

THE TRANSFORMATIONAL GOVERNMENT FRAMEWORK

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ABSTRACT

The Transformational Government Framework (TGF) is the first practical "how to" standard for the design and implementation of an effective program of technology-enabled change at national, state or local government level. It describes a managed process of ICT-enabled change in the public sector, which puts the needs of citizens and businesses at the heart of that process and which achieves significant and transformational impacts on the efficiency and effectiveness of government.

During much of the last two decades, many Governments thought that new technology would provide the key to deliver the necessary transformations to enable them to deliver more with less. But at a time when virtually every government is now an "e-government", it is now clear that ICT is no magic bullet. Duplicated expenditure, wasted resources, no critical mass of users for online services, and limited impact on core public policy objectives - this has been the reality of many countries' experience of e-Government.

This paper outlines the work of the OASIS Technical Committee established to address this new approach by developing a new framework and set of enabling standards that can jump-start this transformation and optimize the benefits of technology-enabled change at all levels of government. The various components of the Transformational Government Framework described in this paper represent the first outputs of the committee – the TGF Primer [1] and the TGF Pattern Language [2].

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K.6.1 [Management of computing and information systems] Project and People Management - strategic information systems planning.

General Terms

Management, Governance, Standardization.

Keywords: Transformational Government, e-Government, citizen-centric services, pattern language

1. INTRODUCTION

1.1 Background

All around the world, governments face huge pressure to do more with less. To raise educational standards to meet the needs of a global knowledge economy. To help our economies adjust to financial upheaval. To lift the world out of poverty when more than a billion people still live on less than a dollar a day. To facilitate the transition to a sustainable, inclusive, low-carbon society.

Responding effectively to these challenges means governments need to be capable of delivering change which is transformational, not incremental.

During the 1990s and the first part of this decade, many thought that new technology would provide the key to deliver these transformations. The great majority of the world's leading e-Governments have adopted formal interoperability frameworks (IFs), and dozens of new IFs are currently being developed by governments around the world. Indeed, bodies such as the World Bank and the United Nations have funded much of this work because they believe IFs to be essential to the delivery of successful e-Government:

“Recognizing that e-Government should be transformative and become more citizen- rather than government- focused in delivering public services, investing in the development of an e-Government interoperability framework is fundamental. Otherwise, the millions of dollars spent on e-Government would rarely lead to good governance and the achievement of the Millennium Development Goals.” [4]

But at a time when virtually every government is now an "e-government" - with websites, e-services and e-government strategies proliferating around the world, even in the least

developed countries - it is now clear that Information and Communication Technology is no magic bullet. The OECD Report of 2009 [5] identifies most of the failures points that have been the reality of many countries' experience of e-Government, eg duplicated IT expenditure, wasted resources, no critical mass of users for online services, and limited impact on core public policy objectives. A number of other influential bodies have researched this aspect and produced reports that support this assessment [7-11]. The Wikipedia entry for Transformational Government [12] provides a list of other relevant supporting evidence.

But whilst all these reports identify the problems and suggest what needs to be done to correct them, none of these reports or other methodologies provides a complete end-to-end solution. The TGF is the first complete framework that sets out the "how" to implement a Transformational Government program. It has been developed using the practical experiences of seasoned professionals who have been at the sharp end and delivered successful programs. As a result of their early work an increasing number of governments are now starting to get to grips with the much broader and more complex set of cultural and organisational changes which are needed if ICT is to deliver significant benefits in the public sector. Countries such as the UK, Canada and Australia have all recently published strategies which shift decisively away from "e-government" towards a much more radical focus on transforming the whole relationship between the public sector and users of public services.

1.2 Defining Transformational Government

The definition of Transformational Government used within the Framework is as follows:

"A managed process of ICT-enabled change in the public sector, which puts the needs of citizens and businesses at the heart of that process and which achieves significant and transformational impacts on the efficiency and effectiveness of government."

This definition deliberately does not seek to describe some "perfect end-state" for government. That is not the intent of the Transformational Government Framework (TGF). All governments are different: the historical, cultural, political, economic, social and demographic context within which each government operates is different, as is the legacy of business processes and technology implementation from which it starts. So the Transformational Government Framework is not a one-size-fits-all prescription for what a government should look like in future.

Rather, the focus is on the process of transformation: how a government can build a new way of working which enables it rapidly and efficiently to adapt to changing citizen needs and emerging political and market priorities. In the words of one of the earliest governments to commit to a transformational approach:

"... the vision is not just about transforming government through technology. It is also about making government transformational through the use of technology" [13]

A full understanding of this definition of Transformational Government can also be assisted by focusing on the four major

ways in which Transformational Government programs differ from traditional e-Government programs:

- They take a whole-of-government view of the relationship between the public sector and the citizen or business user;
- They include initiatives to e-enable the frontline of public services: that is, staff involved in direct personal delivery of services such as education and healthcare - rather than just looking at transactional services which can be e-enabled on an end-to-end basis;
- They take a whole-of-government view of the most efficient way of managing the cost base of government;
- They focus on the "citizen" not the "customer". That is, they seek to engage with citizens as owners of and participants in the creation of public services, not as passive recipients of services.

1.2.1 Transforming services around the citizen and business user

Most governments are structured around a set of vertically-integrated silos or stovepipes - agencies, departments, ministries. By and large, it is these silos which the governments of developed countries have spent billions of dollars on "e-enabling" since the 1990s. Yet the needs of citizens, businesses and others engaging with government typically cut across the organisational structures and hierarchies of government - so this is an ICT investment strategy which is fundamentally not a citizen-focused one, and which has inevitably resulted in low levels of take-up for e-services.

Governments in developed countries are now grappling with the legacy of thousands of fragmented, silo-focused websites (270,000+ in the US public sector, over 9,000 gov.de sites in Germany, and over 3,000 gov.uk sites in the UK). An increasing number are now seeking to make a fundamental strategic shift, towards a holistic, citizen-centred approach, driven at the whole-of-government level. This shift includes, in leading countries, a move to a one-stop citizen-centric service delivered over multiple channels.

1.2.2 e-Enabling the frontline

Traditional e-Government focused on e-enabling transactional services and providing online content. Yet the great majority of public sector staff and expenditure is not involved in such services, but rather is on the "front line": teachers, healthcare workers, police, court officials, emergency response teams and so on. Leading governments are increasingly beginning now to understand how the work of such front line staff can be transformed through the use of real-time knowledge management and mobile workflow applications.

1.2.3 Empowering the citizen

Citizens' experience of new technology is shaped by the best of the global private sector and - increasingly - through an ability to co-create content and services as individuals or in peer-to-peer networks. They will increasingly demand this level of interactivity and ownership in their relationship with public services. Transformational Government programmes embrace this. Where traditional e-Government programmes focused on the user as "the customer", Transformational Government looks to enhance the

relationship between government and the citizen on a much richer, more reciprocal, and more empowering basis.

1.2.4 Cross-government efficiency

The silo-based approach to ICT investment typical of much e-government has not only resulted in "un-citizen-centric" services (as discussed above), but also in duplication and inefficiency. Governments have "reinvented the wheel" in ICT terms - over and over again - with different agencies each:

- maintaining their own databases, even for universal data sets such as citizen identity, addresses and so on;
- building bespoke applications for e-service functions which are common to all or many agencies (such as payments in and out, eligibility, notification, and authentication), as well as for common business processes such as HR and Financial Management;
- and doing so in ways which not only duplicate expenditure, but which also will not inter-operate with other agencies - making it more difficult and expensive to move towards inter-agency collaboration in future.

A key focus of Transformational Government is therefore to move towards an integrated ICT and back-office service architecture across all parts of government - reaping efficiency gains while at the same time enabling better, more citizen-focused service delivery. As "cloud computing" gains traction and momentum, this approach to government ICT opens up even greater scope to achieve large-scale efficiency savings while simultaneously improving organisational agility.

1.2.5 Purpose of the Transformational Government Framework

Delivering this degree of change is not straight-forward for government. Indeed, government faces unique challenges in delivering transformational change, notably:

- the unparalleled breadth and depth of its service offering;
- the fact that it provides a universal service, engaging with the whole population rather than picking and choosing its customers;
- structures, governance, funding & culture which are all organised around specific business functions, not around meeting citizen needs in a holistic way.

The governments and industry leaders involved in the OASIS Technical Committee therefore believe that the time is now right to set out a clear best practice framework within which governments can overcome these challenges to deliver genuinely transformational ICT-enabled change in the public sector.

Against this background, the purpose of the Transformational Government Framework is as follows:

" In the increasingly common situation of governments being expected to deliver better and more services for less cost whilst maintaining high-level oversight and governance, the Transformational Government Framework provides a framework for designing and delivering an effective program of technology-enabled change at all levels of government."

1.2.6 Target audience for the Transformational Government Framework

The Transformational Government Framework is primarily intended to meet the needs of:

- Ministers and senior officials responsible for shaping public sector reform and e-Government strategies and policies (at national, state/regional and city/local levels);
- Senior executives in industry who wish to partner with and assist governments in the transformation of public services, and to ensure that the technologies and services which the private sector provides can have optimum impact in terms of meeting public policy objectives.

Secondary audiences for the Transformational Government Framework are:

- Leaders of international organisations working to improve public sector delivery, whether at a global level (eg World Bank, United Nations) or a regional one (eg European Commission, ASEAN, IADB);
- Professional bodies that support industry sectors by the development and maintenance of common practices, protocols, processes and standards to facilitate the production and operation of services and systems within the sector, where the sector needs to interact with government processes and systems;
- Academic and other researchers working in the field of public sector reform;
- Civil society institutions engaged in debate on how technology can better enable service transformation.

1.2.7 OASIS Technical Committee's work

The OASIS Technical Committee was established in October 2010 to formalise and enhance the early work on transformational government. Its current membership includes representatives from national governments, major industry organisations, academia and other internationally recognized expert practitioners on e-Government. Full details of its work are available at www.oasis-open.org/committees/tc_home.php?wg_abbrev=tgf.

The major deliverable of the committee is a Framework for Transformational Government. Included in this Framework are:

- a business model for change,
- a series of guiding principles,
- a series of policy products necessary to implement the change,
- a delivery roadmap,
- and a checklist of critical success factors.

A TGF Primer [1], which gives an overview of the Framework, and a TGF Pattern Language[2], which is a formalization of the Framework that is both human-readable and machine-tractable, have been approved by the Technical Committee and both are now proceeding through the full OASIS approvals process.

Supporting both these documents there will be in due course a number of Use Cases and other guidance advice on its adoption.

2. THE TRANSFORMATIONAL GOVERNMENT FRAMEWORK

The Transformational Government Framework can be seen schematically at Figure 1 below:

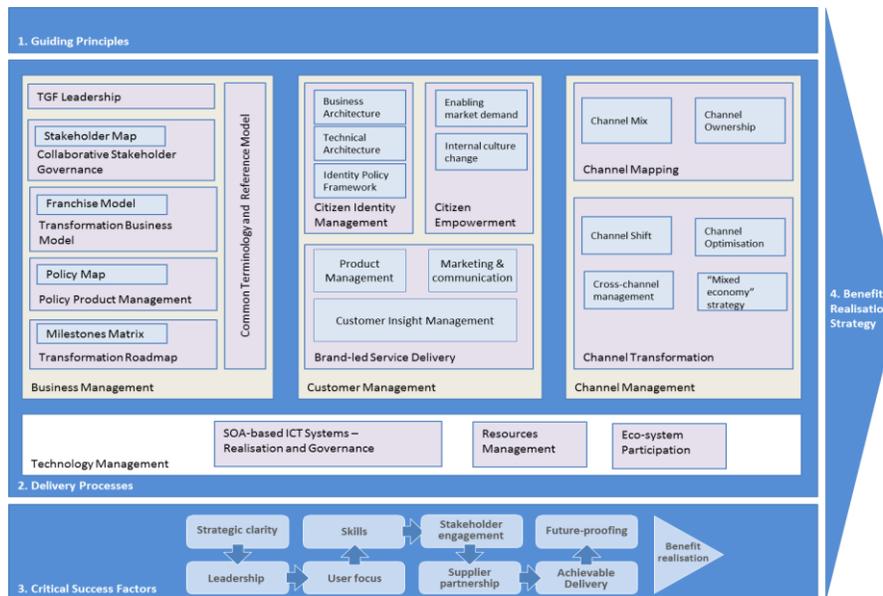


Figure 1. The Transformational Government Framework schematic.

There are four main components to the Framework:

1. A set of **guiding principles** for transformation: that is, the core values which underpin successful citizen-centric reform around the world.
2. The major **delivery processes** within government, all of which need refocusing in a citizen-centric way in order to deliver genuinely transformational impact: business management, customer management, channel management, and service-oriented technology management.
3. A checklist of the **critical success factors** that every government needs to manage if it is to develop and deliver an effective Transformational Government programme.
4. The **Benefits Realisation Framework** that is needed to ensure that the Transformation Government programme ultimately delivers all of its intended benefits and impacts in practice.

Each of these components is described in more detail below.

2.1 Component 1 of the TGF: Guiding Principles

As discussed above of this document, a one-size-fits all approach to public sector reform will not work. Nevertheless, there are some guiding principles which 10-15 years of experience with e-enabled government around the world suggests are universal. They are based on the experience of many OASIS member organisations working with governments of all kinds, all around the world, and they form the heart of the Framework.

In the Transformational Government Framework, we use the term “principle” to mean an enduring statement of values which can be used on a consistent basis to steer business decision making over the long term. The TGF Guiding Principles are set out below, and must be used by any Transformational Government programme conforming to the TGF.

- Develop a detailed and segmented understanding of your citizen and business customers;
- Build services around customer needs, not organisational structure;
- Citizen service transformation is done with citizens, not to them;
- Grow the market;
- Manage and measure the nine critical success factors.

2.2 Component 2 of the TGF: Delivery processes

Delivering the principles outlined above, in line with the Critical Success Factors detailed in Component 3 of the TGF, involves inventing every stage of the service delivery process. The Transformational Government Framework identifies four main delivery processes, each of which needs to be managed in a government-wide and citizen-centric way in order to deliver effective transformation:

- business management
- customer management
- channel management
- technology management

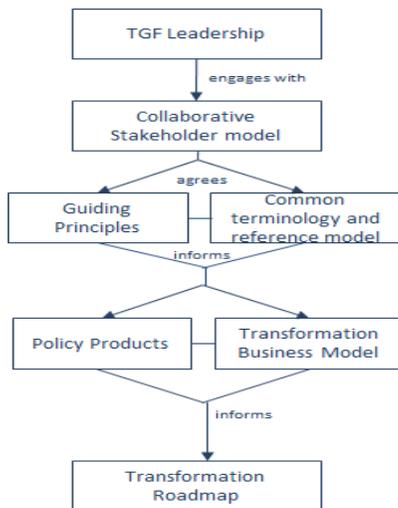
2.2.1. Business Management

For largely historical reasons, governments are generally organised around individually accountable vertical silos (for example, tax, health, transport), with clear demarcations between central, regional, and local government. Yet citizen and business needs cut across these demarcations. In moving to a citizen-centric approach, it is vital to redress this fragmented approach to business management, and to put in place business management processes which operate at the whole-of-government level.

The Transformational Government Framework identifies six key aspects of business management which need to be tackled in this way:

- Transformational Government leadership: the key people and governance structures needed to develop and implement a Transformational Government programme;
- A collaborative Stakeholder Governance Model: the process by which all key stakeholders are identified, engaged and buy-in to the transformation programme;
- A common terminology and Reference Model: ensuring that all stakeholders have a clear, consistent and common understanding of the key concepts involved in Transformational Government; how these concepts relate to each other; how they can be formally modelled; and how such models can be leveraged and integrated into new and existing information architectures;
- A Transformation Business Model: a new virtual business layer within government, focused round the needs of citizens and businesses, which enables the existing silo-based structure of government to collaborate effectively in understanding and meeting user needs;
- The development and management of Policy Products that constitute the documented commitment to the transformational process of any conformant agency;
- A Transformation Delivery Roadmap: giving a four to five year view of how the program will be delivered, with explicit recognition of priorities and trade-offs between different elements of the program.

A high level view of the logical relationships between these components is illustrated below:



• **Figure 2: Business Management components**

A central task of the TGF leadership and collaborative stakeholder model is to develop a new and effective business model which enables the machinery of government to deliver citizen-centric services in practice.

It is failure to address this requirement for a new business model which, arguably, has been the greatest weakness of most traditional e-government programmes. For the most part, the transition to e-government has involved overlaying technology onto the existing business model of government: a business model based around unconnected silos - in which policy-making, budgets, accountability, decision-making and service delivery are all embedded within a vertically-integrated delivery chain based around specific government functions. The experience of governments around the world over the last two decades is that this simply does not work.

So what is the new business model which is required to deliver citizen service transformation? Many attempts have been made by governments to introduce greater cross-government coordination, but largely these have been "bolted on" to the underlying business model, and hence experience only limited success.

The TGF recommends implementation of a business model which permits the joining-up of services from all parts of government in a way that makes sense to citizens, yet without attempting to restructure those parts of government. Conceptually, this leads to a model where the existing structure of government continues to act as a supplier of services, but intermediated by a "virtual" business infrastructure based around customer needs. A top-level view of such a virtual, market-based approach to citizen service transformation is set out in the figure below:

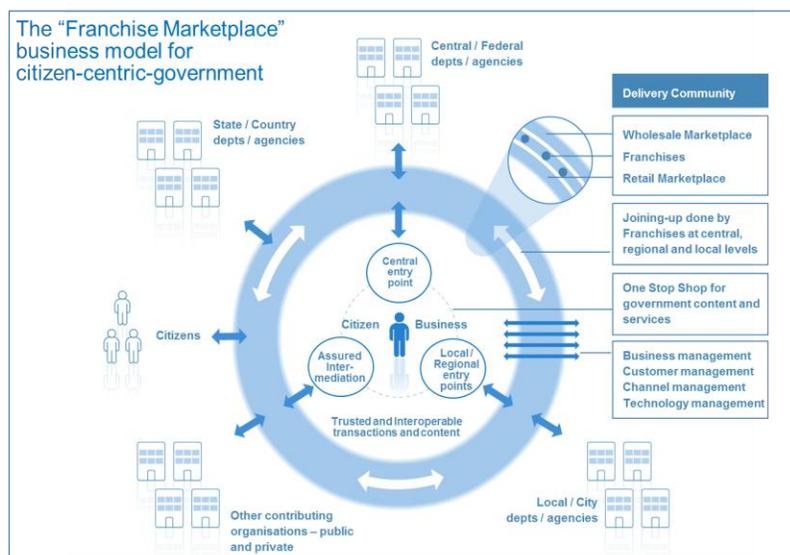


Figure 3: The Franchise Model

Key features of this business model are:

- The model puts into place a number of agile cross-government virtual "franchise businesses" based around customer segments (such as, for example, parents, motorists, disabled people). These franchises are responsible for gaining full understanding of their customers' needs so that they can deliver quickly and adapt to changing requirements over time in order to deliver more customer centric services - which in turn, is proven to drive higher service take-up and greater customer satisfaction.
- Franchises provide a risk-averse operational structure that enables functionally-organised government agencies at national, regional and local to work together in a customer-focused "Delivery Community". They do this by:
 - Enabling government to create a "virtual" delivery structure focused on customer needs;
 - Operating inside the existing structure government (because they are owned and resourced by one of the existing "silos" which has a close link to the relevant customer segment);
 - Dividing the task into manageable chunks;
 - Removing a single point of failure;
 - Working to a new and precisely-defined operating model so as to ensure consistency;
 - Working across government (and beyond) to manage the key risks to citizen-centric service delivery;
 - Acting as change agents inside government departments / agencies.
- The model enables a "mixed economy" of service provision: first, by providing a clear market framework within which private and voluntary sector service providers can repackage public sector content and services; and second by disseminating Web 2.0 approaches across government to make this simpler and cheaper at a technical level.
- The whole model is capable of being delivered using Cloud Computing.

This Franchise model represents an important break-through in the shift from a traditional e-government approach towards citizen service transformation. Certainly, the model as a whole or key elements of it has been adopted successfully in governments as diverse as the UK, Hong Kong, Croatia, Abu Dhabi and Australia (where it has been adopted by both the South Australia and Queensland governments).

Policy Product Management

We define a "Policy Product" as: any document which has been formally adopted on a government-wide basis in order to help achieve the goals of citizen service transformation. These documents vary in nature (from statutory documents with legal force, through mandated policies, to informal guidance and best practice) and in length (some may be very lengthy documents; others just a few paragraphs of text). Policy Products are important drivers of change within government: first because the process of producing them, if managed effectively, can help ensure strategic clarity and stakeholder buy-in; and second because they then become vital communication and management tools.

Over recent years, several governments have published a wide range of Policy Products as part of their work on Interoperability Frameworks and Enterprise Architectures, and other governments are therefore able to draw on these as reference models when developing their own Policy Products. However, we believe that the set of Policy Products required to ensure that a holistic, government-wide vision for transformation can be delivered is much broader than is currently being addressed in most Interoperability Frameworks and Enterprise Architectures.

A TGF-conformant transformation programme will use the Policy Product Map shown below as an assessment framework for determining what Policy Products are needed to deliver the

programme effectively. This maps the four delivery processes described in Component 2 of the TGF (Business Management, Customer Management, Channel Management and service-oriented Technology Management) against the five interoperability domains identified in what is currently the broadest of Interoperability Frameworks - the European Interoperability Framework (EIF): technical, semantic, organisational, legal and policy interoperability – (see http://ec.europa.eu/isa/strategy/doc/110113_iop_communication_annex_eif.pdf).

While the EIF framework is conceptually complete, by mapping it against these core delivery processes, a much clearer sense can be gained of the actions which are needed.

Our full analysis of the Policy Products which are typically needed to deliver an effective and holistic transformation programme is still to be completed; however the diagram below illustrates the types of products that might be needed. Whilst every policy product indicated may not be needed, we recommend that any conformant transformation programme should use the overall framework of the Policy Product Map to conduct a gap analysis aimed at identifying all key Policy Products needed for that government.

		Interoperability Domains				
		Political	Legal	Organisational	Semantic	Technical
The Citizen Service Transformation value chain	Business	<ul style="list-style-type: none"> • Cross-govt vision for citizen service transformation • Governance model^{1,2,3} • Strategic Business Case for overall programmes¹ • Risk Management Strategy 	<ul style="list-style-type: none"> • Legal vires for inter-agency collaboration • Legal framework for public private partnership 	<ul style="list-style-type: none"> • Transformation Roadmap • Key Services Portfolio¹ • Funding model • Franchise Operating model • Transformation competency framework 	<ul style="list-style-type: none"> • Business case best practice guidance¹ • Performance Measurement Framework² • Benefits Realisation Plan¹ 	<ul style="list-style-type: none"> • Metadata Repository^{1,3} • Business Process Model^{2,4} • Logical Data model⁴
	Customers	<ul style="list-style-type: none"> • Identity Management Strategy¹ • Privacy and Data Sharing Policy^{1,2} 	<ul style="list-style-type: none"> • eSignatures and e-Business enabling legislation^{1,2} • Privacy, data protection and data security legislation^{1,2} 	<ul style="list-style-type: none"> • Federated trust model for cross-agency identity management^{1,2} • Marketing and Communications strategy • Cross-government customer segmentation framework • Service definition for One-Stop Government service • Brand Management guidelines 	<ul style="list-style-type: none"> • Common data standards (especially for name, address, key personal attributes)^{1,2,3} 	<ul style="list-style-type: none"> • Single-sign on Architecture³
	Channels	<ul style="list-style-type: none"> • Digital Inclusion strategy • E-Service take-up strategy • Intermediaries policy³ • Accessibility policies and compliance¹ 	<ul style="list-style-type: none"> • Pro-competitive regulatory framework for the telecoms sector 	<ul style="list-style-type: none"> • Channel Integration Framework² • Channel Management Guidelines^{2,3} 	<ul style="list-style-type: none"> • Web Accessibility Guidelines^{1,3} 	<ul style="list-style-type: none"> • Presentation Architecture⁴
	Technology	<ul style="list-style-type: none"> • Information Security Policy^{1,2,3} 	<ul style="list-style-type: none"> • Procurement legislation¹ • Framework contracts¹ 	<ul style="list-style-type: none"> • Supplier management guidelines • Service level agreements¹ 	<ul style="list-style-type: none"> • Physical data model⁴ 	<ul style="list-style-type: none"> • Interoperability Framework^{1,3} • Security Architecture^{1,3} • Application Architecture⁴ • Network Architecture⁴ • Service-oriented Architecture¹

Sources for reference models
 1: European Interoperability Framework v2 draft, <http://ec.europa.eu/idabc/en/document/2315/5644>
 2: US Federal Enterprise Architecture www.whitehouse.gov/omb/e-gov/fea/
 3: UK GovTalk, www.govtalk.gov.uk
 4: Zachmann, <http://zachmaninternational.com/index.php/home-article>

Figure 4: The Policy Product Map

Transformation Roadmap

Finally, it is essential that the vision, strategy, business model and policies for citizen service transformation are translated into an effective Transformation Roadmap.

Since everything can clearly not be done at once, it is vital to map out which elements of the transformation programme need to be started immediately, which can be done later, and in what order. There is no one-size-fits all strategy which governments can use, since strategy needs to be tailored to the unique circumstances of each government's situation.

However, all governments face the same strategic trade-offs: needing to ensure clear line-of-sight between all aspects of programme activity and the end outcomes which the government is seeking to achieve, and to balances quick wins with the key steps needed to drive longer term transformation.

In the early days of the Transformational Government programme, we recommend that the major strategic focus should be on **safe delivery** - that is, prioritizing high benefit actions which help to accelerate belief and confidence across the government and the wider stakeholder community that ICT-enabled change is possible and beneficial - but which can be delivered with very low levels of risk. As the programme develops, and an increasing number of

services become available, the strategic focus can move towards **building take-up**: that is, building demand for online services and creating a critical mass of users. Once that critical mass starts to appear, the strategic focus can start to shift towards fuller **transformation**: in other words, to start driving out some of the more significant transformational benefits that high levels of service take-up enables, for example in terms of reducing the cost of government service delivery.

2.2.2. Customer Management

Citizen-centric customer management involves taking a holistic, market-driven approach to every step of the service design and delivery process. Three areas in particular are of vital importance:

- Brand-led service delivery
- Identity management
- Citizen empowerment

Brand and Marketing Management

Marketing is critical to effective citizen service transformation, yet is something at which government traditionally does not excel. Often, marketing is fundamentally misunderstood within

government - as being equivalent to advertising or perhaps, more broadly, as being equivalent to communication.

Properly understood, however, marketing is the process of:

- Understanding the target market for government services in all its breadth and complexity;
- Learning what is needed in order to meet citizen needs;
- Developing an offer for citizens and businesses that they will engage with;
- Establishing a clear set of brand values for that offer - a set of underpinning statements that adequately describe what the product or service will deliver and how;
- Delivering that offer through appropriate channels, in a way which fully delivers on the brand values;
- Generating awareness about the offer;
- Creating desire/demand for the offer;
- Reminding people;
- Changing the offer in the light of experience;

This is the process that a brand-led consumer product company such as Proctor and Gamble or Virgin would go through when developing a new product. However, it is not typically how governments manage their own service development, and governments generally lack the skills to do it. Moreover, the challenge faced by governments is significantly more complex than any private sector company, given the greater range and complexity of services and government's need to provide a universal service rather than pick and choose its customers. Yet if governments are to succeed in the ambition of shifting service delivery decisively away from traditional channels to lower-cost digital channels, then these marketing challenges have to be met.

And given the fact that a) citizen needs cut across organisational boundaries in government and b) the skills for delivering an effective brand-led marketing approach to service transformation will inevitably be in short supply, it is important that these challenges are addressed at a government-wide level.

2.2.3. Channel Management

Channel management is often a weak spot in government service delivery, with widespread duplication, inefficiency and lack of user-focus. Experience shows common pitfalls include:

- Managing new, digital channels as "bolt-ons", with business and technical architectures which are entirely separate from traditional face-to-face or paper-based channels;
- No common view of citizen service across multiple channels;
- Operational practices, unit costs and service standards for many channels which fall well below standards set for those channels in the private sector;
- A reliance on government-owned channels, with insufficient understanding of how to partner with private and voluntary sector organisations who have existing trusted channels to government customers;
- Unproductive and costly competition among service delivery channels.

Transformational Government programmes seek to avoid these pitfalls, by building a channel management approach centred on the needs and behaviour of the citizen. The two key elements of the approach recommended in the Transformational Government Framework are:

- Channel Mapping: a clear audit of what existing channels are currently used to deliver government services. The TGF Channel Mapping approach includes an analysis of the current usage and costs of these channels across two key dimensions: which delivery channels are being used ('channel mix') and who owns them ('channel ownership').
- Channel Management Strategy: the TGF helps build a new channel management approach centred on the needs and behaviour of citizens and businesses. The key components of such an approach include:
 - Channel Shift
 - Channel Optimization
 - Cross-Channel Management
 - Development of a wholesale intermediary market.

2.2.4. Technology management

The transformations to business, customer and channel management described above require a new approach to technology and in particular a commitment to the paradigm and principles of Service Oriented Architecture (SOA) and SOA-based infrastructure, as defined in the OASIS 'Reference Model for Service-Oriented Architecture.

Transformational Government demands a single view of the citizen or business, delivered inside an integrated business and channels architecture. In terms of ICT, all of this requires governments to learn from private-sector best practice. Industry is moving towards a model of company-wide, service-orientated enterprise architecture, where common building blocks using open standards can be re-used to enable flexible and adaptive use of technology to react quickly to changing customer needs and demands. Increasingly, companies are gaining even greater efficiency benefits by managing these building blocks as a service, provided not within their own ICT architecture but from within "the Cloud" - the dynamically-scalable set of computing resources now being offered as a service over the Internet.

Governments are increasingly taking this 'building block' approach to technology development. Key building blocks such as ICT infrastructure, common data sets, and identity verification need to be co-ordinated effectively. While much can be learned from the private sector, simply importing industry practices will not solve this coordination problem within government.

Governments are taking different approaches to the co-ordination function: some build central infrastructure for use by all departments and agencies; others identify lead departments to build and implement common solutions; others have a more decentralized approach, allowing departments to develop their own solutions according to a common architecture and standard set. However, finding an effective approach which works within a specific government approach is vital, since without this sort of technology flexibility, then Transformational Government becomes impossible - or possible only at great expense and with significant wasteful and duplicated IT expenditure.

The Technology Management Framework is modelled as one of the four TGF delivery processes, but it is concerned with more than "just" the delivery of services using ICT. Its focus on the SOA paradigm is key to an approach that puts citizens and businesses as customers at the centre of a service ecosystem with many stakeholders, roles and systems involved.

The three key elements of the approach recommended in the Transformational Government Framework are:

- Resources Management which underpins ecosystem governance
- Ecosystem Participation
- Realisation and governance of SOA-based ICT systems

2.3 Component 3 of the TGF: Critical Success Factors

Programmes and projects which seek to deliver Transformational Government face a significant range of risks to successful delivery. Typically, the risks are not to do with the technology involved - which is largely now mature and proven. Rather, the risks lie primarily in the business and cultural changes which are needed within government to deliver the business management, customer management and channel management transformations described above.

However, there is now an increasing body of research which seeks to understand why some ICT-enabled transformation programmes succeed and why others fail. The TGF has drawn together the findings from such research, validating these with OASIS members from around the world, to identify nine Critical Success Factors that must be taken into account. Successful transformation programmes manage and measure the following Critical Success Factors throughout the life of the programme:

Strategic Clarity:

- All-of-Government view
- Clear vision
- Strong business case
- Focus on results

Leadership

- Sustained support
- Leadership skills
- Collaborative governance

User focus

- A holistic view of the customer
- Citizen-centric delivery
- Citizen empowerment

Stakeholder Engagement

- Stakeholder communication
- Cross-sector partnership

Skills

- Skills mapping
- Skills integration

Supplier Partnership

- Smart supplier selection
- Supplier integration

Future-proofing

- Interoperability
- Web-centric delivery
- Agility
- Shared services

Achievable Delivery

- Phased implementation
- Continuous improvement
- Risk management

Benefits Realisation

- Benefits Realisation Strategy

2.4 Component 4 of the TGF: Benefits Realization Strategy

Logically, the design and delivery of a Benefits Realization Strategy is a part of the Business Management task, and is a core responsibility for the Transformational Government Leadership and the collaborative stakeholder governance model described in the TGF Business Management component. It is of such vital importance though, that we have highlighted it as a distinct component of the overall Transformational Government Framework.

Put simply, ICT projects in government (and indeed in the private sector) do not automatically deliver benefits. Governments historically have fallen into two pitfalls which have hindered full benefit realization:

- Failure to pro-actively manage the downstream benefits after an individual ICT project has been completed.
- Failure at a whole-of-Government level to undertake the restructuring of the public labour market to take advantage of new efficiencies.

The Transformational Government Framework does not seek to specify in detail what benefits and impacts a Transformational Government programme should seek to achieve – that is a matter for each individual government. However it does identify three key parts of a Benefit Realisation Strategy as follows:

- Benefit Mapping
- Benefit Tracking
- Benefit Delivery

3. The TGF PATTERN LANGUAGE

The TGF Pattern Language is a formalization of the Framework that is intended to be readable end-to-end as a piece of prose but is structured also in a way that lends itself to being quoted and is used pattern by pattern and to being encapsulated in more formal, tractable, and machine-processable forms including concept maps, Topic Maps, RDF or OWL.

It provides a concise, structured and formal set of “patterns” using the so-called “Alexandrian form” [14][15], where each pattern describes a core problem, a context in which the problem arises and an archetypal solution to the stated problem.

The exact configuration will vary from one pattern language to another but each pattern in the TGF Pattern Language is structured as follows:

- The name of the pattern and a reference number;
- The conformance level intended to be applied in any use of the pattern;
- An introduction that sets the context and, optionally, indicates how the pattern contributes to a larger pattern;
- A headline statement that captures the essence of the problem being addressed;
- The body of the problem being addressed as well as constraints and evidence for the pattern’s validity;
- The solution stated as an instruction – what needs to be done;
- Optionally, some completion notes that links the pattern to related and more detailed patterns that further implement or extend the current pattern. This may also include references to external resources that are not part of the standard.

Version 1 of the TGF Pattern Language contains 20 Core Patterns but as a Pattern Language is inherently extensible, it is expected that extensions and specializations are likely to be developed by individual Governments to suit their implementation needs.

Also included in the TGF Pattern Language is a set of Conformance criteria that need to be adhered to for any Transformational Government program to be compliant with the OASIS standard.

4. CONCLUSIONS

There is a clear need to learn the lessons of the work by public sector administrations on e-Government programmes over the last decade and to move to a more citizen-centric service delivery model called Transformational Government. The outcomes of these programs have generally failed to meet expectations, deliver policy objectives and achieve citizen engagement.

The new approach emphasizes the need for much more focus on the business, operational and cultural aspects rather than solely on the technology issues, which has been the approach to date. Just bolting technology onto the current working methods of government does not achieve the desired outcomes. These other factors need to be addressed first before technical solutions are thought about.

There is also the need to break the usual public sector model of silo-based services and requires amongst other factors a new approach to cross-organisation funding and customer management. A very important factor in this new approach is the implementation of a "franchise" business model whereby services are brigaded under a customer segment champion and delivered by that individual on behalf of the whole of government.

The Transformation Government Framework addresses all these needs and provides a practical, tried and tested way forward utilizing the best parts of existing e-Government programs and avoiding large new investments. Its formalization as a Pattern Language enables it to be encapsulated in more formal, tractable, and machine-processable forms, thus making it easy to integrate into desk-top tools and management software aiding testing and assurance of compliance and conformance.

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