Abstract:

The Transformational Government Framework (TGF) is a 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.

The complete Framework consists of:
- The TGF Primer
- The TGF Pattern Language
and possibly other future deliverables

The TGF Pattern Language is a formalization of the Framework that is both human-readable and machine-tractable. It provides a concise, structured and formal set of “patterns” using the so-called “Alexandrian form”, where each pattern describes a core problem, a context in which the problem arises and an archetypal solution to the stated problem.

This Work Product constitutes the initial set of patterns that form the core of the TGF Pattern Language. This set may be revised and/or extended from time to time as appropriate.

Status:

This Work Product was last revised or approved by the OASIS Transformational Government Framework TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this Work Product.

Technical Committee members should send comments on this specification to the Technical Committee’s email list. Others should send comments to the Technical Committee by using the “Send A Comment” button on the Technical Committee’s web page at http://www.oasis-open.org/committees/tgf/.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the Technical Committee web page (http://www.oasis-open.org/committees/tgf/ipr.php).

Citation format:

When referencing this specification the following citation format should be used:

[TGF-PL-Core]


http://docs.oasis-open.org/tgf/TGF-PL-Core/v1.0/csprd01/TGF-PL-Core-v1.0-csprd01.html
Notice

Copyright © OASIS Open 2011. All Rights Reserved.

All capitalized terms in the following text have the meanings assigned to them in the OASIS Intellectual Property Rights Policy (the "OASIS IPR Policy"). The full Policy may be found at the OASIS website.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to OASIS, except as needed for the purpose of developing any document or deliverable produced by an OASIS Technical Committee (in which case the rules applicable to copyrights, as set forth in the OASIS IPR Policy, must be followed) or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by OASIS or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

OASIS requests that any OASIS Party or any other party that believes it has patent claims that would necessarily be infringed by implementations of this OASIS Committee Specification or OASIS Standard, to notify OASIS TC Administrator and provide an indication of its willingness to grant patent licenses to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification.

OASIS invites any party to contact the OASIS TC Administrator if it is aware of a claim of ownership of any patent claims that would necessarily be infringed by implementations of this specification by a patent holder that is not willing to provide a license to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification. OASIS may include such claims on its website, but disclaims any obligation to do so.

OASIS takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; neither does it represent that it has made any effort to identify any such rights. Information on OASIS' procedures with respect to rights in any document or deliverable produced by an OASIS Technical Committee can be found on the OASIS website. Copies of claims of rights made available for publication and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this OASIS Committee Specification or OASIS Standard, can be obtained from the OASIS TC Administrator. OASIS makes no representation that any information or list of intellectual property rights will at any time be complete, or that any claims in such list are, in fact, Essential Claims.

The name "OASIS" is a trademark of OASIS, the owner and developer of this specification, and should be used only to refer to the organization and its official outputs. OASIS welcomes reference to, and implementation and use of, specifications, while reserving the right to enforce its marks against misleading uses. Please see http://www.oasis-open.org/who/trademark.php for above guidance.
# Table of Contents

1. Introduction ................................................................................................................. 5  
   1.1 Terminology ............................................................................................................. 5  
   1.2 Normative References ............................................................................................ 5  
   1.3 Non-Normative References .................................................................................. 5  
   1.4 The Transformational Government Framework (TGF) ............................................. 5  
   1.5 The TGF Pattern Language (TGF-PL) ................................................................... 6  
   1.6 Pattern Languages ................................................................................................ 6  
   1.7 Notation and conventions used for the Pattern Language ...................................... 6  

2. The TGF Pattern Language ......................................................................................... 8  
   [3] Program Leadership ............................................................................................... 10  
   [4] Engagement with Stakeholders ........................................................................... 10  
   [8] Franchise Marketplace ........................................................................................... 13  
   [9] Skills ....................................................................................................................... 15  
   [10] Supplier Partnership ............................................................................................. 15  
   [12] Benefits realization .............................................................................................. 17  

2.2 Customer Management ............................................................................................. 18  
   [13] Citizen Empowerment ......................................................................................... 18  
   [14] Citizen Identity Management .............................................................................. 19  

2.3 Channel Management ............................................................................................... 21  
   [15] Channel Management Framework ....................................................................... 21  
   [16] Channel Mapping ................................................................................................ 21  
   [17] Channel Transformation ..................................................................................... 22  

2.4 Technology Management ......................................................................................... 24  
   [18] Resources Management ..................................................................................... 24  
   [19] Technology Development and Management ....................................................... 24  
   [20] Critical Success Factors ........................................................................................ 26  

3. Conformance ............................................................................................................... 27  
   A. Acknowledgments .................................................................................................. 29  
   B. Revision History .................................................................................................... 30
1 Introduction

1.1 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

The notations and conventions used for the patterns in this document are covered in section 1.7 below.

1.2 Normative References


1.3 Non-Normative References

(EIF] The European Interoperability Framework, version 2, European Commission
[TGF-Primer] Transformational Government Framework Primer, 17 March 2011. OASIS Committee Note Draft 01 http://docs.oasis-open.org/tgf/TGF-Primer/v1.0/TGF-Primer-v1.0.docx

The text in the remainder of this section 1 Introduction is for information only and is neither normative nor part of the TGF Pattern Language.

1.4 The Transformational Government Framework (TGF)

Transformational Government is defined in the Framework as “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 avoids describing some perfect “end-state” for government. That is not the intent of the Transformational Government Framework.

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. Central to this process is a strong emphasis on leadership and governance as well as an active role played by all stakeholders in the creation, delivery and use of government services.
1.5 The TGF Pattern Language (TGF-PL)

Whereas the TGF Primer is intended primarily as a detailed and comprehensive introduction to the Framework, the TGF Pattern Language is intended as a working reference manual and tool of the main concerns that the Framework covers. It 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 used pattern by pattern and to being encapsulated in more formal, tractable, and machine-processable forms including concept maps, Topic Maps, RDF or OWL.

1.6 Pattern Languages

The idea of Pattern Languages, as a process for analyzing recurrent problems and a mechanism for capturing those problems and archetypal solutions, was first outlined by architect Christopher Alexander [Alexander 1964] and [Alexander 1979]: "The value of a Pattern Language is that remains readable and engaging whilst providing basic hooks for further machine processing… [it] is not an ‘out-of-the-box’ solution but rather some ‘familiar’ patterns with which a team can work" [Brown 2011].

Each pattern in a pattern language is expressed essentially as a three-part rule:

- The context in which a particular problem arises (the ex-ante condition) and in which the pattern is intended to be used;
- The ‘system of forces’ or problem to be solved and that includes the drivers, constraints and concerns that the pattern is intended to address — Alexander highlighted that this ‘system’ often involved conflicting forces (for example, an architect’s desire confronted with a material limitation) that the pattern should seek to resolve;
- The ‘configuration’ or solution.

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

- The name of the pattern and a reference number
- 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 or instructions – 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

1.7 Notation and conventions used for the Pattern Language

The patterns of the TGF Pattern Language are grouped together and organized into a series of sections, corresponding to the high-level structure of the Transformational Government Framework.

Some patterns may be used in more than one part of the overall Framework but will only be outlined completely once, when first encountered. Thereafter, reference will be made back to its original definition.

Below is an example of a pattern together with comments about the notation and conventions used.

Note: The example is not a pattern that is part of the TGF Pattern Language as it was drafted from an early proof of concept. It is strictly informative.
It is a core responsibility of the Transformational Government Leadership and stakeholders together to design and deliver a Benefit Realisation Strategy. The Business Management Framework provides guidance on six key aspects of business management including collaboration between stakeholders. Both Strategic Clarity and Stakeholder Engagement ensure that stakeholder views are clear and understood; and effective Policy Product Management helps ensure that they share a common understanding of TG program expectations, including the Guiding Principles.

The TG program requires a process by which all key stakeholders are identified, engaged and buy-in to the transformation program. Development and delivery of an effective Transformational Government program requires engagement with a very wide range of stakeholders, not only across the whole of government but also with the private sector, voluntary and community sectors as well as with business and citizen users of public services. A significant effort is needed to include all stakeholders in the governance of the Transformational Government program at an appropriate and effective level.

The Collaborative Stakeholder Governance Model assists a TG program to engage successfully with stakeholders and align them effectively behind shared objectives. It does this through stakeholder mapping and stakeholder engagement as well as keeping an eye open to potential or required cooperation with TG programs of other governments and agencies.

Therefore:

A conformant TG program must have a Collaborative Stakeholder Governance Model as part of its overall business management. This model must explicitly articulate a comprehensive stakeholder map, coupled with the structures, processes and incentives needed to deliver full understanding and buy-in to the program, plus effective stakeholder action in support of it.

Tooling should be provided with the aim of supporting all stakeholders and facilitating their collaboration as partners in the TG Franchise Marketplace.

Stakeholder collaboration is further aided by a Common Terminology and Reference Model and more specifically an up-to-date mapping of stakeholders depicted in a Stakeholder Model, and their engagement through the Stakeholder Engagement Model; in addition to a clear understanding of how they form part of the TG Ecosystem and contribute to Interoperability. Stakeholders also play key roles in the development of the Franchise Marketplace Model.
2 The TGF Pattern Language

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 methodology for designing and delivering an effective program of technology-enabled change at all levels of government.

The Transformational Government Framework (TGF) is made up of four high-level components that can be seen schematically below:

Figure 1 - The Overall Framework

The patterns in the TGF Pattern Language mostly cover the core delivery processes, “topped and tailed” by patterns concerned with Guiding Principles and Critical Success Factors.

The Transformational Government Framework is made up of a core of 20 patterns, starting and ending with high level concerns, Guiding Principles and Critical Success Factors.
Guiding Principles

A one size-fits-all approach to government transformation will not work. There are nevertheless some guiding principles which are universal and help inform the delivery of services.

A management hand on the tiller is not enough to deliver effective transformation.

“Transformational Government” is 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. However, even the most well intentioned and effectively governed program can drift off course without clear direction provided by explicit and well-publicized guiding principles.

Therefore:

Use a set of high-level guiding principles that cover as a minimum the need to:

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

See also “Part II, Component 1: Guiding Principles” in [TGF Primer].

Delivering these principles, in line with the Critical Success Factors, involves re-inventing every stage of the service delivery process. The Transformational Government Framework identifies four main delivery processes, each of which must be managed in a government-wide and citizen-centric way in order to deliver effective transformation. Most of the following patterns are concerned with the delivery processes and are presented in four sections:

- Section 2.1 Business Management
- Section 2.2 Customer Management
- Section 2.3 Channel Management; and
- Section 2.4 Technology Management

Patterns [2] to [19] below cover these four delivery mechanisms.

The core set of TGF patterns is completed by the key [20] Critical Success Factors.
2.1 Business Management

[2] Program Leadership

Transformation programs require strategic clarity and sustained leadership over a period of years.

There is no “ideal” leadership structure for a transformation program. Transformational government cannot be pursued on a project-by-project or agency-specific basis but requires a whole-of-government view.

The transformational government program needs to connect up relevant activities in different agencies at different levels of government within and between countries. All program stakeholders have a common, agreed and comprehensive view of what the program is seeking to achieve.

The optimal positioning of the leadership team will depend on the context of each specific government. Key functions should be occupied by individuals with sufficient authority to command the resources and mobilize the support necessary to fulfill this mission. Effective leadership of a program requires the senior accountable leaders to have access to a mix of key skills in the leadership team which they build around them, including: strategy development skills, stakeholder engagement skills, marketing skills, commercial skills and technology management skills. It is not essential that all Ministers and senior management are committed to the transformation program from the outset. Indeed, a key feature of an effective roadmap for transformation is that it nurtures and grows support for the strategy through the implementation process. However, it is important that the program is seen not simply as a centralized or top-down initiative. Sharing leadership roles with senior colleagues across the Government organization is important.

Therefore:

Have a clear vision based on an All-of-Government view and focus on results.

Focus on taking concrete, practical steps in the short to medium term, rather than continually describing the long-term vision.

Whether a political leader or senior management, commit to the program for the long term. This is particularly relevant given the realities of changing political leadership and underlines the need for continuity across those changes.

Establish clear accountability at both the political and administrative levels of the program.

Deploy formal program management disciplines and have a clearly identified mix of leadership skills.

Engage a broad-based leadership team across the wider government.

Ensure the Program’s interoperability with other services and programs through appropriate Government-to-Government cooperation.

Establish a strong Business Case and know what outcomes you want to achieve, know where you are now and how you will measure success. These are amongst several [20] Critical Success Factors and which are further detailed in Part II of the [TGF Primer].

[3] Engagement with Stakeholders

The private, voluntary and community sectors have considerable influence on citizen attitudes and behavior. These influences must be transformed into partnerships which enable the market to deliver program objectives. This requires a “map” of all stakeholders as part of overall business management.

It is not enough to map and understand stakeholder relationships and concerns. Classic models of ‘actor’ and ‘stakeholder’ also need to be re-assessed
Leaders from all parts of the government organization, as well as other organizations involved in the program, are motivated for the program to succeed and are engaged in clear and collaborative governance mechanisms to manage any risks and issues. The development and delivery of an effective Transformational Government program requires engagement with a very wide range of stakeholders, not only across the whole of government but also with the private sector, voluntary and community sectors as well as with business and citizen users of public services. A significant effort is needed to include all stakeholders in the governance of the Transformational Government program at an appropriate and effective level.

The generic concept of ‘User’ that is dominant in traditional IT stakeholder engagement models needs to be replaced by a model that disambiguates and identifies the different interests and concerns that are at stake as well as the key groups of stakeholders in the development of any service. By clearly separating out key stakeholder groups and starting to recognize and articulate their specific concerns as stakeholders (any individual’s role may vary according to context), an understand can evolve of how stakeholders relate (in different roles): to each other; to various administrations and services involved; to policy drivers and constraints; and how these all come together in a coherent ecosystem supported by a Transformational Government Framework.

Therefore:

- Put a Collaborative Stakeholder Governance Model in place that ensures that all stakeholders are identified and engaged; and that they buy-in to the transformation program.
- Create a Stakeholder Engagement Model that ensures that there are adequate Stakeholder Engagement Structures, Stakeholder Engagement Processes and Stakeholder Incentives in place.
- Have a clear understanding both of the transformational government program as well as how to engage with it, irrespective of stakeholder role – as user, supplier, delivery partner elsewhere in the public, private and voluntary sector, politician, the media, etc.
- Develop a comprehensive stakeholder map, coupled with the structures, processes and incentives needed to deliver full understanding and buy-in to the program, plus effective stakeholder action in support of it.
- Model the stakeholders, actors and systems that comprise the overall service ecosystem and their relationships to each other. Maintain and update the stakeholder model on a regular basis.

There is no single, correct model for doing this successfully, but any conformant TGF program needs to make sure that it defines its own Collaborative Stakeholder Engagement Model which explicitly articulates all of these elements: map all stakeholders, coupled with the structures, processes and incentives needed to deliver full understanding and buy-in to the program, plus effective stakeholder action in support of it.

Map All Stakeholders and maintain this map as part of overall business management. The development of successful Customer Franchises within the [7] Franchise Marketplace will depend on the effectiveness of collaborative governance.

See also “The Stakeholder Engagement Model” in Part III(a) (“Guidance on the TGF Business Management Framework”) of the [TGF Primer]


In any change program of the breadth and complexity that the TGF supports, it is vital that all stakeholders have a common understanding of the key concepts involved and how they interrelate, and have a common language to describe these in.

Leadership and communication both break down when stakeholders understand and use terms and concepts in very different ways, leading to ambiguity, misunderstanding and, potentially, loss of stakeholder engagement.

Concepts do not exist in isolation. In addition to clear definitions and agreed terms, It is the broader understanding of the relationships between concepts that give them fuller meaning and allow us to model
our world, our business activities, our stakeholders, etc. in a way that increases the chance that our digital systems are an accurate reflection of our work.

Therefore:

Ensure 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. To this end:

Seek agreement among stakeholders to establish and maintain an agreed and shared Common Terminology and Reference Model.

This enables any conformant agency to use a common terminology without ambiguity and be sure that these terms are used consistently throughout all work.

A core terminology is proposed in the [TGF Primer] and any program should consider this as a basis for their own terminology and reference model.


In any government, “Policy Products” - that is, the written policies, frameworks and standards which inform government activity - are important drivers of change. In the context of Transformational Government, the [2] TGF Program Leadership will use a wide set of Policy Products to help deliver the program.

Traditional policy approaches for e-government have often been too narrowly focused. An effective Transformational Government program requires a more holistic approach to policy development.

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).

Over recent years, several governments have published a wide range of Policy Products as part of their work on e-Government, including e-Government Visions, e-Government Strategies, e-Government Interoperability Frameworks, and Enterprise Architectures. 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.

This more holistic approach is captured in the matrix shown below, which MUST be used to create a map of all the Policy Products needed to deliver a particular TGF program effectively. This matrix maps the four delivery processes of the TGF (Business Management, Customer Management, Channel Management and Technology Management) against five broad interoperability domains identified in the [EIF] (technical, semantic, organizational, legal, and policy interoperability). While the EIF framework is conceptually complete, mapping it against these core delivery processes provides a much clearer sense of the actions needed.

Therefore:

Use the following matrix to classify the Policy Products:
Identify, for each and every cell in the matrix, the policy product(s) that are needed to deliver the Transformational Program effectively. More than one policy product may be required per cell but every cell MUST be completed.

The [2] TGF Program Leadership should undertake this policy gap analysis through the [3] Collaborative Stakeholder Model, and then ensure that the accountability and process for developing any missing Policy Products is embedded within the [10] Roadmap for Transformation.

Examples of policy products that can be found to populate the cells of the matrix can be found in ‘Policy Product Management’ in Part III(a) of the [TGF Primer].

### [6] Transformational Business Model

There is a seeming paradox between keeping “global” oversight of all aspects of a customer’s needs at the same time as delivering well-targeted services which implies continual structural reorganization.

Too many government departments and agencies have overlapping but partial information about citizens but nobody takes a lead responsibility for owning and managing that information. There is a tendency to reorganize government structures to reflect every change in service delivery.

Government transformation programs typically involve a shift from silo-based delivery towards an integrated, multi-channel, citizen-centric service delivery platform offering “one stop” government.

Developing such a service requires a clear end-to-end service definition: a comprehensive documentation describing the product which will be offered to citizens.

Therefore:

1. **Establish a Transformational Business Model that encourages internal cultural change.**
2. **Build services around citizen and business customer needs, not organizational structure.** This will include providing people with one place to access government, built around their needs (such as accessibility).
3. **Do not spend money on technology before addressing organizational and business change and do not re-invent wheels.**
4. **Build a cross-government strategy for common citizen data sets and common citizen applications (e.g. authentication, payments, notifications).**

This pattern is essential in order to enable personal data under citizen control.


### [7] Franchise Marketplace

It has arguably been the failure to address the need for a new business model that has been the
greatest weakness of most traditional e-Government programs.
What best practices exist which governments can draw on to address this requirement in a proven and
low-risk way?

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. 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.

We recommend implementation of a business model which 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). Called the "Franchise
Marketplace", the model permits the joining-up of services from all parts of government and external
stakeholders in a way that makes sense to citizens and businesses, yet without attempting to restructure
the participating parts of government.

Key features of this business model are:

- It 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.

- It provides a risk-averse operational structure that enables functionally-organized 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 across the existing structure of Government (because the Customer Franchises are led
    by one of the existing "silos") and resourced by organizations that have close links with the
    relevant customer segment including, possibly, some outside of government
  - 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 and beyond government 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:
  - firstly, by providing a clear market framework within which private and voluntary sector service
    providers can repackage public sector content and services; and
  - secondly by deploying 'Web 2.0' type approaches across government that promote re-use and
    'mash-ups' of existing content and services, to make this simpler and cheaper at a technical level.

- The whole model is capable of being delivered using Cloud Computing

Therefore:

Use the Franchise Marketplace model, building a virtual business layer of “customer franchises”
which sit inside the existing structure of government and which

a) deliver user-centric, trusted and interoperable content and transactions to citizens and
businesses; and

b) act as champions of and drivers for citizen-centric service improvement within the government.

The Franchise Marketplace is a specific example of a [6] Transformation Business Model and is
considered as the most effective and lowest risk way of delivering the element of the [1] TGF Guiding
Principles which requires Transformation Programs to “Build services around customer needs, not organizational structure”.

[8] Skills

Implementing a Transformational Government program and establishing [12] Brand-Led Service Delivery involves taking a holistic, market-driven approach to service design and delivery, which in turn often requires new skills. Part of the responsibility of [2] Program Leadership is to ensure that program leaders have the skills needed to drive all aspects of the program. This focus on skills has of course to be part of an effective HR Management discipline.

Governments generally lack the key skills to manage service development. Where they do exist there is often reliability on a small number of individuals with no continuity plans in place for when those individuals are either absent for any reason or leave the team.

We know that the full range of business change, product and marketing management, program management, and technology skills needed to deliver transformational change does not already exist in our organization.

Many of the policy products required for the Transformational Government program will take us into new territory and it is unlikely that we will all the skills necessary to develop these in-house.

Therefore:

Ensure the right skills mix is available to the program, particularly in the leadership team but also throughout the whole delivery team.

Map out the required skills together with a clear strategy for acquiring them and a continuity plan for maintaining them.

Be prepared to buy-in or borrow the necessary skills in the short term to fill any gaps.

Ensure that the program leaders, i.e. the senior accountable leaders, have the skills needed to drive ICT-enabled business transformation, and have access to external support.

Ensure there is skills integration and skills transfer by having effective mechanisms to maximize value from the skills available in all parts of the delivery team, bringing together internal and external skills into an integrated team.

The development of a Transformation Competency Framework is a good way of producing a taxonomy of the competencies required to deliver ICT-enabled transformation, which should then be underpinned by tools enabling organizations to assess their competency gaps and individuals to build their own personal development plans. Deployment of a formal competency framework such as [SFIA] can be helpful in identifying and building the right skill sets. As an example see the UK’s eGovernment Competency Framework which is available at www.civilservice.gov.uk/my-civil-service/networks/professional/it/framework.aspx.


[9] Supplier Partnership

Governments rely heavily on suppliers to deliver large parts of their services. These suppliers are usually external organizations but they can also be other internal parts of government. The management of supplier relationships needs to sit above the management of individual contracts and it is important that distinction is fully understood by all parties.

Transformational Government programs require effective, partnership-based relationships with suppliers.
Supplier partnerships should set out a formalized and robust way of managing, monitoring and developing supplier performance whilst at the same time minimizing risks to the business. They focus on the overall relationship with suppliers rather than the specific relationship around an individual contract.

Successful supplier partnerships require specific skills sets to effectively manage the relationship. Attention should be given to this as part of the wider focus on ensuring the requisite skills are available to the program.

Therefore:

Select suppliers based on long-term value for money rather than price, and in particular based on the degree of confidence that the chosen suppliers will secure delivery of the expected business benefits.

Manage the relationship with strategic suppliers at the level of top management on both sides of the partnership with joint responsibility for the success of the program.

Resolve issues on a regular (e.g. daily) basis rather than as part of regular schedule partnership review meetings.

Look for pragmatic solutions to problems and opportunities for improvement within the overall relationship without contravening any particular contract.

Ensure client/supplier integration into an effective program delivery team with shared management information systems.

Ensure there is always a win-win situation for both sides of the partnership.

A good example of Supplier Management Guidelines is available at:

www.ogc.gov.uk/contract_management_strategic_supplier_management.asp


[10] Roadmap for Transformation

It is essential that the vision of the [2] Program Leadership, and the associated [6] Transformation Business Model and process of [5] Policy Product Management are translated into an effective Roadmap for Transformation. This should not be some all-encompassing master plan – which tends to be brittle and prone to failure – but a pragmatic framework for delivering clearly identifiable results in achievable stages.

Big-bang approaches don’t work

Since everything can clearly not be done at once, it is vital to map out which elements of the transformation program need to be started immediately, which can be done later, and in what order. The "big bang" approach to implementation has been shown not to work or be effective. By its nature it is heavily reliant on significant levels of simultaneous technological and organizational change. Instead, a transformational government program will develop a phased delivery roadmap which balances quick wins with the key steps needed to drive longer term transformation.

Therefore:

Establish a phased Transformation Roadmap.

Work with citizens and businesses to identify a set of services which will bring quick user value.

Give priority to services which can be delivered quickly, at low cost, and low risk using standard (rather than bespoke) solutions.

Establish systems to learn from early customer experience, to improve services in the light of this, and then to drive higher levels of take-up.

Work with early adopters within the government organization in order to create exemplars and internal champions and thus learn from experience and drive longer-term transformation.
The [TGF Primer] gives further details of best practices for planning and delivering a Transformation Roadmap. In particular, it sets out a Strategic Trade-off Model which can be helpful in guiding the focus of the [2] Program Leadership through the course of the transformation program as it evolves. It also describes the typical structure of a best practice Transformation Roadmap, covering five main phases: Plan, Initiate, Deliver, Consolidate, Transform.

The Transformation Roadmap should be pursued with due attention to risk management, and should therefore include checkpoints at key stages to allow regular, independent review of performance against the [20] Critical Success Factors.


No program has any value if it does not or cannot deliver what has been promised. Benefits Realisation is therefore a core responsibility for the [2] Program Leadership.

All intended benefits need to be delivered in practice, and this will not happen without pro-active benefits management.

Many organizations often fail pro-actively to manage the downstream benefits after an individual ICT project or program has been completed. Often, ICT programs are seen as "completed" once the technical implementation is initially operational. Yet in order to reap the full projected benefits (efficiency savings, customer service improvements etc.), on-going management is essential, often involving significant organizational and cultural changes. The Transformational Government Framework does not seek to specify in detail what benefits and impacts a Transformational Government program should seek to achieve – that is a matter for each individual government. However, the TGF does set out a best practice approach to benefit realization.

Therefore:

Establish a benefits realization strategy to ensure that the intended benefits from the Transformational Government program are delivered in practice. Build that strategy around the three pillars of Benefit Mapping, Benefit Tracking and Benefit Delivery:

- Set out all the intended outcomes from the transformation program and be clear how the outputs from specific activities and investments in the program flow through to deliver those outcomes;
- Baseline current performance against the target output and outcomes, define “smart” success criteria for future performance, and track progress against planned delivery trajectories aimed at achieving these success criteria; and
- Ensure that governance arrangements are in place to ensure clear accountabilities for the delivery of every intended outcome.

See also Component 4 ("Benefits realization Strategy") of the [TGF Primer] for further details. The benefits realization strategy should be a formal document, developed as part of the [5] Policy Product Management process and in collaboration with [3] Engagement with Stakeholders. Benefits realization is an integral part of the [20] Critical Success Factors, and review of progress against the benefits realization strategy should be part of the checkpoint process recommended therein.
2.2 Customer Management


Insight into citizen and business needs helps develop a detailed and segmented understanding of citizens and businesses as customers of government services.

A lack of focus on users often leads to duplicated and inefficient government services delivered through inappropriate channels.

Understanding user needs, and how to design and deliver services that users will engage with, is a discipline in which governments lag behind the best of the private sector.

In a brand-led company, customer insight informs all aspects of the product development process, and involves a comprehensive program of qualitative and quantitative research to understand and segment the customer base. Lessons learned from this are fed into a brand-led product management process - not as a one-off input of initial research, but through a continuous process of iterative design and customer testing. A key output from this is a set of brand values for the product or service, which then need to drive all aspects of service delivery, and marketing communications for the service. And this is all managed as an iterative process of continuous improvement, not a linear one.

This is not typically how governments manage their own service development, and governments generally lack the skills to do it. 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.

Therefore:

Establish a culture of Brand-led Service Delivery across government, based around three key pillars of Customer Insight, Product Management, and Marketing and Communication:

- Customer Insight: Don’t assume to know what users of a service think. Be obsessive about understanding the needs of customers – both internal and external – on a segmented basis. Invest in developing a real-time, event-level understanding of citizen and business interactions with government.

- Product management: Establish a brand-led product management process covering all stages of government service design and delivery, agreed and managed at a whole-of-government level, which gives citizens access to services through a "one-stop" service available over multiple channels.

- Marketing and communication: Use the brand values for one-stop government to drive all aspects of marketing and communications for government services.

Often, governments may face significant gaps in terms of the people and skills needed to manage brand-led product development and marketing cycles of this nature, so identifying and addressing these gaps as part of the [8] Skills strategy is vital. It is also vitally important that the drive to brand-led service delivery is led at a whole-of-government level: the element of the [1] Guiding Principles which points to the need to “own the customer at the whole-of-government” level is therefore of particular significance for this pattern.

The cultural change required by brand-led service delivery will be facilitated and accelerated through [13] Citizen Empowerment.

[13] Citizen Empowerment

Many e-Government programs have failed because the citizen is seen as simply a passive recipient of services rather than an actor in their design and delivery.

Citizen Service transformation is done with citizens, not to them
The focus of a Transformational Government program is on citizens and businesses and not just on the narrower idea of "customer" as a passive consumer. Citizens and businesses are engaged as owners of and participants in the creation of public services.

Therefore:

**Engage citizens directly in service design and delivery.**

**Encourage and enable service innovation in the Citizen-to-Citizen, Business-to-Citizen, Citizen-to-Government, and Business-to-Government sectors.**

**Give citizens the technology tools that enable them to create public value themselves and give them ownership and control of their personal data.**

**Make all non-personal government data freely open for reuse and innovation by citizens and third parties.**


### [14] Citizen Identity Management

A key element of the [1] TGF Guiding Principles is that "Citizen Service transformation is done with citizens, not to them". One of the consequences of this is that an effective identity management strategy needs to give citizens ownership and control of their personal data.

Identity management is a key enable of effective service delivery, yet something with which most governments struggle. At the heart of that struggle is often a failure to put the citizen at the center of government's thinking about identity.

Identity is a complex, and by definition deeply personal, concept. A single citizen in fact has multiple, overlapping "identities, each of which may be associated with different rights and permissions, even different addresses. These identities overlap, but in some cases the citizen may want to keep them separate in order to protect his or her privacy. At other times, the citizen may want them to be joined up, and be frustrated at constantly having to furnish government with the same information over and over again. Governments have often struggled to manage this complexity, for reasons described in [TGF Primer].

A wide range of agencies, standards bodies and advocacy groups are deeply involved in many aspects of the work needed to resolve these problems, from technical models for privacy management (such as the OASIS [PMRM]) through to the business, legal and social issues around online identity assurance (such as promoted by [OIX]). It is not the purpose of the Transformational Government Framework to address the details of identity management but rather to give high-level guidance on the main issues that a conformant program should seek to address - based on a set of best practices which is emerging around the world and which we believe represents a way forward for citizen service transformation, which is broadly applicable across a very wide range of governments.

Therefore:

**Establish a Citizen Identity Management Framework and within this:**

- Have a business architecture based on federation between a wide range of trusted organizations (the Government, banks, employers etc.), and a clear model for cross-trust between these organizations;
- Use a supporting technology architecture which does not rely on monolithic and potentially vulnerable large databases but which, in line with the SOA paradigm, uses Internet-based gateway services to act as a broker between the different databases and IT systems of participants in the federated trust model;
- Place citizens themselves directly in control of their own data, able to manage their own relationship with government – whether on their own behalf as citizens or in another
identity relationship or intermediated role – and with clearly visible controls to reassure them that this is the case.

Further details about this Citizen-Centric Identity Management approach are described in [TGF Primer]. No one Government has implemented all features of this approach, but all are being successfully deployed around the world, and together they represent our view of the approach to identity management which will best help deliver Transformational Government. This pattern is important in order to deliver integrated, citizen-centric services as part of a [6] Transformational Business Model and the [7] Franchise Marketplace, as well as to enable the citizen-led service innovation envisaged by [13] Citizen Empowerment. At a technology level, the approach is underpinned by the SOA-based [19] Technology Development and Management.
2.3 Channel Management

[15] Channel Management Framework

Government services to citizens and businesses are delivered through a wide range of channels. One of the core aims of a Transformational Government program is to ensure that these channels are managed in the most cost-effective way at a whole-of-government level, and meet the needs of citizens.

Delivery of services needs to be citizen-centric, with services accessible through both a "one-stop" service and through a wide range of private and voluntary sector intermediaries. The one-stop service should be offered over multiple channels, but with clear policies to shift service users into lower-cost digital channels (including a digital inclusion strategy to enable take-up of digital services by those segments of the population currently unable or unwilling to use them).

Channel management is often a weak spot in government service delivery, with widespread duplication, inefficiency and lack of user-focus. Experience has shown the common pitfalls to 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 organizations who have existing trusted channels to government customers
- Unproductive and costly competition among service delivery channels

Transformational Government programs seek to avoid these pitfalls, by building a channel management approach centered on the needs and behavior of citizens and businesses.

Therefore:

Establish a Channel Management Framework, which includes:

- a clear audit of what existing channels are currently used to deliver government services, and the costs and service levels associated with these ("Channel Mapping"); and
- the vision and roadmap for developing a new channel management approach centered on the needs and behavior of citizens and businesses ("Channel Transformation").


[16] Channel Mapping

A vital first step in developing a [15] Channel Management Framework is to carry out a mapping of existing delivery channels across government, and to put a cost to each transaction delivered through these channels based on standard industry assumptions.

Government service delivery organizations often do not have a clear and quantified understanding of which channels their customers use, what the average and marginal costs of delivery through these channels is, or how service levels and customer satisfaction vary by channel.
When government organizations carry out a full channel mapping for the first time, a common finding is that much customer contact between governments and citizens/businesses is:

- unnecessary - because the user is struggling to find the right place to get the service they need, resulting in multiple contacts before their need is finally resolved
- hidden and un-costed - because only some of these customer contacts are caught by existing management information systems. The rest are just lost within the broader operational structure and budget of the organization.

And when channel mapping is undertaken at the whole-of-government level, it typically highlights significant duplication across government (for example: having multiple high-street locations in the same town serving different government departments or agencies; thousands of contact telephone numbers; hundreds or even thousands of web-sites). There is significant scope for delivering both cost savings and service improvements by joining government services together through channels managed on a shared basis, and through channels managed by private and voluntary sector intermediaries.

Therefore:

1. **Establish a clear map of customer interactions by channel, and the true costs of these, in order to provide essential data in both building the business case for service transformation, and in highlighting priority areas for reform.**

2. **Take a holistic approach to understanding the range of channels through which government services are and could be delivered, including both “Channel Mix” (that is, the physical type of channel being used, including face-to-face, mail, e-mail, Internet and telephone) and also the variety of “Channel Ownership” options which are available (including service delivery through private and voluntary sector channels).**

This pattern is needed to inform development of a [17] Channel Transformation Strategy. Further details on how to set about Channel Mapping can be found in Part III(c) of the [TGF Primer].

### [17] Channel Transformation

The [15] Channel Management Framework requires a TGF program not only to undertake [16] Channel Mapping of existing channel usage and channel costs, but also to develop a Channel Transformation Strategy, which sets out the vision and roadmap for developing a new channel management approach centered around the needs and behavior of citizens and businesses.

Government can learn a lot from the best of private sector approaches to channel management, but also needs to recognize unique challenges and opportunities which apply to channel management in the public sector.

Once a full [16] Channel Mapping has captured the current channel mix and cost base, it is important to map out a strategy for the future desired channel mix, and the future customer experience over different channels. Successful private-sector businesses tend to be more effective at this than government. They understand that each channel opens up different ways to create value for customers, so they differentiate services across channels. They also take a hard-nosed approach to channel management, with customers being encouraged to use the channels that are most efficient from a business point of view. They also realize that channel shift is a complicated process, which needs planning over a multi-year period.

Transformational Government programs adopt a similar approach, setting out clear strategies for channel transformation. Typically though they recognize two distinct differences between the public and private sector:

- First, government has an obligation to provide services on a universal basis, so is not able to pick and choose which customers it will engage with through different channels. "Directed choice" towards cheaper channels is therefore the strategy selected for most citizen-facing services (although a number of governments are increasingly looking to make Internet-only services the norm for businesses).
Second, in terms of the online channel, government is in a unique position compared with any other online service provider. Whereas an online bank or retailer is limited by the size of the online population in the market, a government can take action significantly to increase that online population. "Digital inclusion" policies, aimed at increasing the proportion of citizens who have access to and confidence in using online channels, are therefore an important part of government channel strategies which would not normally be seen in their private-sector counterparts.

In addressing these issues, it is important to recognize that government service delivery cannot be divorced from what is happening in the broader market: the expectations of citizens and businesses are shaped by their experiences of other services. Demand for e-services across society will continue to grow while other market players (in the private, voluntary and community sectors) will have a significant influence on citizen attitudes and behavior.

Therefore:

Develop a Channel Transformation Strategy and within this:

- Shift users where possible to lower cost digital channels - including through digital inclusion policies which build access to and demand for e-services in those segments of the population which face barriers to their use;
- Optimize the cost and performance of each channel, using public and private sector benchmarks to drive improvement;
- Improve cross-channel management, by building channel support services around a common, web-based infrastructure in order both to improve customer service and reduce costs;
- Facilitate development of a thriving mixed economy delivery of services;
- Build partnerships which enable the market and others to work with the government to deliver jointly-owned objectives.

The Channel Transformation Strategy must be informed by [16] Channel Mapping, and must address how to shift users into lower-cost channels while maintaining and reinforcing [13] Citizen Empowerment. The mixed economy of delivery of government services is developed with private and voluntary sector intermediaries and SHOULD be addressed using the [8] Franchise Marketplace pattern. A significant effort is needed to include all stakeholders in the governance of the Transformational Government program at an appropriate and effective level: see [3] Engagement with Stakeholders. The key milestones and accountabilities for delivery of the Channel Transformation Strategy should be embedded within the [10] Roadmap for Transformation.
2.4 Technology Management

[18] Resources Management

All too often, technology resources are seen as a means to an end, artifacts that are used to accomplish a particular problem at hand and thus something transient to be disposed of at the end of a particular cycle. As systems become more complex and organizations mature, resource re-use becomes ever more important and prevalent.

Technology resources need to be managed as much as any other resource.

Technology resources are increasingly re-used beyond the scope of their original intended use. This is to be encouraged. However, in order to be re-used effectively, resources need to be identified and managed by explicitly designated owners and also be identifiable across ownership domains.

The ability to identify a resource is important in system interactions, in order to determine such things as rights and authorizations, as well as to understand what functions are being performed; what the results mean. Within large-scale, SOA ecosystems, interactions take place across ownership boundaries and the combination of interactions can be unpredictable. Identifiers provide the means for all resources important to a given SOA system to be unambiguously identifiable at any moment and in any interaction.

Establishing resource identity and subsequently managing those resources and their identities thus become an important part technology management.

Therefore:

Manage information and ICT system resources as distinct, valued assets

Manage issues related to the Identification, ownership, stewardship and usage policies for each asset type.

Section 3.1.3 of the [SOA-RAF] looks at the issue of resources and how they should be identified and managed.

[19] Technology Development and Management

Technological change is more rapid than organizational change and yet governments often find themselves locked-in to particular technology solutions.

Governments need to protect themselves against the downside of technology evolution and maintain governance of ICT development and deployment

Transformational Government needs a strategic IT platform to guarantee future agility as business and customer priorities change. Such a platform cannot afford to be locked-in to specific technologies or solutions that prevent or limit such agility.

Therefore:

Concentrate technology resources and efforts around leveraging open standards and SOA Principles so as to ensure development and deployment agility, and support all customer interactions, from face-to-face interactions by frontline staff to online self-service interactions.

Use the Reference Model for Service-Oriented Architecture [SOA-RM] as the primary source for core concepts and definitions of the SOA paradigm. Have a clear understanding of the goals, motivations and requirements that any SOA-based system is intended to address. Identify boundaries of ownership of all components in any SOA ecosystem.

Realize discrete services that can perform work on behalf of other parties. Use common building blocks that can be re-used to enable flexible and adaptive use of technology to react quickly to changing customer needs and demands. Have clear service descriptions and contracts for any capability that is offered for use by another party.
Manage key ICT building blocks as government-wide resources and make them available as
shared services - in particular common data sets (e.g. name, address); common citizen
applications (e.g. authentication, payments, notifications); and core ICT infrastructure.
Wherever possible prefer interoperable, open standards, particularly when well supported in the
market-place.
Pay due attention to the total cost of ownership and operation of technology and consider the
possible value of open source when making technology choices.

This pattern should be seen in conjunction with the [10] Roadmap for Transformation.
The [EIF] has a useful definition of “open” in 5.1.1 “Specifications, openness and reuse”.

816
Critical Success Factors

There is now an increasing body of research which seeks to understand why some ICT-enabled transformation programs succeed and why others fail. Effective risk management is part of the solution but consideration of a range of success factors is needed for the delivery processes covered in the patterns above.

Programs and projects which seek to deliver Transformational Government face significant risks to successful delivery. Clarity and insight into the consequences of transformation are needed.

It is unrealistic to expect to get everything right first time and moving forward will be a process of continuous improvement. Systems are needed which allow the government organization to understand the current position, to plan, to move quickly, and to learn from experience.

These risks are not related to the technology itself – which is largely mature and proven – but rather to business and cultural changes. Such changes are needed within government to deliver the business management, customer management and channel management transformations required as part of a Transformational Government program. A conformant program needs to keep track of a core set of critical success factors throughout the lifetime of the program.

Therefore:

Manage and measure a clearly defined set of Critical Success Factors.

Seek regular, independent review of performance against those critical success factors.

Have mechanisms in place to assess risk and handle monitoring, recovery and roll-back.

The [TGF Primer] recommends nine core Critical Success Factors:

- Strategic Clarity
- Leadership
- User Focus
- Stakeholder Engagement
- Skills
- Supplier Partnership
- Future-Proofing
- Achievable Delivery and
- Benefits realization

Benefits realization is used to measure the level of success in achieving Critical Success Factors.

3 Conformance

The following conformance statements indicate to what extent each of the patterns above are used in a transformational government program.

All conformant Transformational Government programs:

1. **MUST** use the [1] Guiding Principles;

2. **MUST have** [2] Program Leadership including:
   - Clear accountability at both the political and administrative levels;
   - Deployment of formal program management disciplines;
   - A clearly identified mix of leadership skills;
   - Engagement of a broad-based leadership team across the wider government.


5. **SHOULD** create a Policy Product Map (using the matrix as a tool to help identify the Policy Products required) within the relevant government as outlined in [5] Policy Product Management;

6. **MUST** have a [6] Transformational Business Model;

7. **SHOULD** use the [7] Franchise Marketplace model;

8. **MUST** address [8] Skills issues;


10. **MUST** have a [10] Roadmap for Transformation;

11. **MUST** have a [11] Benefits realization strategy which addresses the areas of benefit mapping, benefit tracking and benefit delivery;

12. **MUST** have a [12] Brand-Led Service Delivery Strategy, which is agreed and managed at a whole-of-government level and which addresses:
   - Customer Insight
   - Product Management
   - Marketing and communication;

13. **MUST** have a [13] Citizen Empowerment framework, which encourages and enables service innovation in the Citizen-to-Citizen, Business-to-Citizen, Citizen-to-Government, and Business-to-Government sectors;

14. **MUST** have a [14] Citizen Identity Management framework, which:
   - Uses a federated business model;
   - Uses a service-oriented architecture (as part of the wider SOA described in the TGF Technology Management Framework);
   - Is citizen-centric, giving citizens control, choice and transparency over personal data;

15. **MUST** have a [15] Channel Management Framework;

16. **MUST** include [16] Channel Mapping;

17. **MUST address** [17] Channel Transformation;
18. MUST provide [18] Resources Management;

19. MUST address [19] Technology Development and Management;

20. MUST measure and manage [20] Critical Success Factors and SHOULD consider using at a minimum the specific critical success factors outlined in the [TGF Primer].
A. Acknowledgments

The following individuals have participated in the creation of this specification and are gratefully acknowledged:

Participants:
- Oliver Bell, Microsoft Corporation
- John Borras, Individual Member
- Peter F Brown, Individual Member
- Nig Greenaway, Fujitsu Ltd
- Ted Haas, GS1
- Andy Hopkirk, Individual Member
- Gershon Janssen, Individual Member
- Arnaud Martens, Belgian SPF Finances
- Steve Mutkoski, Microsoft Corporation
- Chris Parker, CS Transform Ltd
- John Ross, Individual Member
- Trond Arne Undheim, Oracle Corporation
- Colin Wallis, New Zealand Government
- David Webber, Oracle Corporation
- Joe Wheeler, MTG Management Consultants, LLC
## B. Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Editor</th>
<th>Changes Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-incomplete</td>
<td>2011-05-17</td>
<td>Peter F Brown</td>
<td>Initial Draft – incomplete</td>
</tr>
<tr>
<td>02-complete</td>
<td>2011-06-13</td>
<td>Peter F Brown</td>
<td>Complete draft – first full (draft) set of patterns</td>
</tr>
<tr>
<td>03-incomplete</td>
<td>2011-07-05</td>
<td>Peter F Brown</td>
<td>Incorporates comments, edits from TC members</td>
</tr>
<tr>
<td>03-incomplete</td>
<td>2011-07-11</td>
<td>Peter F Brown</td>
<td>Update of missing patterns and revisions of text so far. Two patterns, [4] and [18], still missing</td>
</tr>
<tr>
<td>03-complete (This document)</td>
<td>2011-07-13</td>
<td>Peter F Brown</td>
<td>Completed draft. Ready for submission as Committee Specification Draft</td>
</tr>
<tr>
<td>03-complete</td>
<td>2011-07-18</td>
<td>Peter F Brown</td>
<td>Minor typos corrected</td>
</tr>
<tr>
<td>03-complete</td>
<td>2011-07-20</td>
<td>Peter F Brown</td>
<td>Typos and minor textual amendments proposed by Nig Greenaway</td>
</tr>
<tr>
<td>04</td>
<td>2011-08-03</td>
<td>Peter F Brown</td>
<td>Amendment to conformance clause 9 modified as per TC vote on 21 July 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acknowledgments section completed</td>
</tr>
</tbody>
</table>