infrastructure to make considerable progress.

Existing assessment studies of e-Government readiness shows that governments need to adopt more effective approaches to promote in principle, the authentication of online identities. Key to

achieving this requirement is to develop a national infrastructure to enable online authentication of users. This need to be developed to address the overall requirements of trust, identity management and privacy and in the context of electronic governance.

The UAE government has always been noted as the region's leader in innovations especially in public sector management. Its adopted mixed-approach of both citizen and governance-centric vision for its e-governance initiatives, resulted in many reformations of traditional public sector governance models; and not merely the computerisation of government operations.

The presented approach of the UAE government to build an identity management infrastructure part of the ID card program has a derivative role as the single point of authority for the provision of identity information in the country. In support of this role, it maintains the National Register which, coupled with a Public Key Infrastructure, enables it to issue ID Cards to all citizens and residents.

The ID Card's strong authentication capability and the presented Federated Identity Management system are both designed to facilitate the implementation of e-Government services within the United Arab Emirates. This is envisaged to support advanced development of e-government specifically in areas related to e-inclusion and e-participation, as well as the end-to-end integrated government work processes.

ACKNOWLEDGMENT

Partial content of this article was presented in the Cards Middle East 2010 Conference, held in Dubai, United Arab Emirates.

REFERENCES

[1] Al-Khouri, A.M. & Bal, J. (2007) 'Electronic Government in the GCC Countries,' *International Journal Of Social Sciences*, Vol. 1, No. 2, pp.83-98.

[2] Burn, J. and Robins, G. (2003) 'Moving towards e-government: a case study of organizational change processes,' *Logistics Information Management*, Vol. 16 No. 1, pp. 25-35.

[3] Chesher, M., Kaura, R. and Linton, P. (2003) Electronic Business & Commerce, Springer, London.

[4] Heeks, R. (2003) Most egovernment-for-development projects fail: how can risks be reduced? paper no. 14, *i-Government Working Paper Series*, Institute for Development Policy and Management, University of Manchester, Manchester.

[5] Lambrinoudakis, C. and Gritzalis, S. et al. (2003) 'Security requirements for e-government services: a methodological approach for developing a common PKI-based security policy,' *Computer Communications*, Vol. 26 No. 16, pp. 1873-83.

[6] Lootah, R. & Geray, O. (2006) "Dubai eGovernment Case Study," Dubai eGovernment [Online]. [Retrieved February 22, 2010], http://www.oecd.org/dataoecd/4/40/36986277.pdf.

[7] UK Cabinet Office (2000) "e-government: a strategic framework for public services in the Information Age." [Online]. [Retrieved February 22, 2010], http://archive.cabinetoffice.gov.uk/e-envoy/resources-pdfs/$file/Strategy.pdf

[8] United Nations (2008) "UN e-Government Survey 2008: From E-Government to Connected Governance." New York. [Online]. [Retrieved February 22, 2010], http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf

[9] United Nations (2010) Global E-Government Survey 2010: Leveraging E-government at a Time of Financial and Economic Crisis. New York. [Online]. [Retrieved February 22, 2010], http://www2.unpan.org/egovkb/global_reports/10report.htm.

Paper

8

Population Growth and Governments Modernisation efforts: the Case of GCC Countries [12]

Ali M. Al-Khouri

ABSTRACT: Because of the economic and job market requirements, the Gulf Corporation Council (GCC) countries have acquired extremely high proportion of migrant workers in the world, and is considered as the third largest in the world after the European Union and North America. Supported by the expansion of the oil industry, the colossal influx of foreign residents and workforce led to the exacerbation of the demographic imbalance in the GCC countries.

This had an enormous impact on the region's landscape both socially and economically. There are serious concerns among GCC countries about the stability of the national identity in light of the disproportionate population demographics. This paper touches upon the subject of the national identity in GCC countries, and present some recent statistics about the

[12] Al-Khouri, A.M. (2012) "**Population Growth and Governments Modernisation Efforts: The Case of GCC Countries**", International Journal of Research in Management and Technology, Vol. 2, No. 1, pp. 1-8.

Partial content of this article was also published in:

Al-Khouri, A.M. (2010) "**The Challenge of Identity in a Changing World: The Case of GCC Countries**," Proceedings of the 21st-Century Gulf: The Challenge of Identity, University of Exeter, U.K., 30 June - 3 July 2010.

population demographics. It also presents one of the approaches followed by the GCC countries; namely, identity management systems, to allow their governments and policy makers develop and regulate their national identity strategies and the labour market.

Key words: *GCC, national identity, identity management.*

1. INTRODUCTION

IN the age of globalisation, the world is rapidly becoming a single place and closer to each other, as distance has become irrelevant. Amidst ruthless modernisations plans, governments have discovered some crucial implications of globalisation. From a socio-cultural perspective, globalisation exercised a permeating effect on forming the relationships between and among various locales, leading to the de-centering and dislocation of identities [1].

In fact, the world is moving towards a more complex, plural, interdependent identity structures [2]. Held [3] explains that "globalisation may be thought of initially as the widening, deepening and speeding up of worldwide interconnectedness in all aspects of contemporary social life, from the cultural to the criminal, the financial to the spiritual".

The social change as result introduces "significant alteration of social structures" where social structures means "patterns of social action and interaction" [4]. Globalisation has therefore created the need for identity. Many societies are attempting to rediscover and define there sense of self (often referred to as national identity) in a world that is rapidly producing cosmopolitan societies driven by economic powers. Therefore, national identity in many countries has been the object of governmental policies aimed at the restoration of rooted tradition, religious fervour and/or commitment to ethnic or national identities [5].

This paper looks at the Gulf Cooperation Council (GCC) in the Middle East; one of the most important and strategically vital regions in the world. GCC countries represent a unique phenomenon with regards to their population composition. Unlike many other countries in the world, nationals constitute a minority in four of the countries.

GCC countries are occupied by one of the most diverse workforces in the world, who constitute 60 to 90% of the labour workforce. This had triggered some courses of actions in GCC countries to preserve national identity. One of the approaches adopted by the GCC countries is the development of contemporary identity management systems to provide them with modern enablers to authenticate the identities of their legitimised population both citizens and foreign residents.

The paper is structured as follows. A short background to GCC countries is provided which sheds light on its history and its development principles. Then, some recent data about GCC population and the changing patterns of their demographics are explored. The issue of identity in GCC countries is discussed to pinpoint the ideology of its collective identity structure shaping the 'Gulf Society'. Next, an overview of the national identity management approach adopted in GCC countries is provided which outlines its primary objectives and benefits, and the paper is concluded.

2 BACKGROUND TO GCC COUNTRIES

Figure 1: Middle East in the World Map

The Gulf Cooperation Council, referred to as GCC, is a regional co-operation system between six of the southern Gulf countries; Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The constitution which was formed in 1981, was based on the need to reconstruct identity, and on the principle of a single culture and nation. The geographical proximity, common religion, language and culture, and the similarity of their regulations and economic and social conditions were key factors that ameliorated the establishment.

In a total area of 2.55 Million Km2, an estimated population of around 46.5 million lives in GCC countries. Albeit the positive growth rates in the non-oil sectors economies, oil has been the principal component of government revenues since the 1970's for all of the six countries, which also have around 45% of the world's proven oil reserves and 25% of crude oil exports.

GCC governments have made profound investments in the last few years in infrastructure development and other economical sources to recalibrate their economies. The vision of economical growth in these countries developed a cosmopolitan culture, and significantly impacted their population demographics.

Due to lack of local expertise, GCC countries relied heavily on foreign knowledge and labour, which outnumbered the local population in some of the countries. The next sections will provide further details of the population demographics in GCC countries.

3. GCC POPULATION

Considered as one of the highest rates of population growth in the world [6], the GCC population has grown more than ten times during the last 50 years; from 4 million in 1950 to 46.5 million in 2010. Towards mid 2010, GCC countries were inhabited by 27 million foreigners, who constituted 59 percent of the total population. See also Figure 2.

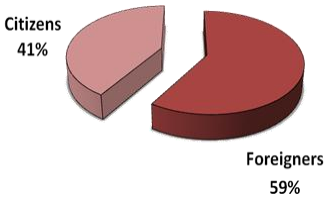


Figure 2: GCC citizens v.s foreign residents

In UAE, Qatar, Kuwait and Bahrain foreigners constituted a majority; in the United Arab Emirates alone foreigners accounted for over 88 percent of the population. Merely Oman and Saudi Arabia managed to maintain a relatively low proportion of foreigners: about 30 and 27 percent, respectively. See also Table-1.

Table 1: GCC Population

Foreigners Constitute majority in 4 states

Country	Population 2005	Population 2010	Citizens	%	Foreigners	%
UAE	4,106,427	8,190,000	950,000	12%	7,240,000	**88%**
Qatar	796,186	1,678,568	218,214	13%	1,460,354	**87%**
Kuwait	2,991,189	3,480,000	1,044,000	30%	2,436,000	**70%**
Bahrain	727,000	1,050,000	507,150	48%	542,850	**52%**
Oman	2,508,837	3,418,085	2,392,660	70%	1,025,426	30%
Saudi Arabia	22,673,538	28,686,633	20,941,242	73%	7,745,391	27%
GCC (Total)	**33,803,177**	**46,503,286**	**19,058,559**	**41%**	**27,413,687**	**59%**

The population growth in GCC countries is very much associated with the economic growth. For instance, in the UAE, one of the most dynamic economies in the region, foreign labour comprises an enormous portion of the population.

According to the 2010 census, UAE population is counted to be 8.2 million, of which only around 950,000 are UAE nationals. The nationals were around 818,000 in 2005, meaning a growth rate of around 3% each year over a period of 5 years.

On the other hand, the residents in the UAE have doubled from 3.3 million in 2005 to 7.2 million in 2010. It is predicted that the GCC national population compared to the total population would further drop in the following years, if appropriate correctional procedures and policies were not taken to address the issue. Indeed, such growth of both GCC nationals and expatriates is likely to lead to exacerbation of the demographic imbalance in the country.

According to a report issued by the Economist Intelligence Unit [7], the population in the Gulf region is predicted to continue rising by a third in the next decade, hitting 53.5 million by 2020. However, in light of our reading of the GCC 2010 census reports, our forecast of GCC population is likely to go beyond this number, and reach or exceed 60 million by 2020.

Perceived as a serious challenge to future development of the region, 24 percent of the GCC population according to the report will be under 25 year, rating second highest in the world, after Africa. Besides, this increase raises significant questions related to how GCC countries' labour and immigration policies would respond to address these sources of economic, cultural, and political instability.

Before we attempt to address this area of concern, it is important to comprehend the evolving patterns of foreign workforce in GCC countries in the last 40 years, as the next section explains.

4. THE CHANGE PATTERNS OF THE POPULATION DEMOGRAPHICS

As depicted in Figure 3, GCC countries relied immensely on foreign workers in the 1970's, which largely came the from Arab Middle Eastern countries. Using the significant financial liquidity generated from the petroleum revenues, GCC countries followed a gradual development and modernisation pathway to pursue their economic and social transformation plans.

Due to increased oil prices, which reached unprecedented levels between 1970s and 1990s, a large number of migrant workforce started to inflow the GCC countries. This workforce primarily participated in the following three strategic sectors:

(1) infrastructure development e.g., energy sources and improvement of governmental departments and services;

(2) development of the industrial and agricultural sectors;

(3) improvement of social services, e.g., health care, education systems, etc.

By the year 2000, the economic diversification and the expansion of the private sector's role were the key components of the GCC countries agenda to move towards post-oil economy. In light of the increasing foreign population as a result, the GCC countries adopted forceful policies to promote 'nationalisation' of various segments of the workforce both in the public and private sectors.

However, this required extensive national workforce of a quality and quantity which could not be supplied by local sources primarily in the smaller countries.

This period also witnessed the development of growth-driven foreign workforce migration models in many of the GCC countries. The private sector remained heavily dependent on foreign labour, as it imported more workforces to source and execute their plans. This has created a deeper, regional labour market in the GCC countries.

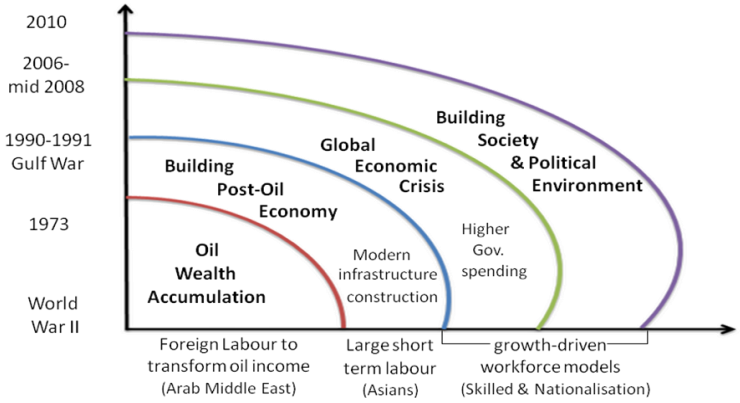


Figure 3: Workforce changing patterns

4.1 The Economic Crisis

The global economic crisis did not have a great impact on the GCC countries workforce population. The GCC countries tackled the deteriorated oil prices and the consequences of the global

crisis, with higher government spending, partly redirected to internal and Arab region and sectors such as education and energy. This kept the growth of the foreign workforce at almost the same levels as previous years.

The 2010 GCC census shows a considerable increase in foreign population compared to previous years, as illustrated in the earlier section. The increase in population came despite the shrink of the countries real estate and construction sectors which suffered a slowdown.

GCC countries attracted in the past few years highly skilled workforce to execute its ambitious world class programs. But at the same time, it also created large numbers of short term foreign workforce, where Asians outnumbered Arab workers.

Today, GCC countries are recognised as the innovation hubs in a global environment characterised by strong demand for energy and increasing globalisation. GCC recent development efforts pay higher attention to constructing the society and the political environment. Equally, this is a daunting challenge.

4.2 Employment

Taking into consideration the growing foreign labour force in GCC countries, the foreign workforce is estimated at more than 60 percent of the working population, and as high as 90% in countries such as the UAE. It is notable that the employment distribution in

GCC countries is quiet disproportionate, as only 1 % of the workforce is employed in the oil and gas sector which produces 47 % of GCC GDP. A large number of the workforce is employed in construction, utilities, government, and other service sectors. Government services alone constitute more than 20% of total GCC employment.

GCC countries have attempted in recent years to reform their labour markets through developing labour and immigration and employment policies to shift towards more proactive social and economic courses of actions in the development of human capital and meeting the increasing demand for employment among nationals (i.e., substituting expatriates with qualified national).

The unemployment rates among nationals in GCC countries are floated between 5 and 15%. The extensive foreign workforce has exposed the GCC society to challenging consequences not only on the employment side, but also in terms of the stability of its national identity, as the next section will explain.

5. GCC IDENTITY

Castells [8] states that "the construction of identities is fundamental to the dynamic of societies" and that "cultural identity is the process by which social actors build their own meaning according to cultural attributes." Perceptibly, scholars constructed the concept of identity across a range of disciplines both from individual and societal perspectives.

The individual identity development has been observed as the central 'project' of humanity [9]. The societal identity is often viewed as one of the primary driving forces of the information or network era [8].

The founder of social identity theory, Tajfel [10] stated that, "any society which contains power, status, prestige and social group differentials (and they all do), places each of us in a number of social categories which become an integral part of our self-definition".

Social identity (or national identity in our case) is defined as "that part of an individual's self-concept which derives from his [or her] knowledge of his [or her] membership of a social group (or groups) together with the value and emotional significance attached to that membership" [11].

Castells [2] divides the principal forms of collective identities into three types:

- Legitimising identities: a set of logic and meaning introduced and propagated by dominant institutions of society – notably political regimes in control of the state apparatus and their followers – to rationalise, reproduce, and expand existing rule.

- Resistance identities: constructed by those who are being marginalised, devalued and/or stigmatised by the logic of

domination in opposition to the ruling norm, leading to communes or communities of resistance.

- Project identities: go beyond resistance and attempt to create new identity that redefines their position in society and, by so doing, seek to transform the overall social structure.

National identity is the most important component of the collective identity structure. The issue of national identity in GCC countries has featured prominently since their independence and has been an integral part of the psyche of the citizens. As a result, the sense of identity in the Gulf countries is very strong.

Although the elements illustrated in Table 2 explain to a large extent the common identity elements shaping the 'Gulf Society', some researchers attempted to create the definition of this identity by formulating its substantive content.

They argue that mutual identity in GCC countries is evolving in the context of two paradoxical concepts; homogeneity of cultural and social, that is shared among the member of the society, besides, the elements that make them different from members of other societies.

Table 2: Common identity elements shaping the 'Gulf Society'

Element	Description
Tribalism	People sharing common ancestry and kinship, and use their tribal affiliation as their last names.
Religion	Islam
Language	Arabic; created a linguistic culture that is specific to the Gulf population.
Dress Code	Gulf citizens wear traditional attire
Political System	the GCC formation led to cooperation and integration, in the fields of health, education, labour and social affairs, tourism, sports, etc.
Economy	Oil based, custom union, common exchange rate

Mapping to Castells [2] typology of identities, the identity of GCC countries evolved overtime as depicted in Figure 4.

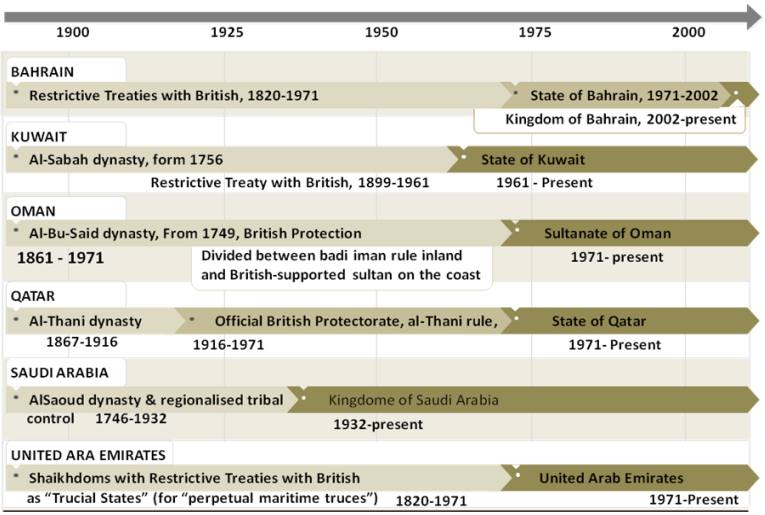


Figure 4: Historical development of GCC countries [12]

Their first identity was generated by "social actors" in the six countries to "move out of the trenches". This phase witnessed nationalists in each of the six countries seeking self-affirmation in the process of "collective resistance against the territorial domination and cultural survival, which resulted in their independence and/or proclamation and recognition, as depicted in Figure 5.

To redefine their positions in the region, they moved from resistance to project identity, and succeeded to transform the entire social structure, which resulted in some countries, the restoration of fundamental cultural values and meanings with deep historical roots.

They all acquired membership in the League of Arab States; which was found in 1945 by Egypt, Iraq, Lebanon, Saudi Arabia, and Syria to safeguard their independence and sovereignty (Kuwait joined in 1961, and the rest of the GCC countries in 1971).

In an attempt to build stronger political Gulf-wide identity, the six countries formed the GCC council, utilising the common identity elements described earlier as principles to provide them with the required reference and identities of legitimisation.

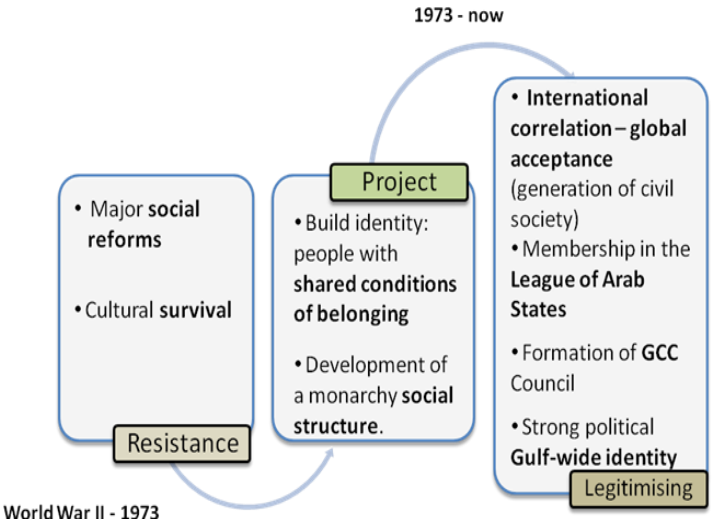


Figure 5:GCC countries identity development stages

The specific content of national identity is based on the four foundations, land, people, time, and will to live together. These powerful symbolic links lays the foundations to connect and interact with each other to create national identity [13]. However, these elements may also cause at the same time dangerous 'seed' than can be cultivated to cause dissention, disruption of the social order and alienation (ibid).

For the past 30 years, the expansion of the oil industry has confronted the GCC countries, with changes and challenges that is observed to threaten the national identity of their native citizen populations. There are serious concerns among GCC citizens that this significant influx of foreign workers has somehow challenged and altered the national identity of the countries.

Coined with the modernisation agendas of the GCC governments, the colossal influx of foreign workers and their families, led to the coexistence of multiple (project) identities representing different groups in today's GCC society (see also Figure 6). Most of the foreign labours in GCC countries are considered to be unskilled workers, mainly in construction, and household personnel (maids, servants, drivers, gardeners, etc.).

The impact of such groups in the GCC countries is considered enormous. With more than 200 nationalities living in these countries, they brought various cultural backgrounds, articulated values and norms that constituted their own identities. In fact, in the last 10 years, the foreign population living in the GCC countries exposed various traditional elements to often contradictorily opinions and viewpoints.

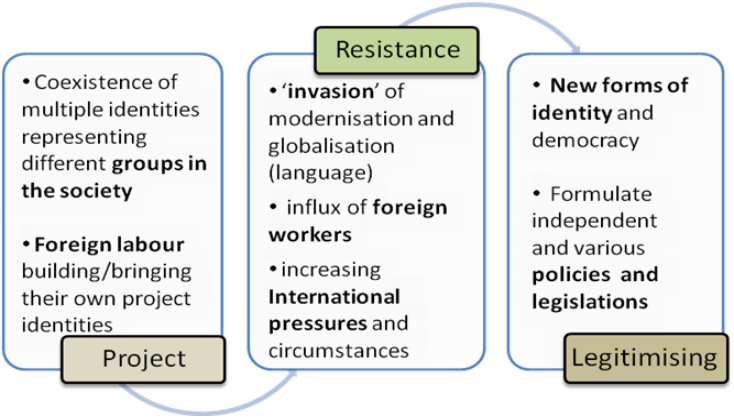


Figure 6: Emerging identities in 20th Century in GCC countries

It is worth mentioning that GCC countries have also been under growing international pressure in the past few years to allow expatriates to settle down and be given equal rights. This has opened room for more liberty among foreigners and emphasised individual freedom.

GCC citizen population, on the other hand, perceived this as an invasion of their principles and traditional constituents. They find it difficult to accept that they are now national minorities and instigated to see this diversity as a threat to their traditional values and customs. Fear of cultural assimilation and insecurity about the future of their identity has created a source of public debate.

All this, has pushed the GCC countries, to construct new forms of legislative structures to preserve its identity. Labour and immigration policies were formulated to address a range of economic, cultural, and ethical issues.

These developed policies were also aimed to limit the inflow of foreign labour, through limiting contractual duration of residencies. However, the GCC countries economy development plans which demanded further labour force made those policies result-less.

So apparently, we observe that GCC national identity has been superfluously vulnerable to pervasive influences by the various and complex ways in which local cultures in the GCC countries and multiple foreign cultures interact with each other.

Amidst GCC plans to pursue economic growth and increase its vitality, the six countries have realised the need to establish a cohesive national identity strategy to address this challenge. This clearly requires delineated objectives and outcome expectations supported by the right mix of various approaches.

One recent approach the GCC countries have adopted in this regard is the development of contemporary identity management systems to provide them with more accurate information about their population i.e., national ID programs.

Accurate information is viewed by GCC countries as a fundamental planning requirement to allow their governments and policy makers develop and regulate their national strategies (see also Figure 7). The next section explores on a high level, the scope of these programs in the GCC context.

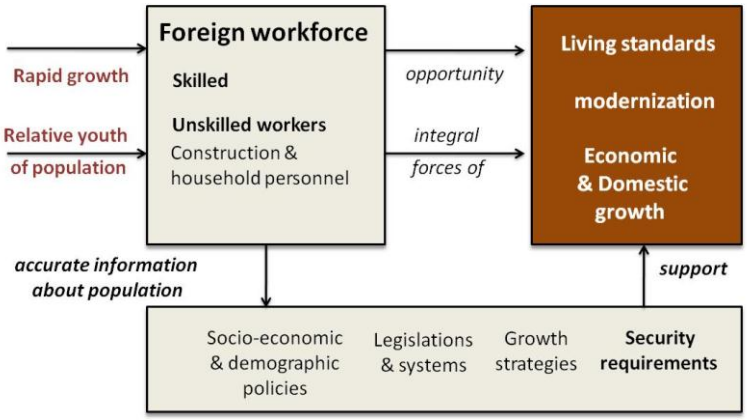


Figure 7: economy driven population growth

6. NATIONAL IDENTITY MANAGEMENT SYSTEMS

The ever-increasing socio-economic shapes of globalisation have driven many governments worldwide to invest in more secure forms of identification and improved identity management systems, in order to ascertain the true identities and legitimacy of their population i.e., of those who hold identification documents.

This need is considered a critical requirement for GCC countries in order to balance growth and against the consequent challenges of globalisation i.e., the swelling influx of foreign residents and labour, threat of identity fraud, illegal immigration, international crime and global terrorism.

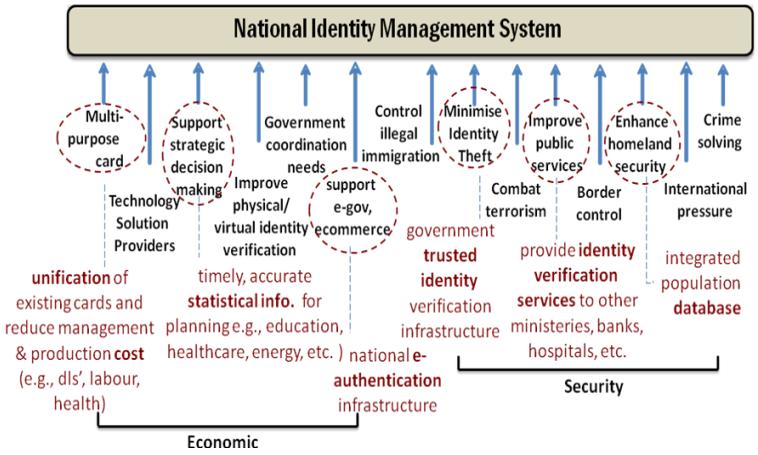


Figure 8: National identity management driving forces in GCC

In a nutshell, the national ID card program in GCC countries has a comprehensive focus to achieve two prevailing objectives (See also Figure 8):

1. **Security enhancement:** focuses on reinforcing immigration control and increasing national security; and

2. **Economic growth:** enhance and expedite service delivery, and facilitate e-government

In principle, these systems are designed to improve identity recognition both in the form of identification (1-to-many) and verification (1-to-1). The primary components of these systems are:

1. **Central population database:** considered key to enable timely and accurate identity information, uses biometrics to eliminate redundant identity information, objective of

2. **ID card:** smart card, that offers various approaches to authenticating individuals, allowing more timely delivery of government benefits.

Identity Management systems are envisaged to improve the services provided to nationals and residents in terms of both scope and responsiveness or, in government terms, "best value". It is also foreseen to provide continuous, state based identity verification and authentication of individual population, and to improve the security and integrity of both data and process. Figure 9 depicts the

major components of national identity management systems in GCC countries.

With strong leadership and a long-term focus, these programs are designed to provide more reliable data about important demographics and socio-economic facets related to population, which should help in designing persistent legislative policies and systems.

This should in turn, contribute to developing national human resources strategies in light of the growth strategies for all age groups and communities. National Identity Management systems are also expected to materialise 'identity-dependent' service models that form the basic foundation of identity management services provided to constituents both in public and private sectors.

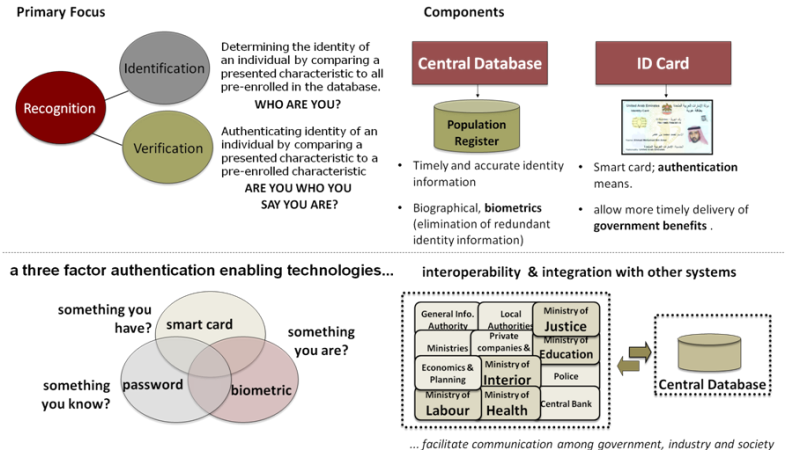


Figure 9: Key features of national ID systems

7. CONCLUSION

The impact of globalisation and thereafter the modernisation efforts in the GCC countries has resulted in numerous socio-cultural implications. The rapid growth and relative youth of the population allowed foreigners to dominate the workforce. While there is no doubt that migrant labourers have been integral forces behind the unprecedented pace of modernisation in the GCC countries, they have also been observed as a negative influence on the national cultures, identities and values as well as social structures.

Undeniably, the GCC identity today faces primarily the challenge of finding a balance between their traditions and modern standards and practices. The living standards and highly paid wages compared to other countries in the region, is likely to result in more interested foreigners to work and settle in GCC countries.

Indeed, governments have an active role in shaping and stabilising collective identities of their societies. Realising this role, GCC governments have attempted in recent years to develop long-term structural changes and short and medium term needs of their continued rapid economic markets, that also address the sources of economic, cultural, and political instability.

One important approach GCC countries followed in this regard is the development of contemporary identity management systems. These initiatives have been backed by strong leadership to achieve two prevailing objectives:

(1) homeland security enhancement, and

(2) enhancement and expedition of service delivery and support e-government.

Certainly, an identity management system that provides reliable and accurate data source about the population demographics is a fundamental planning requirement and central to improving decision making. It should subsequently allow GCC governments and policy makers to examine, and hence develop and regulate their national (identity) strategies and labour markets in a more proactive manner.

REFERENCES

[1] Unknown (2001) Globalisation and Identity: Trends and Contradictions [Online]. Available from: http://www.osi.hu/nsp/program_uk/yorkconf/papers2001/globalizationandidentity.htm [Accessed 3 March 2010].

[2] Castells, M. (2006) Globalisation and identity A comparative perspective. Pp. 56-65.

[3] Held, D., A. McGrew, D. Goldblatt, and Perraton, J. (1999) Global Transformations: Politics, Economics and Culture. Polity and Stanford University Press.

[4] Moore, W.E. (1967) Order and Change: Essays in Comparative Sociology. New York: John Wiley & Sons.

[5] Eriksen, T.H. (1999) Globalisation and the politics of identity [Online]. Available from: http://folk.uio.no/geirthe/UNChron.html [Accessed 2 June 2010].

[6] Kapiszewski, A. (2006) Arab Versus Asian Migrant Workers in the GCC Countries, United Nations Expert Group Meeting on International Migration and Development in the Arab Region. Department of Economic and Social Affairs United Nations Secretariat , Beirut [Online]. Available from:

http://www.un.org/esa/population/meetings/EGM_Ittmig_Arab/P02_Kapiszewski.pdf [Accessed 5 May 2010].

[7] EIU (2010) 'The GCC in 2020: Resources for the future.' The Economist Intelligence Unit [Online]. Available from: http://www.commodities-now.com/component/attachments/download/142.html [Accessed 18 March 2010].

[8] Castells, M. (2004) "The Power of Identity: the information age: Economy, Society and Culture. vol. 2. Oxford: Blackwell.

[9] Erikson, E. H. (1963) Childhood and society (2nd ed.). New York: Norton.

[10] Tajfel, H. (1977) Social psychology and social reality. New Society, 39, pp. 65-66.

[11] Tajfel, H. (1981) Human groups and social categories: Studies in social psychology. Cambridge: Cabridge University Press.

[12] The Metropolitan Museum of Art - www.metmuseum.org.

[13] Salkind, N. (1985) Theories of Human Development. John Wiley and Sons Inc.

[14] Abouchakra, R., Moujaes, C.N., Najjar, M.R. and Shediac, R. (2008) Economic Diversification: The Road to Sustainable Development. Booz & Company.

[15] Clarke, M. (1974) 'On the concept of 'sub-culture', British Journal of Sociology, vol. 25, no.4.

[16] Cooper, R. (1996) Language Planning and Social Change. Cambridge: Cambridge University Press.

[17] Edwards, J. (1994) Multilingualism. London: Routledge.

[18] Even-Zohar, I. (1986) Language Conflict and National Identity. In Alpher, J. (Ed.) Nationalism and Modernity: A Mediterranean Perspective. New York: Preager & Haifa: Ruben Hecht Chair, pp. 126-135.

[19] Featherstone, M. (1995) Undoing Culture: Globalisation, Postmodernism and Identity. SAGE Publications: London, Thousand Oaks, New Delhi.

[20] Featherstone, M. (1996) 'Localism, Globalism, and Cultural Identity', in (Eds) Rob Wilson and Wimal Dissanayake Global/Local: Cultural Production and the Transnational Imaginary. Durham/London: Duke University Press.

[21] Fellman, J. (1973) Language and national Identity: the case of the Middle East. *Anthropological Linguistics*, vol. 15, no. 5, pp. 244-249.

[22] Fierman, W. (1997) Language, Identity, and Conflict in Central Asia and the Southern Caucasus. Perspectives on Central Asia, vol. 2, no. 5.

[23] Giddens, A. (1991) Modernity and Self-Identity. Self and Society in the Late Modern Age. Cambridge: Polity Press.

[24] Hebdige, D. (1979) Subculture: The Meaning of Style. London/New York, Methuen and Co.

[25] Kahn, J.S. (1995) Culture, Multiculture, Postculture. London: Sage.

[26] Kellner D. (1991) 'Popular Culture and Construction of Post-modern Identities'. In Lash S., Friedman J. (eds.). Modernity and Identity. Blackwell: Oxford, UK.

[27] King, A. (1991) Introduction: Spaces of Culture, Spaces of Knowledge in King, A. (ed) Culture, Globalization and the World-System: Contemporary Conditions for the Representation of Identity, New York: Macmillan.

[28] Miller, D. (ed) (1995) Worlds apart : modernity through the prism of the local. New York: Routledge.

[29] Nayak, Anoop (2003) Race, Place and Globalization: Youth Cultures in a Changing World. Oxford: Berg.

[30] Rees, C.J., Mamman, A. and Bin Braik, A. (2007) Emiratization as a strategic HRM change initiative: case study evidence from UAE petroleum company, International Journal of Human Resource Management, vol. 18, no.1, pp. 33-53

[31] Safran, W. (2001) Nationalism. In J. Fishman (Ed.) Handbook of Language and Ethnic Identity, Oxford: Oxford University Press, pp.77 – 93.

ABOUT THE AUTHOR

Dr. Ali M. Al-Khouri

Dr. Ali M. Al-Khouri is a senior UAE government official and is currently working with Emirates Identity Authority. He received his Engineering Doctorate degree from Warwick University where his research focused on the management of strategic and large scale projects in the government sector. He is a Certified Project Management Professional and a Chartered Fellow of the British Computer Society. He has been involved in many strategic government development projects, and lately the UAE national ID project as an executive steering board member and the chairman of the technical committee. His main research interests include the application of modern and sophisticated technologies in large contexts, projects management, organisational change and knowledge management

Email: ali.alkhouri@emiratesid.ae

ABOUT THE CONTRIBUTING AUTHORS

H.E. General Ahmad N. Al-Raisi

H.E. General Ahmad N. Al-Raisi is the Director-General for Central Operations at Abu Dhabi Police GHQ,, and Chairman of the Executive Board Committee at Emirates Identity Authority. He received his degree from Otterbein, Ohio State University in the United States, and is currently doing his doctorate research in London in the field of risk and disasters management. With projects ranging from force automation, administration and security systems, and fingerprint/PKI-based smart card systems to iris recognition, H.E. Al Raisi has championed many successful innovative and complex projects on both the local and federal levels. His research interests include strategic management and innovation.

Email: alraisi@adpolice.gov.ae.

Dr. Duncan Westland

Dr. Duncan Westland is working with PA consulting and is based in London. He received his doctorate from Oxford University. He has expertise in biometrics and related identity management technologies, including public key infrastructure and security features to support issuance of ID Cards and e-passports. He has worked for the UK's Identity and Passport Service for five years and held the post of Biometrics Architect for the UK's National Identity Service. He was previously responsible for assuring the passport production system for the UK's first e-passport.

Email: Duncan.Westland@PAconsulting.com

Author Biography:

Dr. Al-Khouri is the Director General (Under Secretary) of Emirates Identity Authority; a federal government organisation established in 2004 to rollout and manage the national identity management infrastructure program in the United Arab Emirates. He has been involved in the UAE national identity card program since its early conceptual phases during his work with the Ministry of Interior. He has also been involved in many other strategic government initiatives in the past 22 years of his experience in the government sector.

He holds an engineering doctorate degree in strategic and large scale programs management from Warwick University, UK; Masters Degree (M.Sc.) in Information Management from Lancaster University, UK; and a Bachelors Degree (B.Sc., Hons.) from Manchester University, UK. He is also a member in several academic and professional institutions.

He is an active researcher in the field of advanced technologies implementation in government sector, and the approaches to reinventing governments and revolutionising public sector services and electronic business. He has published more than 50 research articles in various areas of applications in the past 10 years.

Papers Included:

Strategic Management

Public Value and ROI in the Government Sector

Strategy Development at Emirates Identity Authority

Targeting Results: Lessons Learned from the UAE National ID Program

Re-thinking Enrolment in Identity Card Schemes

Organisational Performance

Improving Organisational Performance Through Understanding Human Motivation

Succeeding with Transformational Initiatives

e-Government

Supporting e-Government Progress in the UAE

National Identity

Population Growth and Governments Modernisation efforts: The Case of GCC Countries

ISBN978-9948-16-737-2