Georgia IT Assessment:

Report of Findings and Business Case

February 2008

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Transforming the State's IT Infrastructure: An Overview

Technology Partners International (TPI):
Report to the Georgia Technology Authority

Transforming the State's IT Infrastructure: An Overview

Introduction

Information technology is essential to efficient, responsive government. It enables the state to provide critical services to Georgians in a cost-effective way. Governor Perdue's vision is for Georgia to lead the nation's state governments in IT enterprise management and the innovative use of technology.

Despite the best efforts of many dedicated people, Georgia continues to struggle with an aging IT infrastructure. The state faces major challenges in meeting industry standards and providing security and disaster recovery. A major initiative is required to significantly advance the maturity of state government's IT enterprise. The state must ensure IT operations meet industry standards, manage IT investments more effectively and provide greater support for the state's business needs.

At the direction of Governor Sonny Perdue, the Georgia Technology Authority is taking the necessary steps to bring about an integrated, IT infrastructure that is secure, stable and well-governed. This report offers a brief overview of the comprehensive assessment of the IT operations of GTA and 12 participating state agencies, and the resulting recommendations and actions.

A comprehensive assessment

GTA began an in-depth look at its operations in 2006. The analysis revealed shortfalls in IT operations when compared to industry best practices. GTA lacks many of the processes and automation necessary to operate efficiently. At the same time, much of its hardware and software is running well beyond its intended life cycle. Almost half of GTA's IT infrastructure is 6-10 years old, and updating the infrastructure would require a significant capital expenditure. Many other agencies face similar challenges with their IT infrastructures.

In 2007, GTA conducted an assessment of IT infrastructure services. The thorough assessment aimed to determine whether GTA should continue providing certain IT services directly or outsource them to a commercial provider. The sourcing assessment closely examined data center, telecom and desktop services and was conducted with the help of an experienced vendor.

GTA selected TPI of Woodlands, Texas, (www.tpi.net) to assist with the assessment. TPI was chosen through competitive bidding. The company is experienced in sourcing assessments and implementations and advised the State of Texas on its data center consolidation project.

The assessment presented an opportunity to address problems with IT operations in other state agencies. A total of 13 agencies participated: Administrative Services, Community Health, Corrections, Driver Services, GBI, GTA, Human Resources, Juvenile Justice, Natural Resources, Office of Planning and Budget, Revenue, State Accounting Office, and Technical and Adult Education.

The assessment compared IT operations to industry standards. It examined service delivery and service level targets, business continuity and disaster recovery, Condition, life cycle, and cost to refresh and maintain IT assets.

In developing recommendations following the assessment, GTA also reviewed the findings of several efforts:
- Governor Perdue's Telecommunications & Technology Task Force, findings April 2003
- Commission for a New Georgia, findings from April 13, 2004
- Georgia Department of Audits & Accounts
- Operational findings by GTA COO Derek Reynolds
- Research of other states

While other studies and analyses had been conducted in the past, this assessment was the first to provide a solution to address the IT needs of the state.

Scope and approach

The assessment collected sufficient data for a sound business case. It consisted of detailed financial and technical views and an operational self-assessment (ITIL standard view) for each agency.   TPI completed more than 100 agency interviews with senior business and IT managers.   In addition, the state's IT operations were compared to industry standards.

The IT infrastructure assessment considered the following:
- IT processes, assets and facilities across GTA and the 12 participating agencies
    - Mainframe and server services
    - Desktop services
    - Telecommunications services
    - Support functions
- Comparison of services to minimum standards
    - Service delivery and service level targets
    - Business continuity and disaster recovery
    - Condition, life cycle, and cost to refresh and maintain IT assets
- Methodology
    - ITIL process implementation assessment for IT functions and processes
    - IT business continuity and disaster recovery process assessment
    - IT assets and data center facilities assessment

The table on the following page provides a picture of agency IT spending (in millions), staffing and assets.

Agency	FY07 Agency Spend	FY07 Infrastructure Support FTEs	Servers	Desk/laptops	Facilities
GTA	$ 163,855	660	594	984	9
DHR	$ 38,074	172	698	19,588	329
DOR	$ 9,552	39	245	1,624	12
GDC	$ 10,193	84	575	9,430	186
GBI	$ 6,329	26	67	2,523	27
DJJ	$ 5,278	20	58	3,306	31
DNR	$ 4,890	25	92	3,135	21
DDS	$ 2,978	16	20	1,299	2
DCH	$ 4,320	33	60	942	3
DOAS	$ 2,420	14	37	432	1
OPB	$ 1,517	7	38	80	1
Totals	$ 249,406	1095	2,484	43,343	622

Several important issues required particular consideration during the assessment:
- The work must be completed during Governor Perdue's term.
- Obtaining additional funding will be difficult.
- The state budget model will not change.
- Staffing, retention and skills will remain an issue.
- Fixing the problem and maintaining the environment are not the same.
- The state must manage and be accountable to IT operations, but not necessarily own the infrastructure.

Summary observations

After collecting and analyzing the data gathered during the assessment, TPI provided key observations about the IT operations of GTA and the participating agencies:
- GTA is not operating effectively; it is a highly inefficient and dysfunctional organization – delivering expensive services.
- The agencies mistrust the motives and capabilities of GTA.
- Agency decisions and current practices are placing key business systems and operations at risk.
- The State is paying more than it should for IT services as agencies create redundant islands of operations to work around GTA.
- Without coordinated changes across the enterprise the problems observed will continue.
- The capabilities within the state to fix the problem have deteriorated to such an extent that only an enterprise wide initiative that draws services and skills from the market has the opportunity to make timely repairs.

Analysis of alternatives

Based on the findings of the assessment and TPI's observations, a broad range of alternatives was considered:
- Continuing the current blend of GTA and agency provided IT services with incremental investments and improvements
- Agencies providing their own IT infrastructure services – as a whole or just parts

- GTA investing in the necessary capabilities to centralize IT operations on behalf of agencies
- Splitting the scope of services (IT Infrastructure, End User Computing and Telecommunications) and assessing which parts might be best suited to each of the above scenarios
- Outsourcing all of the scope of services to one service provider
- Dividing the scope of services among multiple outsourcing contracts and service providers

Alternatives were rated against key criteria, including operational capability, process maturity and skills, cost benefit/ability to fund, leverage and scalability, capability/service improvement, and risk reduction.

Recommendation

The recommendation accepted by GTA and reviewed and approved by Governor Perdue calls for consolidating the responsibility for managing the delivery of the state's technology infrastructure under GTA and moving this delivery to a multi-contract outsourced environment. The result will be a self-funding solution in which GTA manages both the consolidated state IT infrastructure and relationships with multiple service providers.

GTA will follow three parallel strategies or "streams" for contracting:

Consolidation and upgrade of the state technology infrastructure
- Seek a sourcing partner to address the mainframe and server environments—to invest on behalf of the state in people, tools and processes and build necessary facilities.

Managed backbone connectivity
- Seek a sourcing partner to provide a managed service for telecommunications that will "plug and play" with the remaining infrastructure.

Local telephone and technology services
- Provide a platform for local service providers to interconnect with GTA's other sourcing partners with multiple small service providers serving regional and local needs.

Equally important is a strategy for restructuring GTA, which includes creating a Service Management Organization. Upon completion of the transition, GTA will have 150 FTEs and a $45 million budget.

The 5-7 year contracts will be awarded by competitive bid and are expected to total $1.1-$1.6 billion.

Selected service providers will likely commit approximately $40 million:
- A second data center
- Enterprise disaster recovery capability
- Server consolidation
- Technology tools needed to manage and diagnose
- Best practice operational management

Necessary staffing adjustments will decrease FTEs from 1095 to 170:
- Transition of state personnel to a third party vendor = 554
- GTA state employee layoffs = 237
- Vacancy eliminations = 134
- Governance = 170 (GTA and agencies)

Financial business case

The following table illustrates the financial business case (numbers are rounded in millions). At the end of the seven-year sourcing period, net savings of $76 million are anticipated.
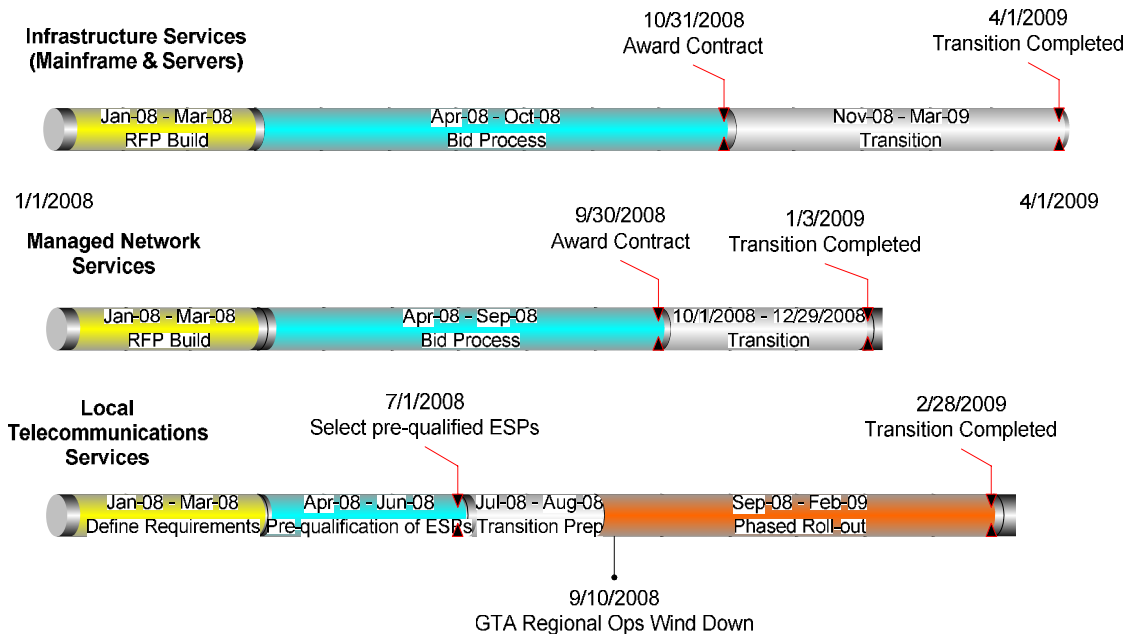
| | Current Base Year Spend | FY08-09 2 Year Pre-Sourcing | 7 Year Sourcing Period | | | Net 7 Year Change | |
			FY10-14 5 Year Sourcing	FY15-16 2 Year Options	7 Year Total		
Base Case*							
Service Delivery	$ 226	$ 451	$ 1,128	$ 451	$ 1,579		
GTA Cross Functional Expense	$ 24	$ 48	$ 119	$ 48	$ 167		
Total Base Case	$ 249	$ 499	$ 1,247	$ 499	$ 1,746		
Cost of Sourcing Option							
Service Delivery		$ 443	$ 1,019	$ 393	$ 1,412	$ 167	reduction
Transition and Transformation Charges		$ -	$ 46	$ -	$ 46	$ (46)	investment
Incremental Equipment Refresh		$ -	$ 41	$ 17	$ 58	$ (58)	investment
GTA Cross Functional Expense		$ 32	$ 66	$ 26	$ 92	$ 74	reduction
GTA Service Management (SMO)		$ 1	$ 43	$ 18	$ 61	$ (61)	investment
State Compensation Payout		$ 4	$ -	$ -	$ -		
Total Cost of Sourcing Option		$ 480	$ 1,215	$ 455	$ 1,669		
							total funds
(Costs)/Savings to Base Case		$ 18	$ 32	$ 44	$ 76	$ 76	net saving (a)
Savings vs. Base Case %		4%	3%	9%	4%		

* Zero inflation model

(a) State, Federal and Other Funds (Other Funds include local funds and agency self generating funds)

Timeline

GTA has developed a timeline for implementing the recommendation. To be more specific, a separate timeline is shown below for each contracting stream. Critical to the success of each concurrent stream is the transformation of GTA and the building of a Service Management Organization.

Infrastructure Services (Mainframe & Servers)

10/31/2008 Award Contract
4/1/2009 Transition Completed

| Jan-08 – Mar-08 RFP Build | Apr-08 – Oct-08 Bid Process | Nov-08 – Mar-09 Transition |

1/1/2008

Managed Network Services

9/30/2008 Award Contract
1/3/2009 Transition Completed
4/1/2009

| Jan-08 – Mar-08 RFP Build | Apr-08 – Sep-08 Bid Process | 10/1/2008 – 12/29/2008 Transition |

Local Telecommunications Services

7/1/2008 Select pre-qualified ESPs
2/28/2009 Transition Completed

| Jan-08 – Mar-08 Define Requirements | Apr-08 – Jun-08 Pre-qualification of ESPs | Jul-08 – Aug-08 Transition Prep | Sep-08 – Feb-09 Phased Roll-out |

9/10/2008 GTA Regional Ops Wind Down

Risks

An undertaking of this magnitude has inherent risks that must be recognized and addressed.

The time factor is significant. Although deficiencies in the state's IT operations have been apparent, determining the exact problems and devising a workable solution have been both time and labor intensive. The state lacked the documentation, asset inventories, and skills and experience to address its problems. The recently completed comprehensive assessment provided the information necessary for moving forward. (The time necessary for implementation is indicated on the chart above.)

Implementing the recommendation represents a monumental shift for state government. The leap from IT service delivery to service management will test the ability of GTA and the participating agencies to absorb change.

The impact on staffing is profound. Retaining staff during a transition is always difficult. Further, the state has a high number of employees who are eligible for retirement.

Successful implementation will require maintaining a balance between the amount of change that can be managed at any one time and how poor the IT infrastructure is and the improvement that is required.

Conclusion

Transforming the IT infrastructure is in the state's long-term best interest. Efficient IT enterprise management and the innovative use of technology are integral to a state government that is accessible to its citizens and serves them well.

A thorough assessment of GTA and 12 participating state agencies that represent the majority of the state's IT spend indicated the need for immediate change. The state is unable to meet industry standards and ensure appropriate levels of security and disaster recovery.

Georgia is part of a nationwide trend toward data center consolidation among state governments. A 2007 study by the National Association of State Chief Information Officers found that more than 75% of the responding states had completed consolidation or were in a planning or implementation phase. Among the driving factors cited by Georgia and other states were disaster recovery, cost savings, security, access to new technologies, aging state facilities and improved data sharing and integration.

Consolidating the IT infrastructure and contracting with providers for service delivery offers a self-funding, sustainable solution, one that will allow the state to continually invest in information technology.

Executive Summary

Technology Partners International (TPI) completed the collection, compilation, validation and analysis of the State of Georgia's IT operations for the Georgia Technology Authority and 12 other participating agencies.

TPI recommends consolidation of responsibility for managing the delivery of the State's technology infrastructure under GTA and the movement of this delivery to a multi-contract outsourced environment.

To execute on this recommendation, TPI recommends pursuing three (3) parallel contract strategies:
- Mainframe and Server Managed Services – including investment in missing disaster recovery capabilities
- Managed Network Services – focused on the core network
- Multiple Local Telecommunications Service Support Contracts – focused on local services

In conjunction with the pursuit of these parallel contract strategies, TPI recommends simplifying the operations and management of GTA to provide an effective management platform for the coordination of services delivered as a result of the execution of the contracting strategies. This will require transforming the business model to simplify operations and remove waste and the creation of a Service Management Organization.

Scope of assessment

The scope of the assessment included the following:

- IT processes, assets and facilities across the 13 participating agencies
  Mainframe and server services
  Desktop services
  Telecommunications services
  Support functions

- How services compare to minimum standards
  Service delivery and service level targets
  Business continuity and disaster recovery
  Condition, life cycle, cost to refresh and maintain IT assets

- Methodology provides framework criteria, including:
  ITIL process implementation assessment for IT functions and processes
  IT business continuity and disaster recovery process assessment
  IT assets and data center facilities assessment

Assessment approach

The assessment focused on agency infrastructure operations, including:
- ITIL implementation assessment for IT functions and processes
- Assessment of agency compliance with the policies in ITIL Version 2
- Assessment of IT business continuity/disaster recovery processes
- Assessment of IT assets and data center facilities

The assessment drew upon two primary sources:
1. Data gathered during interviews
2. Reviews of relevant documentation – policies, procedures, guidelines, performance reports, service level requirements, assets (software, hardware) and contract commitments

To perform the assessment, TPI utilized its infrastructure operational assessment discipline and proprietary tools customized for GTA from TPI's M-STEP methodology. (For details about the methodology, see Methodology Description and High Level Components beginning on page 14.)

The assessment started with the information gathered from all previous reviews of IT operations. The TPI team interviewed both IT professionals and business representatives in each of the agencies and conducted an extensive data gathering exercise. TPI employed its methodology and experience to categorize and assess the information collected.

The outcome of TPI's assessment contains eight key components:
1. Operational assessment of each agency
2. ITIL assessment of each agency
3. Review of the data center facilities
4. Service management and governance assessment of GTA
5. Mark to Market (M2M) findings for an enterprise view of key metrics
6. Options analysis based on the findings of each component
7. Business case constructed around the options and executable strategies
8. Recommendation of actions to address the findings of the assessment

Process of determining the recommendation

GTA provided a starting point for the assessment with information gathered by previous studies and analysis. In compliance with its methodology for conducting IT assessments, TPI defined a process of data collection, interviews and surveys to gather the information necessary to make an analysis of current operations and to identify opportunities for improvement.

Data collection was organized to answer the hypothesis that the State's investment in IT services were inadequate for the test of a best managed State – the null hypothesis to test being: the cost and service quality of current IT operations are adequate to meet the needs of the State and participating agencies.

Based on the information provided at the commencement of the assessment and TPI's experience in conducting IT assessments, TPI considered four primary test statements to be challenged with reference to the data collected and the analysis:

1. Do nothing – if the data indicated the best outcome was to be attained by continuing current practices

2. Invest in agency operations through internal consolidation and re-organization – if the data revealed opportunities for changes that could be orchestrated and managed with current resources

3. Seek external Service Providers capable of delivering benefit to the State for part or all of the subject area of the IT assessment – if the data revealed opportunities for changes that could not be orchestrated and managed with current resources and skill sets

4. A combination of 2 and 3 – if the data revealed varying opportunities dependent on scope and scale of need for the State and GTA to achieve its overall objective of becoming a 'best managed State'

Each report included in the assessment employed filters to analyze the information gathered. The filters TPI used are described in each separate report. Separate reports were produced to address the different perspectives on the information gathered. The information and analysis represented in the diagram on slide 12 (Assessment Approach: Information and Analysis Flows) of the accompanying PowerPoint presentation show a summary view of how information from each component part of the assessment contributed to summary reports, options and scenario analysis, and the conclusions and recommendation of this report.

The scenario analysis considered various options and choices, grouped them into numbered alternatives for a business case analysis and for a final set of filters to determine the overall viability of each alternative.

The scenarios considered were:
- Continuing the current blend of GTA and agency provided IT services with incremental investments and improvements
- Agencies providing their own IT infrastructure services – as a whole or just parts
- GTA investing in the necessary capabilities to centralize IT operations on behalf of agencies
- Splitting the scope of services (IT Infrastructure, end user computing and telecommunications) and assessing which parts might be best suited to each of the above scenarios
- Outsourcing all of the scope of services to one External Service Provider
- Splitting the scope of services across multiple outsourcing contracts and External Service Providers
- Scope and scale of change necessary in GTA to support each of the above noted scenarios

These summary scenarios were grouped into four primary alternatives:
1. GTA current model with incremental improvements
2. Agencies 'Self Serve' – both full and partial scope
3. GTA invests in consolidation and transformation
4. Variants of outsourcing with one or more External Service Providers

Each alternative was rated against the following 6 key criteria
1. Operational capability
2. Process maturity and skills

3. Cost benefit / ability to fund
4. Leverage and scalability
5. Capability / service improvement
6. Risk reduction

Based on the initial data collection and analysis, TPI views the operational capabilities of GTA and the agencies to be deficient to an extent that alternatives 1 and 2 are to be eliminated. The data also raise serious concerns about the ability to execute under the third alternative. Although all six criteria were factored into this round of elimination, the dominant criteria were (in order of impact):

- Capability / service improvement
- Cost benefit / ability to fund
- Risk reduction

For Alternative 3, risk reduction was the dominant and deciding criteria.

See the accompanying PowerPoint presentation for the flow of data collection, compilation and analysis performed by TPI during the assessment.

The financial and the service usage data was profiled and compared with select market data collated from actual deals transacted during the last 18 months. The comparison of these data points (see the accompanying PowerPoint presentation) indicated opportunities for improvement in operations and reductions in expenditure applicable in all categories of the IT expenditures analyzed. The profiling and analysis of the data also revealed errors in the data reported, for which the range of opportunities reported were appropriately discounted. TPI's experience with profiling the data collected and the systems in place in agencies to collect and report the data indicated probable under-reporting and misallocation, the sum of which indicates additional opportunities for benefit to the State in alternative 4.

The interviews and surveys conducted at each participating agency were designed to give an operational overview that would recognize the unique character and business drivers evident and in play at each agency. In parallel with this investigation, the ITIL self assessment results (see the accompanying PowerPoint presentation) were reviewed to assess what elements of the services within the scope of the assessment could considered viable for action under each alternative.

Methodology Description and High Level Components

Baseline and Benchmark Information Gathering

The overall project approach was based on TPI's M-STEP methodology (Methodology for Sourcing Transaction Engagement Projects), and utilized specific tools, templates and methods to achieve GTA's required results. TPI advisors have used this methodology successfully in many engagements during the past 16 years.
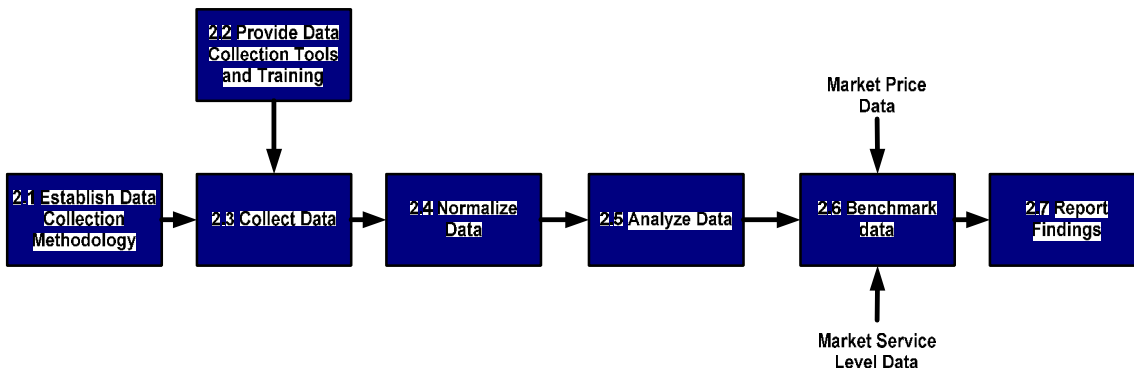
Establish data collection methodology

The data collection methodology used was adapted from the TPI M-STEP methodology and accommodated GTA data collection realities. The methodology builds upon key data categories and considers the "in-scope" process areas and the data needed to support data normalization. This information is used to build overall confidence in benchmark interpretations and in helping direct how fast and how deep the benchmark can realistically go.
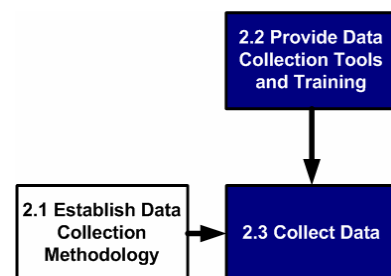
Establish benchmarks

TPI has a unique depth of experience in performing benchmarking assessments and has completed over 100 in the last two years.

TPI made a realistic assessment about the depth and consistency of data that can be obtained and proposed a set of market benchmarks for which the required data could be collected with reasonable accuracy.

Define data to be collected

Of the universe of data that may be collected for benchmarking, only certain measures were needed from GTA and participating agencies to support benchmarking.

The data elements within these categories were chosen to reflect those used in commercial and public sector marketplace transactions and to allow the best benchmark comparison of

government data with pricing and service level data from these marketplace transactions. TPI reviewed the proposed data collection with GTA prior to commencement of the collection process.

TPI compared GTA and participating agencies against a comparable market dataset on a unit cost and service level basis.

Define financial data requirements

It is desirable for the total cost data to be split into major cost components (compensation, travel, hardware, etc.) for provision of the services included in each infrastructure area. Extracts from government financial and management reporting systems were the primary source of this financial data. The data collection methodology addresses issues related to capture of indirect costs and direct costs that need to be split across process areas.

To allow a more precise comparison to market price data, the methodology provides for the collection of indirect government costs associated with the provision of IT services. These indirect costs may include real estate, utilities, human resources, procurement, and senior management. If agencies were unable to obtain this information, an allocation methodology was applied. Costs drivers were used to ensure a fair allocation of these indirect costs for inclusion in the benchmark analysis.

Where GTA was unable to easily split direct costs across infrastructure areas (e.g. allocating personnel compensation to Desktop Services, Help Desk Services, Server Services, etc.) the methodology suggested allocation methods. Subjectivity in the allocation process was minimized by ensuring that the right levels of department/agency leadership were involved in the discussions and that the level of granularity across which costs are allocated was not too small.

Define service level data collection requirements

The data request was based on service levels typically found in commercial and public sector contracts negotiated with the assistance of TPI. Because of known differences in service level data availability, the data collection methodology listed a number of common service levels within each infrastructure area. GTA was able to select the service levels that they are tracking and choose from levels of service currently being achieved.

For example, one service level for Help Desk services would be the Average Speed to Answer (ASA) an inbound call. Where GTA collects and reports ASA data, GTA could indicate the service level being achieved by selecting from options including "<30 seconds", "30-60 seconds", "60-120 seconds" and ">120 seconds".

Define volumetric data requirements

The proposed volumetric information was based on TPI experience with the pricing units that are typically used in commercial and public sector outsourcing arrangements.

Define service context data requirements

Qualitative and quantitative contextual data help with understanding the operational context in which the various services are delivered and provided a basis for interpreting the data. The contextual data requested enabled comparison of individual agency practices with the range of practices that underlie the industry benchmark data.

Define scope of service data requirements

The data collection methodology required GTA to identify the major activities performed within each infrastructure area. The detailed listing of possible activities was based on TPI information from commercial and public sector contract statements of work as well any additional government activities that may be performed, such as services associated with management of specialized security requirements.

To accommodate the diversity of IT services provided by the various GTA agencies, a "pick-list" approach, based on actual outsourced contract statements of work, was used to collect data related to the scope of services provided.

Define data confidence requirements

For each service to be benchmarked, TPI asked specific questions and derived information from other question sections to determine the degree of confidence in the financial, volumetric, service level and scope of service data provided. The questions addressed such issues as:
- Agency confidence that data are precise for benchmark measurement purposes
- Amount of time required to collect data
- Degree of difficulty experienced in data collection
- Whether data were extracted from an activity costing system or other specific ledgers

Define normalization data requirements

The data collection methodology ensured that the information needed for data normalization was collected along with the financial, volumetric, service level and service characteristics data. Data normalization is an important aspect of the data collection methodology. Without making the necessary adjustments, the resulting analysis would have little value. Data normalization was based on the work typically completed by TPI. TPI's experience in the area of normalization stems from its in-depth knowledge of client IT operating cost structures and commercial market pricing gained from over 2,250 client engagements. Data normalization included adjustments for items such as hardware depreciation and software amortization; one-time, non-recurring project costs; and indirect overhead costs.

Define in-scope process areas

The TPI data collection methodology organized business and technology processes into logical functional groupings or cost categories similar to government "infrastructure areas" described in the Request for Proposal (RFP). TPI grouped data this way to facilitate compilation of qualitative and quantitative profiles for each process area. The profile captured performance, cost and service information for all processes within each functional group and allows the most precise comparison to pricing data in line with the marketplace.

At right is a graphical depiction of GTA infrastructure areas for this project in the context of all IT and business process functions within the TPI methodology.
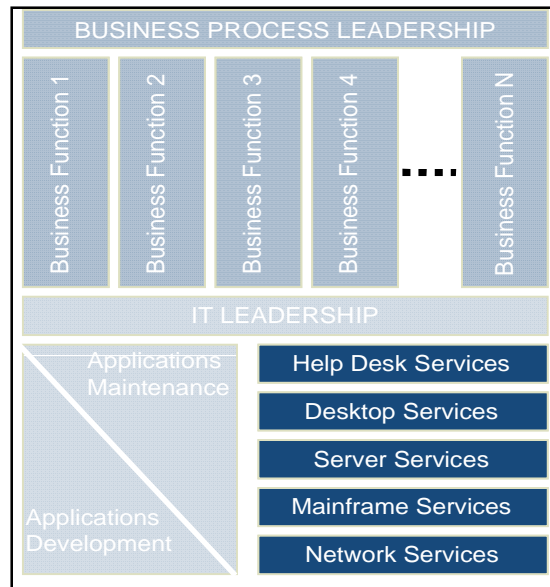
Define data aggregation strategy

TPI established an initial strategy for aggregating sub-GTA level data to GTA level. After review with GTA, TPI refined the strategy to assist with consolidation of disparate data from multiple organizational units within a department/agency.

TPI's Approach to Establishing Framework Criteria for Operational Assessments

TPI's methodological approach to operational assessments was integral to and part of the baseline methodology. In other words, TPI's method was inclusive of baselining and assessment (whether financial or operational).

The requested operational assessment methodology along with the execution of the operational assessments and the baseline methodology along with the execution of the baseline methodology were inextricably linked.

The financial or cost side of the assessment was rendered in the Mark-to-Market (M2M) evaluation, but it was inclusive of detailed data collected from physical assets and established operational processes and procedures. The operational assessment produced output in both summary and at a categorized detail level. Both financial and non-financial data collectively were inputs to a comprehensive assessment.

TPI Approach to Designing

Early alignment of business requirements and service delivery framework is key to designing the optimal delivery model to maximize overhead ROI.

DESIGN → IMPLEMENT → DELIVER

Align	Analyze	Recommend
■ Develop current state functional decomposition	■ Align business requirements to current state delivery model and create rationalized current state	■ Validate service delivery options
■ Create current state delivery model	■ Complete financial baseline	■ Make service delivery model recommendation
■ Begin financial baseline	■ Complete functional assessment for outsourcing/offshoring	■ Recommend sourcing strategy
■ Identify current business requirements	■ Complete service delivery options list	■ Complete high-level project plan, timeline and resource requirements
■ Identify future business requirements	■ Begin service delivery risk assessment	■ Develop risk mitigation and change management strategy
■ Create portfolio map of existing functions		

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Description of Data Collection Tools

The methodology used was adapted from the TPI M-STEP methodology to accommodate GTA's and the participating agencies' data collection realities. The methodology builds upon key data categories and considers the "in-scope" process areas. This information was used to build overall confidence in benchmark interpretations.

ITIL

The focus of the assessment was from the standards within ITIL Version 2. ITIL Version 3, announced on May 30, 2007, was considered too new for many organizations to implement at this time. The results of the assessment identify the current status and readiness of the organization.

The ITIL assessment includes not only template questions but in-depth interviews with process owners and users. The entire ITIL Service Management area, including both Service Delivery and Service Support, were audited.

Service Delivery
- Service Level Management
- Financial Management
- Capacity Management
- Continuity Management
- Availability Management

Service Support
- Incident Management
- Problem Management
- Configuration Management
- Change Management
- Release Management

Service Desk – Areas of ITIL assessment include but are not limited to:
- Pre-requisites
- Management Intent
- Process Capability
- Internal Integration
- Products
- Quality Control
- Management Information
- External Integration
- Customer Interface

IT Business Continuity/Disaster Recovery

TPI employed templates for gathering information for an organization's business continuity policies and execution. The interview was another tool in this process, and the combination of all information was used in the assessment. Comparisons with best practices in comparable organizations were tested, and the assessment and recommendations are recorded.

Data Collection Tools

TPI has a suite of data collection templates developed over the years. Each template is updated as we experience new transactions. Each template, mostly Excel and MS-Word documents, provides not only specific fields of information to be gathered but also guidance in its introductory instructions.

Training Sessions

Appropriate training is the key to any successful data collection activity, especially where collection and reporting of that data is done by multiple organizations and many persons. To ensure a successful start to the project, TPI conducted training sessions for team members in GTA and the participating agencies.

TPI's Approach to Sourcing Assessments and Alternatives Development for IT Infrastructure Services

Sourcing assessment analysis for each IT infrastructure service

The IT Infrastructure Baseline and the Operational Assessments were two of the key inputs for the sourcing assessment analysis for each IT Infrastructure Service. TPI used its Sourcing Strategy Development Process to develop possible sourcing alternatives. The process is highly iterative and involved a working group comprised of representatives of

GTA and participating agencies. This working group participated in the process on a day-to-day basis, and check points facilitated reviews with other team members and stakeholders to solicit input and secure buy-in.

TPI's Sourcing Strategy Development Process is depicted below.

Sourcing Strategy Development Process

The development of an IT Infrastructure Services Sourcing Strategy for GTA and participating Agencies requires significant fact-based analysis and hypothesis-driven alternatives derived from best practice models.

| DESIGN | IMPLEMENT | DELIVER |

Business Context
- Business / Competitive Strategy
- Constraints
- Issues Analysis
- Functional Strategy
- Functional Vision

Current State Profile
- Financial Profile
- Performance Profile
- Technology Profile
- Capability Profile
- Operational Profile

External / Competitive Profile
- Capability
- Market Maturity
- Competitor / Peer delivery models
- Mark-to-Market
- Mark-to-Peer
- Cost Comparison
- Benchmark

SM Current State
- Contract Mgmt.
- Performance Mgmt.
- Relationship Mgmt.
- Financial Mgmt.
- Proj. Mgmt. Office – global operations

Vision & Opportunity
- Value Drivers
- Services Delivery Vision
- Gaps & Opportunities

Gap Analysis

Alternatives Analysis
- Sourcing Strategies
- Financial Analysis
- Portfolio Analysis
- Global Location Alternatives
- Operating Model Scenarios
- Change Readiness Analysis
- Organization Design Scenarios
- Transition Scenarios

Change Management Plan

Benefits & Risk Analysis
- Risk Analysis
- Constraints Analysis
- Benefits Analysis

Target Svs. Delivery Model
- Function / Process Model
- Operating Metrics
- Operating Strategy
- Technology Model
- Organization Model
- Governance Model
- Communications Strategy

Business Case
- Total Cost of Outsourcing Model

Strategic IT ADM & Infra Master Plan
- Transition Plan
  - KT / TO
  - Organization Migration
  - Process Migration
- Portfolio Transition
- Training: onshore and vendor teams
- Portfolio Migration Risk Management Plan
- HR / Change Management Plan
- PMO Implementation Plan
- Governance Model

IT Infrastructure Services Analysis Inputs

Any additional data required in addition to that collected during the Baseline and Operational Assessment activities will be identified early in Phase 1. TPI will not require additional data to be collected but will gather further insights through interview and documentation review of available sources of additional information.

Operational Assessment Data	Baseline Data Categories & Selected Examples

Selected Inputs
- Baseline Data
- Financial data (inc. in Baseline)
- State Strategy Considerations
- Service and Financial Objectives
- Organization data
- Operational Metrics
- Performance Metrics
- Current Contracts / SOWs
- Prior reviews (reports i.e. customer satisfaction / performance reviews etc.)

State Strategy, Operational, & Contractual Data

Infrastructure Financial Data

Organization Data

Performance Data

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Baseline assessment input

GTA and baseline data from participating agencies provided the baseline against which costs and performance levels were assessed against market. Data were organized in line with market range to enable service, performance and cost to be compared on a like-for-like basis with resource and pricing units used by leading External Service Providers (ESPs). A financial base case model reflecting the cost of service related to volume over a multi-year period formed the financial baseline that underpinned scenario modeling to drive the business case.

Operational assessment input

From the Operational Assessment, TPI determined the scope of operational, service performance and cost reduction opportunities for IT infrastructure services and the findings and recommendations related to improvements needed to designated GTA services and functions.

The inputs from the baseline and operational assessment provide the basis against which external sourcing options can be considered. TPI compared both costs and service levels to the market to determine the scope and opportunity for an ESP solution verses alternative in-sourced improvement options.

How marketplace data points were developed

TPI has developed a proprietary methodology for a unique form of benchmarking that it brands as Mark-to-Market (M2M). Underpinning the methodology is TPI's financial data repository, which it believes to be the largest and most current source of market data available. The date have been collected through the hundreds of competitive outsourcing transactions in which TPI has been involved.
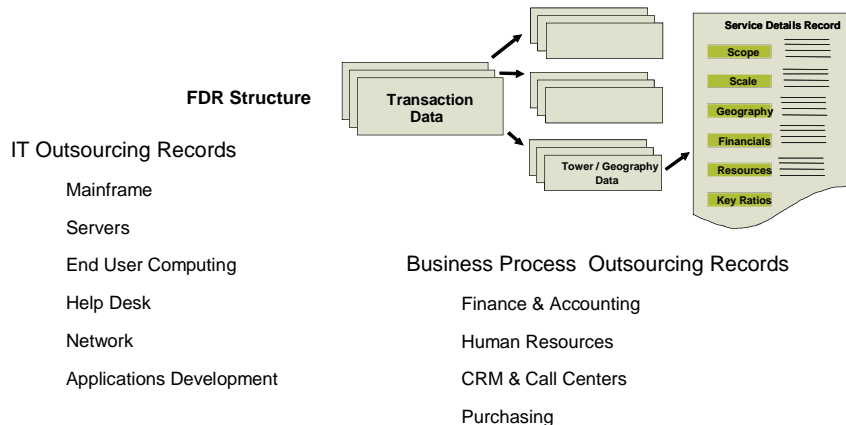
TPI's Mark-to-Market is an evolutionary step beyond simple benchmarking techniques. Unlike other forms of benchmarking that drive "peer group" comparisons, TPI's M2M performs a more relevant comparison by comparing GTA's and participating agencies' service level and financial performance to prevailing market prices and performance levels for services. Through TPI's knowledge and familiarity of current market conditions, it is able to determine the positioning of GTA's and participating agencies' services against what the sourcing market can provide and offer an analysis of the viability of GTA's and participating agencies' pursuing an alternate sourcing strategy. This more appropriately establishes the hurdles for an in-sourced option by comparison to the best that could be achieved in the market as opposed to other, possibly less well performing peers. Alternatively it drives a compelling case for evaluating outsourcing options.

The M2M analysis compares unit prices for services, built from the financial base case and its operational metrics, against market comparisons of environments that are similar to GTA's and participating agencies' current state. TPI's M2M is a quantitative analysis that rationalizes the marketplace data with specific characteristics of the client environment and is expressed as a "TPI Opinion" of the overall size of the opportunity with GTA and participating agencies, both in terms of cost saving opportunity through outsourcing and service improvement opportunity through associated contracted service level agreements with an ESP.

TPI is involved with more than 70 active outsourcing transactions at any given time. As a result, TPI has the highest number and most current insights into external market terms, conditions and pricing of any sourcing advisory firm in the industry. TPI's approach and its advisors' extensive knowledge of IT sourcing transactions ensure the delivery of a high-quality, high-value result based on objective advice that yields informed, fact-based decisions. The next graphic represents the strength and competitive advantage of TPI's M2M services and our financial data repository, which is constantly being populated with new data from engagements across the world. The volume of data is such that TPI can select sample data by region, size, complexity and service characteristics, etc.

TPI's Financial Data Repository

- The strength of the TPI M2M is based on the comprehensive quality, volume and relevance of TPI's comparison data

- TPI systematically stores pricing and other contextual data from the 100 plus completed transactions we advise on each year into our Financial Data Repository (FDR).

- Due to the competitive and highly sensitive nature of this data FDR data is very closely held within TPI with only a few Advisors having access, Client and Supplier confidentiality on pricing data is scrupulously maintained

FDR Structure

Transaction Data

Tower / Geography Data

Service Details Record
- Scope
- Scale
- Geography
- Financials
- Resources
- Key Ratios

IT Outsourcing Records

Mainframe

Servers

End User Computing

Help Desk

Network

Applications Development

Business Process Outsourcing Records

Finance & Accounting

Human Resources

CRM & Call Centers

Purchasing

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The TPI **Financial Data Repository (FDR)** was the primary source of information used in making comparisons between government and industry performance in terms of cost-effectiveness of infrastructure service delivery. TPI systematically stores price point and contextual information based on past consulting services. The FDR contains over 1,000 individual data points that can be organized to match characteristics of GTA identified in Step 1 in this section above.

To illustrate, any offering of a full line of desktop services was matched with companies in the TPI repository offering a similar range of services in order to make a fair comparison of unit costs. Based on this analysis, a tentative judgment can be made concerning the size of the gap between GTA and industry performance. The potential dollar savings to be achieved by closing the gap were determined by multiplying the volume of services – such as number of desktops serviced – by the differences between federal and industry unit cost within a given organization. The assumption underlying the assessment of potential cost savings is that the comparison rests upon 'level ground,' e.g., the comparison is made between government and industry organizations operating under similar structural conditions. If structural conditions are considered comparable, then analysis of causes for the gap may focus on differences in operating characteristics, such as differences in the design and implementation of improvement strategies among organizations.

Comparison of GTA service levels with market range

TPI advises on and collects service level information from industry outsourcing agreements, and this information was the primary source of information used in making comparisons

between government and industry performance in terms of service level achievement. As TPI advises on the largest number of industry sourcing transactions each year, TPI was able to provide GTA with the most comprehensive collection of industry service level information available for comparison. When selecting industry service level for benchmark comparisons, TPI's experience indicates there is minimal variation in service levels achieved in the commercial marketplace regardless of organization size and other structural characteristics. As such, the selection criteria of determining which industry service level information is to be used for comparison is less involved than the selection criteria for unit cost data.

Analysis of GTA service level metrics

TPI analyzed data on service level metrics that are currently being collected to determine what, if any, relationship exists between cost effectiveness and service levels.

Where sufficient number of performance metrics on service levels were collected from survey respondents, these data were analyzed from the following two perspectives.

- Relationship between unit costs and service levels; although both low unit costs and high service levels are desirable, by examining the relationship, GTA managers are able to determine at which point improved service levels drive unit costs above an acceptable level or conversely at which point reduced unit costs drive service levels below an acceptable level.

- Relationship between service levels and structural or operational characteristics; for example, are there differences in service levels between in-house vs. contracted services (operational characteristic) or between agencies with geographically dispersed vs. centralized organizational components (structural characteristic)?

TPI does not believe a more accurate "top performers zone" can be established without using actual market price and service level data.

The FDR has data from a broad range of organizations, and appropriate data points were selected to ensure the most accurate benchmark comparison for organizational units within GTA.

The final M2M report includes a TPI opinion of the potential savings and service level improvement opportunities for GTA's IT infrastructure services, compared to today's market, that could be achieved through outsourcing.

Developing alternative sourcing scenarios

Alternative sourcing scenarios were developed through an iterative process with GTA. TPI facilitated the scenario development process using its Sourcing Strategy Framework in order to identify viable options for insourcing and outsourcing.

Strategy options were explored by considering different structures, relationship types, ESP strategies and sourcing drivers. Sourcing tactics were considered related to service location, retained functions, outsourced functions and desired risk profiles. Various models were considered for the pricing of service, skill allocation and risk allocation. Specific scope scenarios were considered based on function and life-cycle views. Various organization

options were considered for their impact on the organizational alignment and the way in which the alternate sourcing scenarios will interface with the organization.

Sourcing Strategy Framework

tpi	**InSourcing**	**Selective Sourcing**	**Strategic Sourcing**	**Value Based**

Strategies

InSource Optimization	Single Function	Broad Scope	Value Sharing

Supplier	Joint Venture	Subsidiary

Sole-Sourced	Multi-Sourced

Portfolio for Less	Portfolio Rationalization	Portfolio Modernization

Tactics

Onshore	Onsite	Near Shore	Offshore	Hybrid

Single Geography	Multi-Geography

Sourced Competencies, Functions & Roles	Retained Competencies, Functions & Roles

Assumed Risk	Shared Risk	Source the Risk

Operating Models

Outsourced Models								Insourced Models		
Staff Aug.	Project Based	Fixed Time Fixed Price	Traditional Sourcing	Build Operate Transfer	CoE	Extended Centers	Virtual Captive	Captive	Shared Services	Insourced

Portfolio Bundling Alternatives

Source It All	Development Lifecycle	Technology Platform	Business Process	Development / Maintenance	ERP – Package – Custom	Non-Strategic	Geography	Discreet

Operating & Organization Alignment

Operating Model and Organization Alignment

| Centralized	Center-Leading	Center of Excellence

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From this analysis, alternative possible scenarios were identified to form the hypotheses that was tested and modeled in more detail.

TPI used its financial base case modeling tool to develop the financial base case for each sourcing alternative modeled. The graphic below represents the TPI alternative scenario modeling process to assess various alternatives for their financial impact.

Alternative Scenario Modeling Process

Establishing an accurate and comprehensive Financial Basecase is Crucial.
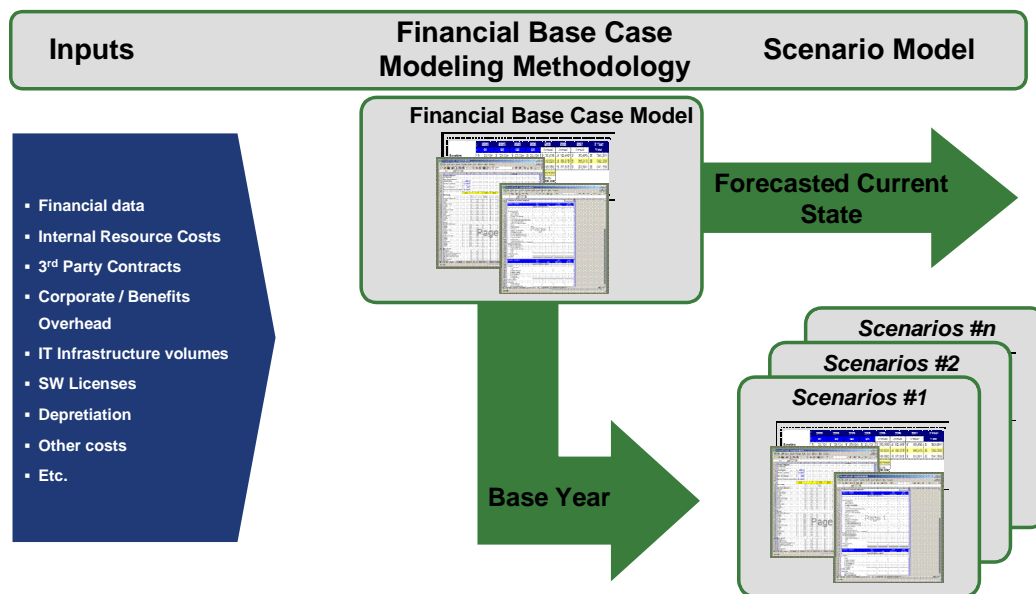
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A non-financial assessment of the impact of alternative sourcing models is driven through the use of TPI's sourcing assessment framework. Each IT infrastructure service included in the baseline and operational assessments was evaluated against the impact of various sourcing alternatives.

GTA's propensity and ability to adopt alternative sourcing models was also considered to ensure the organization's readiness for change. This is an essential element in forming TPI's opinion and the business case for the recommended approach.

Insourced and outsourced scenarios were also evaluated to determine non-financial benefits of alternative sourcing scenarios to determine other tangible and intangible benefits associated with each alternative. A number of filters were applied to evaluate each option against:

- market capability for delivering IT infrastructure services
- business risk reduction
- adaptability
- service improvement
- capability improvement
- economic improvement (factored from the base case analysis)
- legislative constraints

TPI's Approach to Business Case Development and the Recommendation of Alternatives

Having completed the activities associated with sourcing assessments and alternatives development for IT Infrastructure Services, the business case was developed to reflect the final recommendation for the target IT service delivery model and a comparison to the potential alternatives. The business case was developed from a number of inputs, as discussed below.

Financial base case model

A financial base case was developed for each viable sourcing alternative to include the requirements of GTA and each of the participating agencies. It consists of a five-year projection of costs by category reflecting the as-is cost for the delivery of services today (year 1, base year data).

For each sourcing alternative, costs were divided into three categories:
- retained costs
- costs allocated to alternative sourcing models (i.e., ESP-assumed costs under an outsourcing option or GTA's and participating agencies' assumed costs to reflect a consolidation of agency services under a new GTA and participating agencies IT service delivery model)
- costs to be managed or "passed through" by GTA, a participating agency or an ESP.

A five-year projection was derived by considering the impact of costs over time for the as-is services. Growth factors (volumes), inflation and project initiatives (planned projects that have an impact on costs together with associated investment costs) were considered in the extrapolation of costs over the five-year projected term.

The cost of sourcing alternatives were compared to the base case to provide an economic financial benefit analysis for each alternative. Each alternative was evaluated against best practice averages to determine the viability of realizing an improvement over GTA's and participating agencies' current cost and performance levels. Included in the analysis for each alternative was each year's cost of implementation, including transition cost and cost of operation, thereby showing for each alternative the total projected cost.

From this analysis TPI developed a business case. The business case financial models show a comparison of options including a projected operating cost, cash flow and net present value analysis, a return-on-investment (ROI) calculation and a capital projection plan for each option.

The business case development process is illustrated below:

Mechanics of Developing the Business Case

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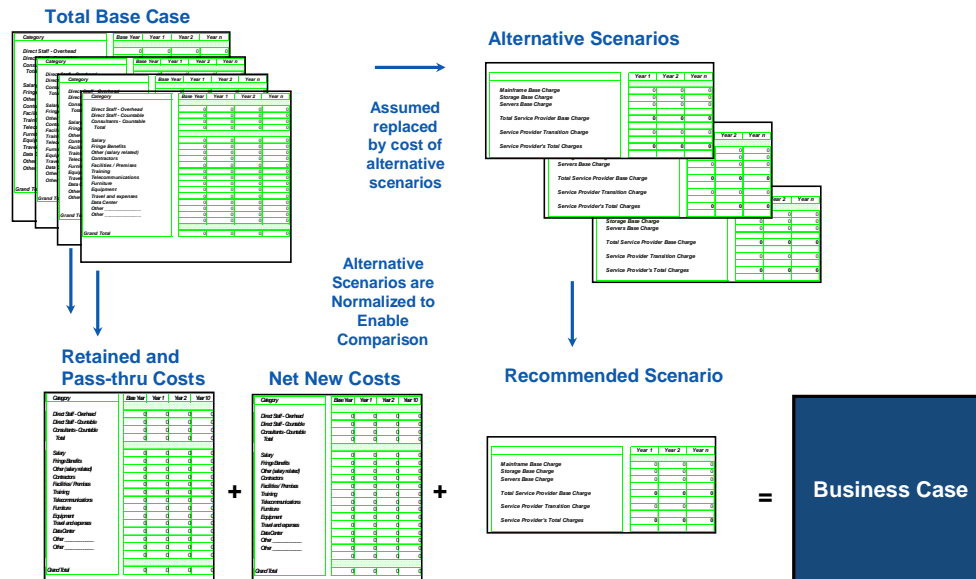
TPI developed the business case iteratively with GTA and participating agencies using a decision model that supported the ranking of alternatives and a "Go – No Go" filtering process with decision criteria to support the inclusion or ruling out of alternatives.

The business case includes rankings of the alternatives with the recommended option(s) and the rational supporting of the recommendation. A risk assessment was included.

Information required from GTA and participating agencies

TPI worked with GTA and participating agencies in the development of the business case, with TPI performing the supporting activities (i.e. financial modeling).

Current-state service management baseline and assessment workstream

Assessment activities during Phase 1 of the GTA sourcing initiative baselined GTA's existing service management and governance capabilities and implementation of associated processes (including ITIL Framework elements) to identify any gaps that exist between current capabilities and those needed for the effective operation in the end-state. Additionally, TPI evaluated the high-level impact of implementing changes to the current-state, including key points of risk to be mitigated.

Assessment approach

The current-state baseline and assessment activities focused on GTA current service management functions/organizations and their interactions with other organizations to understand roles and responsibilities. The activities were primarily those performed by the identified service management functions/organizations along with their structures, defined roles and responsibilities, and supporting policies, procedures and guidelines.
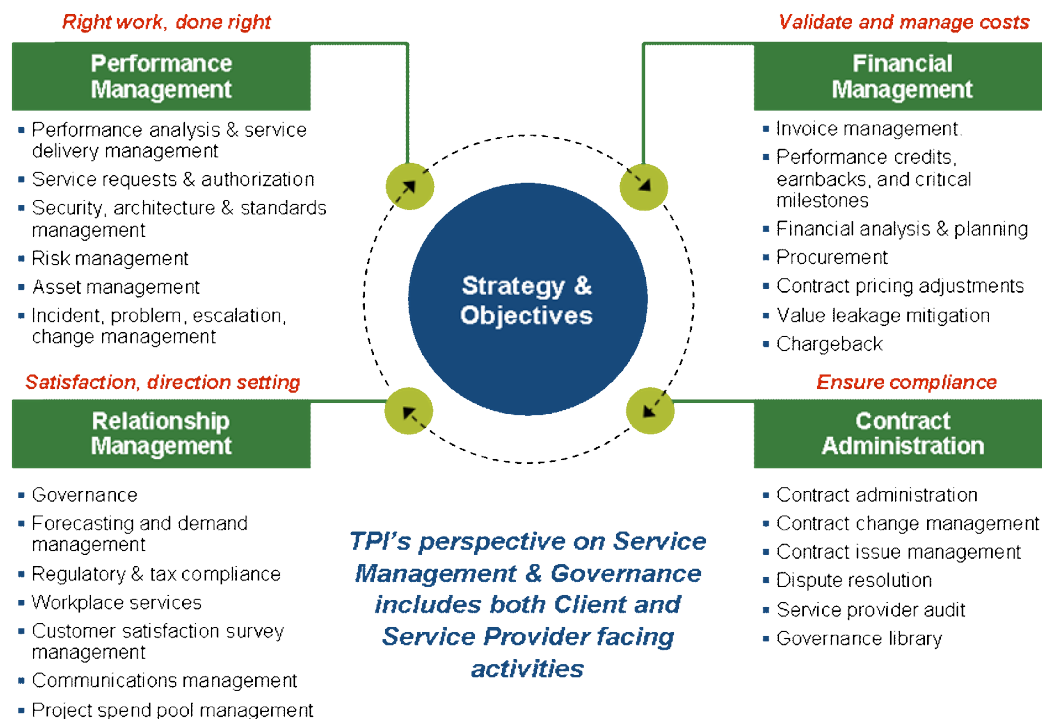
The assessment used two primary information sources:
- data gathered during interviews
- review of relevant documentation – such as policies, procedures, guidelines, performance reports, etc. – used by service management and governance functions/organizations.

This information was combined with TPI information and experience to formulate recommendations and findings.

TPI utilized its service management and governance process model and disciplines, shown in following two diagrams, and the ITIL Framework as the foundation for performing the baseline and assessment of existing GTA's and participating agencies' IT service management and governance capabilities and to facilitate evaluating the high-level impact and identification of key points of risk in moving to the end-state.

TPI service management and governance process model

Right work, done right

Performance Management
- Performance analysis & service delivery management
- Service requests & authorization
- Security, architecture & standards management
- Risk management
- Asset management
- Incident, problem, escalation, change management

Validate and manage costs

Financial Management
- Invoice management
- Performance credits, earnbacks, and critical milestones
- Financial analysis & planning
- Procurement
- Contract pricing adjustments
- Value leakage mitigation
- Chargeback

Satisfaction, direction setting

Relationship Management
- Governance
- Forecasting and demand management
- Regulatory & tax compliance
- Workplace services
- Customer satisfaction survey management
- Communications management
- Project spend pool management

Ensure compliance

Contract Administration
- Contract administration
- Contract change management
- Contract issue management
- Dispute resolution
- Service provider audit
- Governance library

Strategy & Objectives

TPI's perspective on Service Management & Governance includes both Client and Service Provider facing activities

TPI service management and governance disciplines

Performance Management	
P01	Performance Analysis & Service Delivery Management
P02	Service Requests and Authorization
P03	Security Management
P04	Architecture, Standards Management
P05	Risk Management
P06	Asset Management
P07	Incident Management
P08	Problem Management
P09	Service and Problem Escalation
P10	Change Management

Financial Management	
F01	Invoice Management
F02	Performance Credits, Earn-backs, & Critical Milestones
F03	Financial Analysis & Planning
F04	Procurement
F05	Contract Pricing Adjustments
F06	Value Leakage Mitigation
F07	Chargeback

Relationship Management	
R01	Governance
R02	Forecasting and Demand Management
R03	Regulatory & Tax Compliance
R04	Workplace Services
R05	Customer Satisfaction Survey Management
R06	Communications Management
R07	Project Spend Pool Manager

Contract Administration	
C01	Contract Administration
C02	Contract Change Management
C03	Contract Issue Management
C04	Dispute Resolution
C05	Service Provider Audit
C06	Governance Library