APAC Professional Services

IT Services 2011

Our Professional and Managed Services Business Philosophy

"Customers don't buy just Products or Services;
They buy services that provide Solutions."

Our Core Focus

Design and Build Enterprise IT Infrastructure, which is –

- **Green**

Build green infrastructure — environmentally friendly.

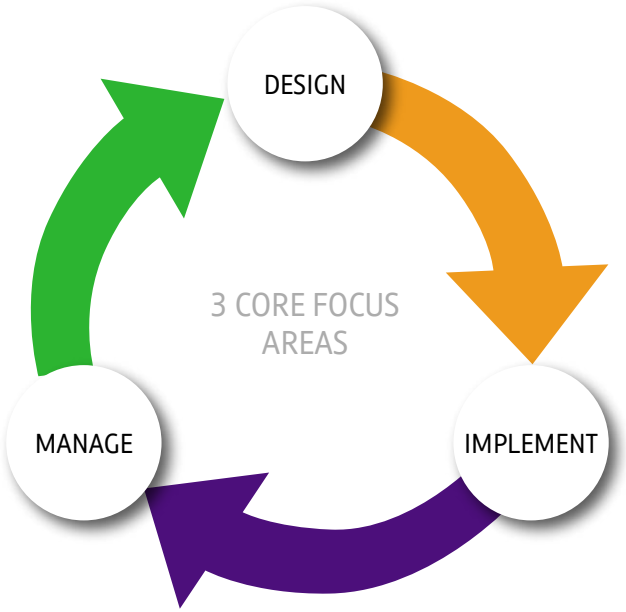
Green data centre refers to one which the mechanical, lighting, electrical and computer systems are designed for maximum energy efficiency and minimum environmental impact (Gartner 2007). This is achieved through virtualisation, consolidation, use of appropriate technology, new perspective of ILM and data centre - best practices floor plan, liquid cooling and utilise green energy sources.

- **Application Optimised**

Build production ready, application aware and security rich infrastructure.

- **Operational Efficient**

Build operationally efficient infrastructure which helps to reduce costs by improving IT services through the adoption of proven best practice processes, improving customer satisfaction by having a more professional approach to service delivery standards and guidance, improving productivity with effective use of skills and experience and improving delivery of third party services through the specification of ITIL.



Professional and Managed Services Portfolio

Networked IT Services
Consulting, Infrastructure and Integration Services

IT Consulting
Strategy and Planning

- Enterprise IT Architecture Assessment
- IT Service Management
- Enterprise IT Architecture
- Operational Efficiency IT Quick Start
- Cloud Private Quick Start
- Cloud Private Migrate Quick Start
- Client Computing Quick Start
- Data Management Quick Start
- IPv6 Quick Start

IT Consulting
Security

- Information Security Risk Assessment
- Information Security Management Systems Development and Implementation
- ISO 27001 and PCI Assessment
- Technology Risk Assessment
- Business Continuity Management Systems Development and Implementation (BIA, BCP/ITDRP)

IT Transformation
Consulting, Infrastructure and Integration Services

- DC Consolidation and Virtualisation
- Server and Storage Virtualisation
- Cloud Private Migration/ Transformation
- Client Computing Transformation
- Data Management Transformation
- Next Generation DC Networks Transformation
- IPv6 Transformation
- DC Facility Transformation

Secured Infrastructure and Integration Services

- Access Management
- Smart Card Management System (2FA)
- Public Key Infrastructure System
- Intrusion Protection/Prevention System
- Network Access Control
- Vulnerability Assessment
- Penetration
- Data Loss Prevention
- End Point Security
- Host, Database, Applications and Email Security
- Security Information, Events and Logs Management System
- Source Code Analysis

IT Performance Optimisation

- Applications Baseline
- Applications Profiling
- E2E Applications Performance Analysis
- Business ICT Analytics

IT Infrastructure and Integration Services

- HA/DR Critical Systems
- Data Management Systems
- Application Infrastructure
- VMware/Citrix Infrastructure

IP Infrastructure and Integration Services

- DC Networks Design and Implementation
- LAN/IPT/WLAN Design and Implementation
- Unified Communications Integration

Networked IT Services
Business Technology Services

Business Advisory and Outsourcing

- Envisioning Quick Start
- Discovery Engagement
- Roadmap Engagement
- Business Case Development

Application Services
Healthcare, Ports/Logistics

- Java and .Net Applications Development and Integration

Strategic Resources

- Residency Consultant

IT Program Management

- Project Management
- Program Management

Networked IT Services
Managed Services

IT Managed Services

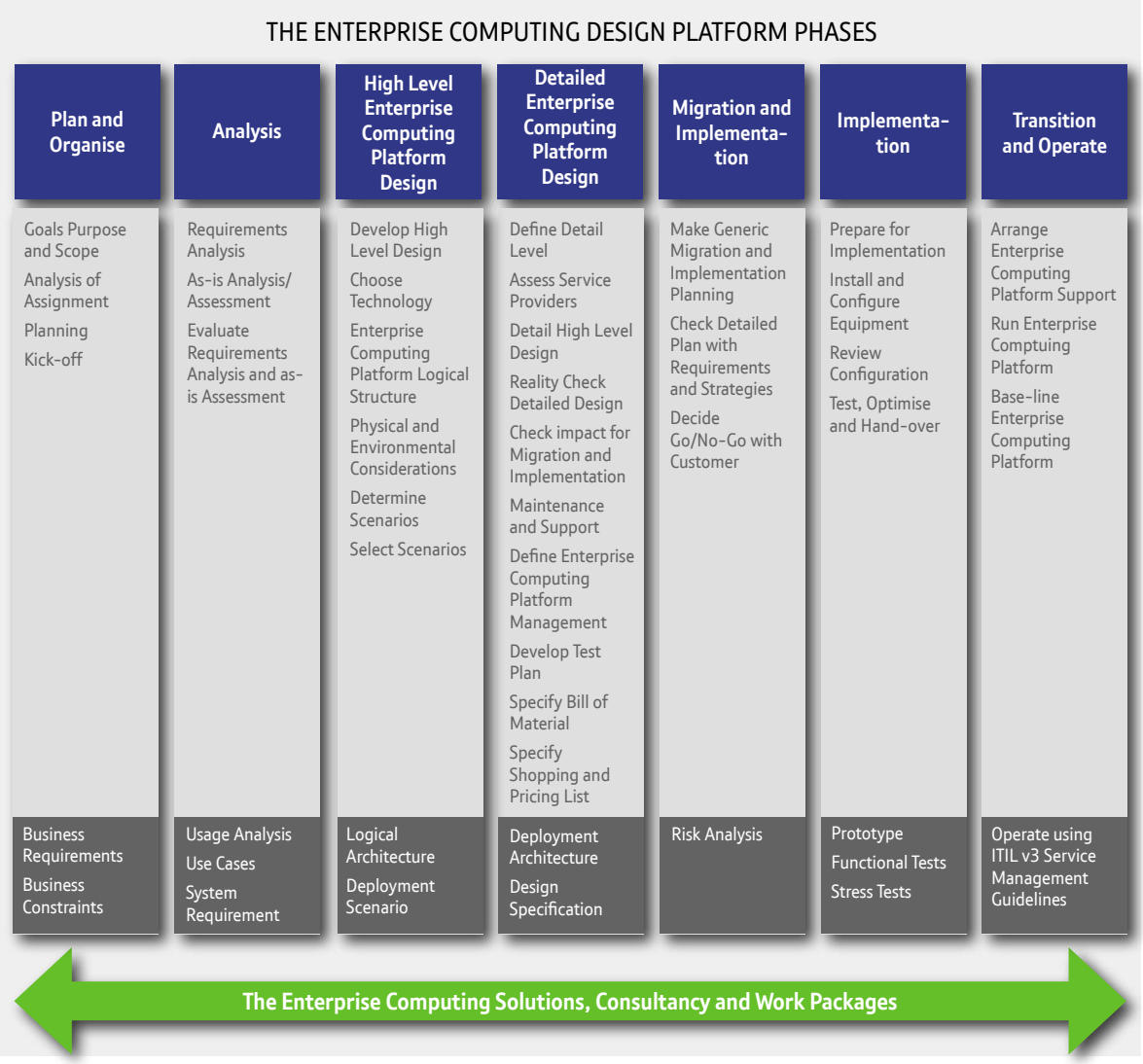
- DC ICT Managed Services
- DC ICT Remote Monitoring and Managed Services
- End User Computing Managed Services
- ICT Service Desk as Managed Services
- Cloud Private on Premises/Hosted (New)

Professional and Managed Service Practices 2011

Contents

1. Networked IT Services – Assessment, Implementation, Integration and Managed Services

PROFESSIONAL SERVICES - TECHNICAL DESIGN AND PROJECT IMPLEMENTATION METHODOLOGY



OUR TECHNICAL DESIGN METHODOLOGY

This is governed by the technical design and solution assurance governance process at the functional unit level, peer level and at the higher level design authority for large complex deals.

Our Project Implementation Methodology is based on the following principles:

- Sound project management for timely project delivery within budget
- Proven implementation methodology
- Quality assurance to exceed customer's expectations

As a service oriented organisation, we believe in meeting a high service delivery standard for our customers. We aim to exceed the customer's expectations (not in what is delivered but in the way it is delivered) and give them confidence in our ability to meet all their future needs.

We take time to listen to our customers, and understand their requirements. We believe that the key points in providing good service are attention to detail and in taking that extra mile to delight the customer.

PROJECT MANAGEMENT

The Project Management Office centrally manages all projects of the professional services and is also offered to you as a service.

Project management is based on PMI®-based project management methodology:

1. Project Definition

- Organisation Structure

2. Project Planning

- Statement of Work
- Project Plan
- Project Schedule

3. Project Execution

- Requirement and Design
- Execution
- Change Control
- Acceptance Testing
- Documentation

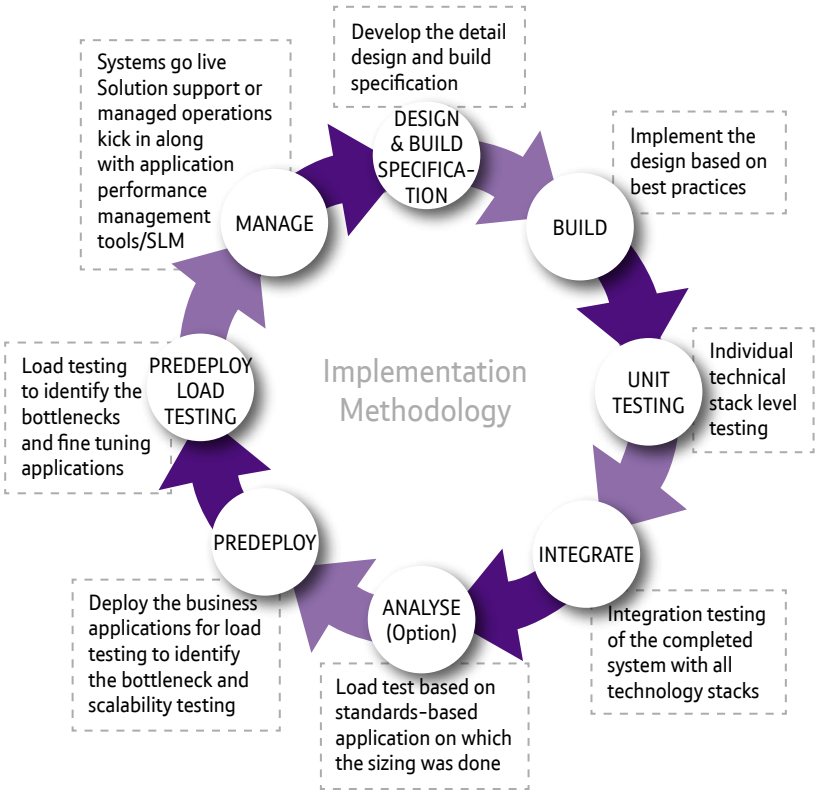
4. Project Tracking

- Progress Meetings
- Monthly Reports
- Schedule Tracking

5. Issue Management

- Technical and Non-Technical
- Project Closure
- Handover
- Review
- Commissioning

IMPLEMENTATION METHODOLOGY



QUALITY ASSURANCE

- Service delivery far exceeds customers' expectations (consulting soft skills and flexibility)
- Forms the basis of measurement of client satisfaction
- Review the problems reported during the warranty period after the implementation

1.1 IT TRANSFORMATION

1.1.1 Server Consolidation and Virtualisation

This service covers server consolidation design which includes database, application, Web, file, messaging, directory and DNS servers. Server consolidation/virtualisation is one of the key drivers for building a green data centre.

This service may be the result of any data centre consolidation, relocation or may be due to technology refresh.

1.1.2 DC Consolidation and Virtualisation

This service focuses on a wider aspect of consolidation, not only it covers server consolidation/virtualisation, it also looks into data centre, people, resources, processes and network consolidation and virtualisation. Customer can expect improvement in overall ROI, reduce TCO, improve service level and increase availability in operating a data centre.

1.1.2.1 ITDRP Design and Implementation

This service creates the Information Technology Disaster Recovery Plan (ITDRP) based on the analysis of the business impact.

It covers the creation of processes and procedures to meet the Recovery Time Objective (RTO) of the IT systems before, during and after the disaster.

1.1.3 DC Facility Transformation

1.1.3.1 Data Centre Facility Design Workshop

This workshop focuses on the following:

- Introduction to Data Centre Design
- TIA 942 Overview
- Best Practices of TIA942:
- Data Centre Tiering
- Space Requirements
- Design Layout
- Infrastructure Design
- Environmental Considerations
- Security
- Managing the Facility

This is for customers who would like to learn about the DC Standards TIA942, a first step in their journey towards their DC Facility Transformation exercise.

1.1.3.2 Data Centre Facility Design Review

This service is to review the design, calculations and illustrations for the works of building the data centre with the following deliverables:

- Design concepts that comply with the Code of Practice, building regulation code, and building architect and engineer requirements in catering to meet customer operation and technology centre requirements
- Conceptual engineering drawings and provision of M&E specifications, drawing and schedule of material
- Detailed data centre design and layout as well as other environmental supporting equipment selection to meet IT best practices. Data centre test and commissioning reports.

1.1.3.3 Data Centre Facility Design and Implementation

This service looks into design, calculations and illustrations for the works of building the data centre with the following:

- Design concepts that comply with the Code of Practice, building regulation code, building architect and engineer's requirement in catering to meet customer operations and technology centre requirements
- Conceptual engineering drawings and provision of M&E specifications, drawing and schedule of material
- Detailed data centre design and layout as well as other environmental supporting equipment selection to meet IT best practices
- Implementation of the production ready data centre.

1.1.3.4 Data Centre Facility Assessment and Audit

This service covers assessment of the following:

- Overall architecture assessment for raised floors, walls, windows, electrical and mechanical, fire protection system, data centre monitoring and security, and highlight the current data centre facility level (if applicable) or any design or implementation fault
- Comparison chart/tabulation of the current data centre tier (TIA942) and targeted tier level configuration.

1.1.3.5 Data Centre in a Rack

This service helps the enterprise in the resources sector for the design and implementation of IT services in rack, where the customer has the challenges in building the data centre facility in offshore areas. This solution can be started with a single rack and scaled up to the large arrays of racks. This data centre in a rack can be viewed as mobile data centre which follows the offshore team across the different locations.

1.1.3.6 Data Centre Relocation/Consolidation (For Improved TCO and Simplified Management)

This service covers the current IT architecture, inventory assessment of the current IT systems, and planning and project management of the relocation and consolidation of the data centre.

This service may result in other services like server consolidation/virtualisation, storage consolidation/virtualisation, network redesign, enterprise backup, enterprise high availability and BCP/ITDRP implementation.

1.1.4 Capacity Planning

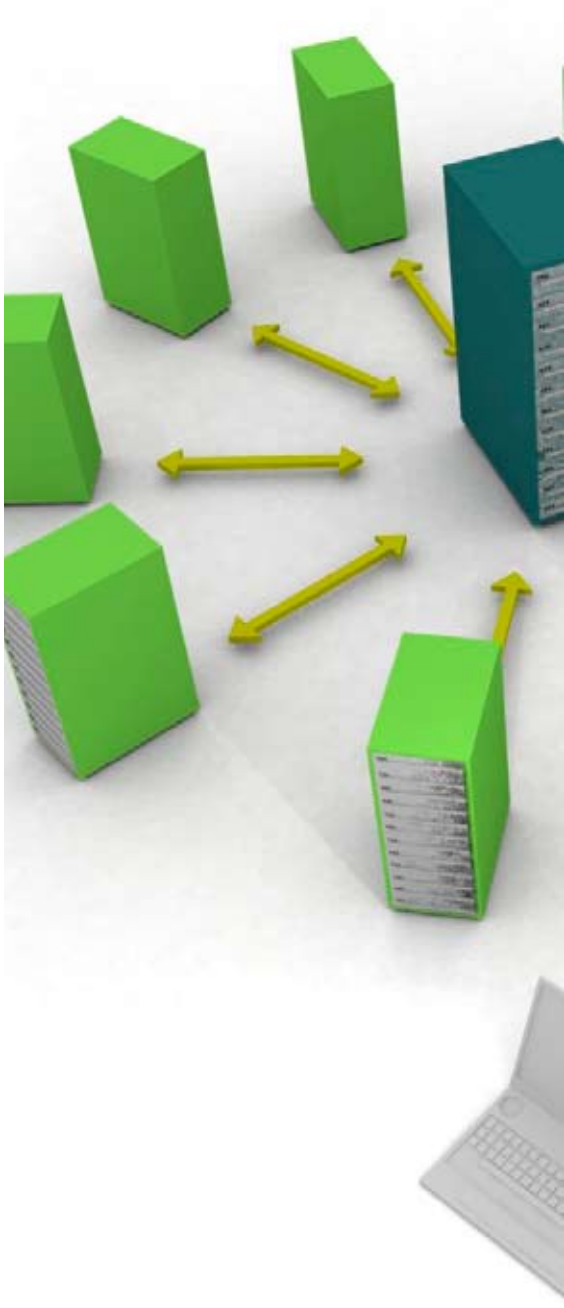
This service is to perform a capacity planning exercise on your production systems to analyse the current systems (server, storage, networks and IO) load and predict the capacity requirements for the future based on business growth. This service comes with bundled tools and processes.

1.1.5 Next Generation Networks Transformation

This service focuses on helping you transform their existing network to next generation of network technology, replacing the traditional circuit switched network of today with packet based transmission technologies. This allows all services to run over an internet protocol (IP), Multi-Protocol-Layer-Switching (MPLS) platform, including voice, Virtual Private Networks (VPNs) and leased lines.

1.1.6 Client Computing Transformation

This service helps in planning, designing and implementing a virtual desktop environment for you. It provides better manageability by centrally provisioning software updates/ upgrades to all clients; it also offers data and device security.



1.2 IT PERFORMANCE OPTIMISATION

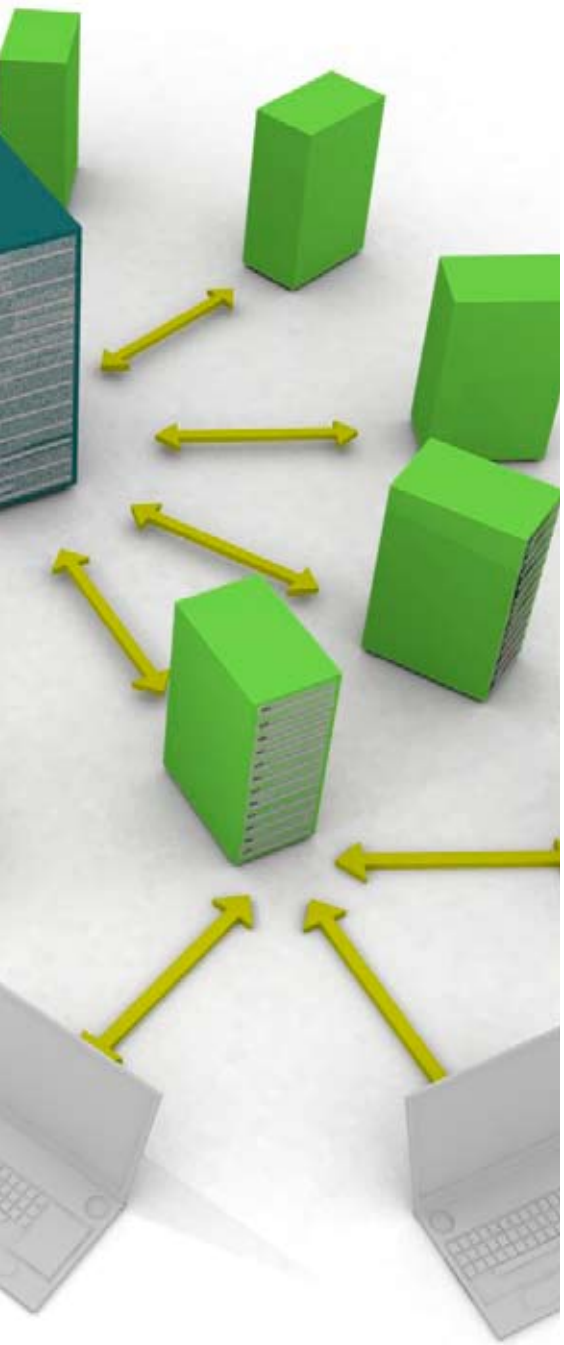
1.2.1 Load Testing/Applications Base-lining

This service is for the provision of industry-standard load testing for the prediction of system behaviour and performance. It emulates hundreds or thousands of concurrent users to put the application through the rigors of real-life user loads. It can stress an application from end-to-end to measure the response times of key business processes and key statistics of the servers.

It also offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.

1.2.2 Web Infrastructure Health Check (No Tuning)

This health check involves an assessment of the Web infrastructure and its performance. The assessment pinpoints potential performance bottlenecks and areas for improvement. It also offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.



1.2.3 System (Operating System) Performance Analysis

This service is for the collection and analysis of operating system statistics as well as for the evaluation of ways to improve server performance using existing hardware configurations. This analysis shows resource consumption by workload type and overall resource loading.

It also offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.

1.2.4 Application Server Performance Assurance

This service is to collect and analyse key J2EE server statistics as well as evaluate ways to improve server performance. It offers complete best-of-breed software and services that will help to provide recommendations, resolutions, and best practices with a comprehensive methodology.

1.2.5 Application Profiling

This service is for the diagnosis and provision of assistance to resolve J2EE application-related performance issues. It includes the identification of performance, memory, thread and code coverage issues down to the line of Java code. In addition, it offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.

1.2.6 Database Server Performance Assurance

This service is to collect and analyse key database server statistics as well as evaluate ways to improve server performance. It also offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.

1.2.7 Database Health Check

This service is to collect and analyse key database statistics as well as evaluate ways to improve server performance.

It also offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology.

1.2.8 Production Readiness Assurance

This service offers complete best-of-breed software and services that will help to provide recommendations, resolutions and best practices with a comprehensive methodology for new application roll-outs. From implementation planning to production support, it will provide the expertise and assurance needed for the deployment of the production environment.

1.2.9 Oracle Performance Analysis/Tuning

This is a service is for conducting performance analysis and the tuning of the systems at the database server level, as well as identifying the PL/SQL statements causing the bottleneck and makes the necessary recommendations for changes in the PL/SQL statements.

1.2.10 Oracle Health Check

This is a service is for conducting of a health check on the databse systems for performance analysis.

1.2.11 Oracle Database Live Re-organisation and Restructuring

This service looks into reorganising and restructuring the 24x7 database for database performance improvement. This is good for large 24x7 online databases.

1.2.12 Application Performance Management Implementation

This is a multi-platform integrated monitoring solution that gives you greater control over your increasingly complex IT infrastructure. It offers a single solution for monitoring IT infrastructure across network, systems and applications. The goal is to deliver a comprehensive monitoring solution that seamlessly addresses the complexity of technology inter-relationships. This service is offered with bundled tools and methodologies.

1.2.13 Business Service Management (BSM)

This service is an implementation of Business Service Management, and this will help in the transition of IT organisations from an infrastructure-focused environment to business-driven service delivery. BSM enables staff to perform IT service monitoring, reporting and notification in a way that makes sense and provides value not only to those within IT, but also to your organisation's business leaders - the true customers of IT.

1.3 IP INFRASTRUCTURE SERVICES

1.3.1 Converged Networks Design and Implementation

This service covers design and implementation of a converged network, which enables customer to combine all communications (voice and data) across a single infrastructure. We deliver a full range of services, including equipment supply, installation and maintenance through to network management. We can provide local area networks (LANs), Wide Area Networks (WANs) and IP telephony, supported by several service options, thus creating a package tailored to your needs.

1.3.2 Data Centre Networks design and Implementation

This is an assessment of the current data network infrastructure and develops the new data centre design taking the requirements from you on business, IT and corporate security policy applicable to networks:

- Develop and implement the overall detailed data centre Networks Architecture
- Networks security design
- Implementation of the design

1.3.3 Networks and Systems Management Implementation

This service is to implement a comprehensive system and network management solution, which includes fault management, performance monitoring and configuration management.

1.4 IT INFRASTRUCTURE INTEGRATION SERVICES

1.4.1 Critical Infrastructure Systems Practices

1.4.1.1 Enterprise High Availability Assessment

This assessment is to help review the current IT infrastructure and determine if it meets the enterprise business availability requirements of your systems, networks, security and applications. Develop the gap analysis and architecture required to narrow the gap between current architecture and the business requirements.

1.4.1.2 Enterprise High Availability Design and Implementation

This service involves the implementation of high availability technical solutions for a new enterprise.

1.4.1.3 Campus High Availability Implementation

This service involves the implementation of high availability technical solutions for a new/existing campus.

1.4.1.4 GEO High Availability Implementation

This service involves the implementation of high availability technical solutions with geographically dispersed cluster nodes.

1.4.1.5 Enterprise High Availability Upgrade/Migration

This service includes upgrading of an existing high availability solution from the current version to the new version, addition/reduction of nodes/servers, and storage or network devices of an existing highly available infrastructure. Or migrating/changing the brands of the high availability solutions (e.g. from Oracle/Sun to Symantec or from Symantec to Oracle/Sun).

1.4.2 Storage Management and Archival

1.4.2.1 Enterprise Storage Assessment

This service is to provide an assessment of the storage configuration, capacity usage patterns, as well as reviewing existing archival strategies. This assessment helps to achieve effective usage of storage. The benefits of this service result in both storage consolidation and proper planning for life-cycle management of data.

1.4.2.2 Enterprise Storage Consolidation

This service helps to consolidate silos of storage islands and design new enterprise storage architecture including SAN fabric configuration and implementation.

This service may be extended to data centre relocation where the redesign of storage infrastructure for the new data centre consolidation may be required as part of the relocation.

1.4.2.3 Enterprise Storage/Back-Up Consolidation (For Improved TCO and Simplified Management)

This service covers the design of new enterprise storage and back-up/recovery architecture that includes SAN fabrics (SAN switches) and implementation.

It may be extended to data centre relocation, as a redesign of the storage infrastructure may be needed as part of the new data centre.

1.4.2.4 Storage Upgrade/Migration

This service includes adding SAN fabric devices or storage capacity, migrating storage devices (e.g. from IBM to HDS or Oracle/Sun to HDS), upgrading firmware/microcode or any other upgrades and reconfiguration of current storage subsystems.

1.4.2.5 Storage SAN Implementation

This service covers the implementation of new storage arrays/frames/SAN fabrics.

1.4.2.6 Enterprise Storage Performance Analysis/Tuning

This service covers the analysis of the storage/SAN design, configuration and file system layout with respect to the host application requirements. It also identifies system and storage bottlenecks with respect to your applications/business requirements.

1.4.2.7 Enterprise Back-Up/Recovery Assessment

This service is to review the current data back-up environment for possible areas of improvement such as back-up/recovery consolidation, reducing the back-up window, and planning for data life-cycle management/archival systems.

1.4.2.8 Enterprise Back-Up/Recovery Consolidation

This service covers the design of new enterprise back-up/recovery architecture including SAN fabrics (SAN switches), libraries and implementation.

This may be extended to data centre relocation, as a redesign of back-up/recovery infrastructure may be required for the new data centre as part of the relocation.

1.4.2.9 Enterprise Back-Up/Recovery Upgrade/Migration

This service includes adding or removing of SAN switches, tape libraries, media/master servers or clients.

Changing the library/back-up/recovery software from one brand to another (e.g. from ADIC to Oracle/Sun or from Legato to NetBackup). Perform software upgrade or reconfiguration of existing back-up/recovery systems.

1.4.2.10 Enterprise Back-Up/Recovery Implementation

This service involves the implementation of new enterprise back-up/recovery systems.

1.4.2.11 Enterprise Back-Up/Recovery Verification

This service is to perform verification of the enterprise back-up/recovery system to ensure that data back-up recovery is possible in the worst-case disaster.

1.4.2.12 Data (Files, Emails and Database) Archival Systems Assessment

This assessment helps you to review the current data archiving/vault management practice for possible areas of improvement, or to comply with any regulatory standards. In addition, an assessment will be conducted based on regulatory standards or corporate standards where you do not have any existing data archival system.

1.4.2.13 Data (Files, Emails and Database) Archiving/Vault Implementation

This service is for implementation of data archiving/vault system as part of the business, corporate audit, International or local regulatory/requirements.

1.4.2.14 Data (Files, Emails and Database) Archival/Vault Upgrade/Migration

This service includes adding or removing of SAN fabrics, tape libraries, media/master servers or clients. Changing the archival software brand (e.g. from Symantec to CA or Legato). Perform software upgrade or reconfiguration of existing data archival systems

1.4.2.15 Data Tape Conversion

This service covers the conversion from one data tape format to another due to evolving tape drive technology, e.g. from DLT to LTO and etc.

1.4.2.16 Data De-duplication

This services helps in developing the data backup/recovery standards for enterprise where the data volume is growing hence the recovery is becoming a challenge at times of disaster, as well reduce the WAN bandwidth requirements for data replication.

1.4.3 Applications Infrastructure Services

1.4.3.1 Oracle JES Directory Assessment and Deployment

This service provides consultancy and delivery of a solid foundation for an identity management solution by providing a central repository for storing and managing identity profiles, access privileges, and application and network resource information.

1.4.3.2 Oracle/Sun Java System

1.4.3.2.1 Oracle/Sun Java System Web Server Implementation and Configuration

This service provides design, implementation and configuration of a production-ready Oracle/Sun Java System Web server following the vendor's recommended best practices. This enables your IT staff to focus on meeting the business needs i.e. on the designing and developing business logic

1.4.3.2.2 Oracle/Sun Java System Directory Server Implementation and Configuration

This service provides design, implementation and configuration of a production-ready Oracle/Sun Java System directory server following vendor's recommended best practices.

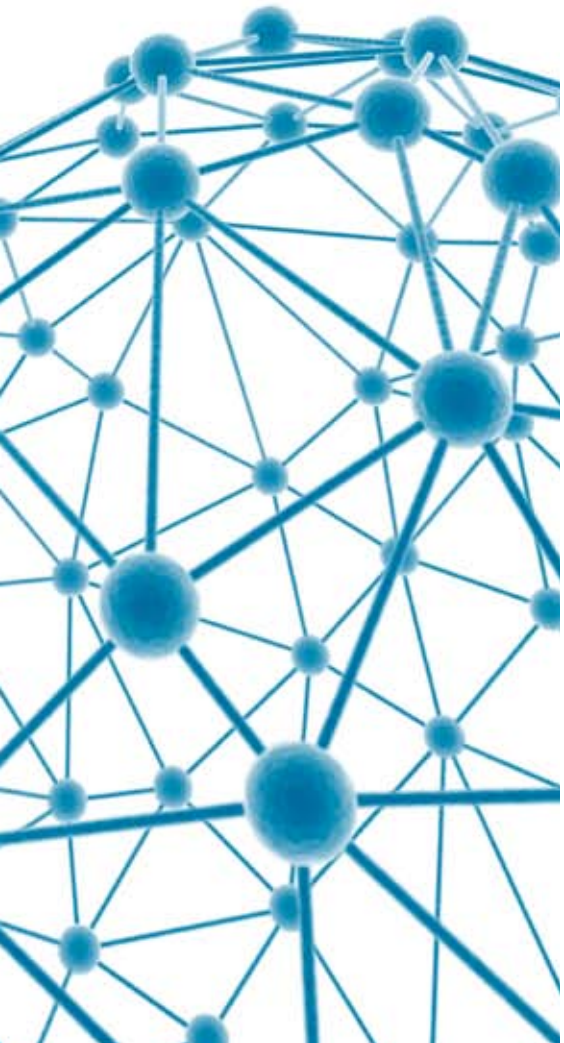
1.4.3.2.3 Oracle/Sun Java System Application Server Implementation and Configuration

This service provides design, implementation and configuration of a production-ready Oracle/Sun Java System application server following vendor's best practices.

1.4.3.2.4 Oracle/Sun Java System Portal Server Implementation and Configuration (Without Customisation)

This service provides design, implementation and configuration of a production-ready Oracle/Sun Java System portal server following vendor's recommended best practices.

1.4.3.3 IBM WebSphere



1.4.3.3.1 IBM WebSphere Application Server Implementation and Configuration

This service provides design; implementation and configuration of a production-ready IBM WebSphere application serve following vendor's recommended best practices.

1.4.3.3.2 IBM WebSphere MQ Server (MQ Series) Implementation and Configuration

This service provides design, implementation and configuration of a production-ready IBM WebSphere MQ server following vendor's recommended best practices.

1.4.3.4 J2EE Jumpstart Services

This service provides an easy way to get J2EE technology up and running quickly. The service provides you with the appropriate foundation — the technical know-how, best practices and mentoring needed to minimise the learning curve — when developing and deploying J2EE technology.

1.4.3.5 Application Server Migration

1.4.3.5.1 Application Server Migration Assessment

The service will evaluate the specifics of customer and help your IT staff to determine the best path to take, how best to leverage on new features and how to minimise the impact on your environment during the upgrade. This assessment also addresses vendor-to-vendor (e.g. from WebSphere to JES) or platform (e.g. from Linux to Solaris) changes.

1.4.3.5.2 Application Server Migration Implementation

This service provides the planning, construction and transition activities associated with upgrading applications and deployments to a more current version of the software. The plans are based on the output from the assessment phase. It also addresses vendor-to-vendor (e.g. from WebSphere to JES) or platform (e.g. from Solaris to Linux) changes.

1.4.3.6 Database Systems

1.4.3.6.1 Database Architecture Assessment

The assessment evaluates the specifics of your situation and helps your IT staff to determine the best approaches to be undertaken, how best to leverage on new features and how to minimise the impact on your environment during the upgrade.

1.4.3.6.2 Database Consolidation

This service helps you to consolidate the database to reduce the TCO in terms of cost and manageability.

1.4.3.7 Oracle

1.4.3.7.1 Oracle DB Server Implementation

This service is to implement the Oracle DB server following the vendor's recommended best practices.

1.4.3.7.2 Oracle RAC Implementation

This service is to implement the Oracle RAC server following the vendor's recommended best practices

1.4.3.7.3 Oracle Replication

This service is to implement the Oracle replication technology between two sites or within the same site.

1.4.3.7.4 Oracle Migration

This service is to migrate the Oracle DB from one platform to another platform (e.g. from Solaris to Linux) or to migrate from one storage sub-system to another subsystem (e.g. from NetApp to HDS).

1.4.3.7.5 Oracle Migration with Minimum Downtime

This service is to migrate the Oracle DB from one platform to another platform (e.g. from Solaris to Linux), or to migrate from one storage sub-system to another subsystem (e.g. from NetApp to HDS) with minimum downtime. This service will be implemented using additional technologies such as Quest Shareplex to reduce the downtime.

1.4.3.7.6 Oracle Upgrade

This service is to upgrade the Oracle DB from one version to the next on the same platform or to another platform (e.g. from Linux to Solaris), or from one storage subsystem to another sub-system (e.g. from NetApp to HDS).

1.4.3.7.7 Oracle Upgrade with Minimum Downtime

This service is to upgrade the Oracle DB from one version to the next on the same platform or to another platform (e.g. from Solaris to Linux), or from one storage subsystem to another sub-system (e.g. from NetApp to HDS) with minimum downtime.

1.4.4 Microsoft Infrastructure Services

1.4.4.1 Microsoft Active Directory Server Assessment and Deployment

This service provides consultancy and delivery of a solid foundation for an identity management solution by providing a central repository for storing and managing identity profiles, access privileges, and application and network resource information.

1.4.4.2 File Server Assessment and Implementation

This service is to provide architecture assessment on the existing file server architecture. Understand the strategy of the company, recommend and implement the most appropriate architecture for the corporation.

1.4.4.3 File Server Consolidation

This service helps you to consolidate the file servers to reduce TCO, as well as to improve availability and manageability.

1.4.4.4 File Server Migration

This service is to perform migration of one file server from one hardware platform to another hardware platform (e.g. from DELL to Sun Opteron) or from one storage sub-system to another sub-system (e.g. from NetApp to HDS).

1.4.4.5 File Server Upgrade

This service is to upgrade the file server from one version to another version on the same hardware platform or to another hardware platform, or from one storage subsystem to another subsystem (e.g. from NetApp to HDS).

1.4.4.6 MS Exchange messaging Server Architecture Assessment and Implementation

This consulting service includes the following:

- Assessment of your current architecture
- Understanding of your corporate business strategy
- Proposal of a recommended architecture to reduce TCO, improve availability and manageability and the implementation of the recommended Architecture.

1.4.4.7 MS Exchange Messaging Server Consolidation

This service is to help you consolidate multiple messaging servers of different technologies or of the same technology to reduce TCO, as well as improve availability and manageability.

1.4.4.8 MS Exchange Messaging Server Upgrade

This service is for the upgrade of the messaging server from one version to another version on the same hardware platform or to another hardware platform, or from one storage subsystem to another sub-system (e.g. from NetApp to HDS).

1.4.4.9 MS Exchange Messaging Server Migration

This service is to migrate the messaging server from one hardware platform to another hardware platform (e.g. from DELL to Sun Opteron) or from one storage sub-system to another sub-system (e.g. from NetApp to HDS).

1.4.4.10 Live Communication Server (LCS/OCS)

This service is to implement Microsoft Live Communication server implementation and integrate with other communication systems following the Industry's best practices.

1.4.4.11 MSSQL

1.4.4.11.1 MSSQL DB Server Implementation

This service is to implement the MSSQL DB server following the vendor's best practices.

1.4.4.11.2 MSSQL Cluster Implementation

This service is to implement the MSSQL cluster server following the vendor's best practices

1.4.4.11.3 MSSQL Upgrade

This service is to upgrade the MSSQL DB from one version to another version on the same hardware platform or to another hardware platform (e.g. from DELL to Sun Opteron) or from one storage sub-system to another sub-system (e.g. from NetApp to HDS).

1.4.5 VMware Infrastructure Services

1.4.5.1 Server Consolidation

This service offering is to consolidate your server hardware with VMware vSphere, the most robust software suite in the industry for server consolidation.

Customer can expect to increase utilisation of existing hardware from 5-15% up to 80%. At the same time, reduce hardware requirement by 10:1 ratio or better.

1.4.5.2 Virtualisation Management

This service is to implement a central management using VMware's vCenter management platform, in managing customer virtualised data centre. It helps in streamlining the IT management and reducing operating cost.

1.4.5.3 Business Continuity

This is a service for implementing a highly available, fault tolerance capability for customer's VMware environment.

1.4.5.4 Disaster Recovery

This is a service for providing a rapid, reliable and hardware independent disaster recovery solution. The disaster recovery process can also be automated using VMware vCenter Site Recovery Manager.

1.4.5.5 Enterprise Desktop & Control

This service will enable you in delivering desktop services from data centre as a managed service for your end users.

1.4.5.6 Cloud Computing

This service is to implement a resource pooling, dynamic resource allocation, centralised management and automation, and a self-service portal for customer through VMware vSphere.

1.4.6 Common Infrastructure Services

1.4.6.1 Proxy/DNS Server Implementation

This service includes the DNS architecture design and proxy server design and implementation.

1.4.6.2 Solaris OS Hardening

This service is to harden the Solaris OS as part of your corporate policy.

1.4.6.3 Linux OS Hardening

This service is to harden the Linux OS as part of your corporate policy.

1.4.6.4 Windows OS Hardening

This service is to harden the Windows OS as part of your corporate policy.

1.5 CONTACT CENTRE INTEGRATION SERVICES

This service helps your organisation to integrate calls, faxes, postal mails, emails, SMS and web site enquiries to a centrally managed single interface, providing a better user experience across all points of contact, drive operational efficiency, maintain competitive advantage and increase flexibility.

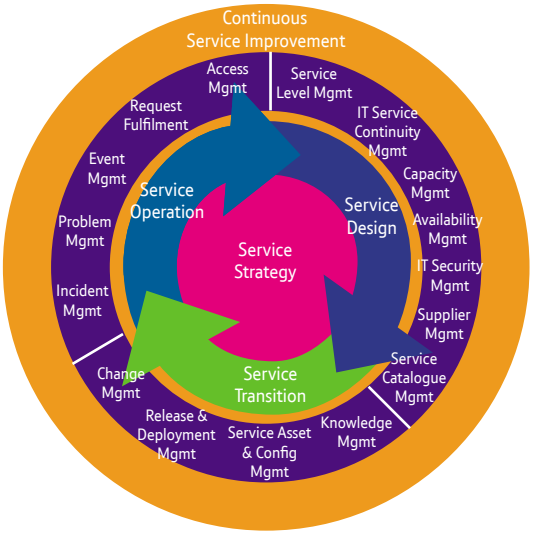
1.6 UNIFIED COMMUNICATION INTEGRATION SERVICES

This service helps to transform your organisation's communication capabilities, by integrating your real-time communication services such as instant messaging and presence, telephony, video conferencing and voice with non real-time communication services such as fax, SMS and email. This empowers your staff to collaborate more efficiently with suppliers, customers, business associates and other employees.

1.7 OUTSOURCING AND MANAGED SERVICES

Outsourcing and managed services (consider us as your partner operating your non-core business operations) can reduce IT complexity while helping to lower costs, mitigate risk and accelerate business growth. Leverage on our innovation and global IT expertise to boost overall competitive success, while you focus on your core competencies.

MANAGED SERVICES



BT's managed services are based on standards of ITIL V3 service model and comprise the following key elements or functions:

- Service Strategy

  BT embraces ITILV3 framework for developing its service management policies, guidelines and processes across the ITIL service lifecycle. Service Strategy guidance is used in the context of Service Design, Service Transition, Service Operation, and Continual Service Improvement. BT uses the internal governance process based on the complexity and size the managed services deal to have peer review, functional unit level review and higher level services assurance review to review the Service Strategy, providing Service Design and Service Assurance standards proposed for any customer engagement.

- Service Design

  BT embraces the ITIL V3 framework for developing the Service Design and development of services and Service Management processes. The scope of Service Design is not limited to new services. It includes the changes and improvements necessary for BT to increase or maintain value to customers over the lifecycle of services, the continuity of services, achievement of service levels, and conformance to standards and regulations

- Service Transition

  BT's Service Transition provides guidance for the development and improvement of capabilities for transitioning new and changed services into operations. This provides guidance on how the requirements of Service Strategy encoded in Service Design are effectively realised in Service Operation while controlling the risks of failure and disruption. BT uses this to provide guidance on transferring the control of services between customers and service providers.

- Service Operation

  BT's Service Operation embodies practices in the management of service operations. It includes guidance on achieving effectiveness and efficiency in the delivery and support of services so as to ensure value for the customer and the service provider. BT uses it to provide guidance on supporting operations through new models and architectures such as shared services, utility computing, web services and mobile commerce.

- Continuous Service Improvement (CSI)

  BT's Continuous Service Improvement provides instrumental guidance in creating and maintaining value for customers through better design, introduction, and operation of services. It combines principles, practices, and methods from quality management, change management and capability improvement. A closed-loop feedback system, based on the Plan, Do, Check, Act (PDCA) model specified in ISO/IEC 20000, is established and capable of receiving inputs for change from any planning perspective.

1.7.1 DC ICT Managed Services

Delivered from our data centres or partner's data centres situated around the world. Our managed infrastructure uses our ITIL V3 based services delivery methodology-defined modular components to deliver tailored end-to-end solutions with high-quality service.

Featured components incorporate a range of preventative to proactive services that support:

- Server management, including application servers, Web servers, and database servers
- Storage management
- Security management
- Database management
- Data centre management
- Network management
- Basic systems support
- Applications Managed services

DC ICT Managed services are delivered to guaranteed service levels by best-in-class service providers using state-of-the-art Internet tools. It is a smart way to extend and enhance your e-business capabilities, with minimum investment in an environment ready to evolve in step with your Internet strategies.

1.7.2 End user Computing Managed Services

This service helps your organisation in managing the complete desktop systems through automation, standardisation and control of the desktops.

Following are the key tasks to be provided by these services offerings:

- Patch them periodically so that they do not turn vulnerable to attacks
- Audit them for software and hardware assets to have an up-to-date record of where is what
- Track the assets to know if they are intact or anything has been removed or stolen or added
- Clean them up (internally) periodically so that they do not choke with too many temp files
- Enforce security settings such as write protecting USB devices or disabling a drive, etc.
- Install software if someone wants it
- Maintain the licenses of the installed software and ensure compliance
- Look out if anyone has installed any prohibited software
- Remove the prohibited software
- Change Internet settings based on policies
- Change proxy settings
- Configure Windows firewall if a new application requires specific ports to be opened
- Schedule few tasks for periodic execution (such as backup).

1.7.3 Service Desk as Managed Services

Our service desk supports your desktop, mobile, and wireless users with a single point of contact for all IT questions and problems — with BT taking full ownership of each query, from the moment it reaches the service desk until final resolution.

Designed to handle complex support requirements, the BT Service Desk increases focus on level 0 support, problem avoidance, and continuous improvement.

1.7.4 DC ICT Remote Monitoring and Managed Services

This is to provide you with remote monitoring and management of your systems, storage, networks, emails, databases and applications from our XOC (networks, systems, security operations centre) located in Singapore. This service can be extended to regional customers with their infrastructure hosted at different locations.

This service will have the following key benefits for the customers:

- Escalation support to the respective vendor based on the agreed escalation process
- Customer can monitor the performance in real-time or via statistical reports
- Customer can provide the specific system performance reports to their business users based on the grouping of services
- When the customer has outsourced their infrastructure to the third party service provider, this service can provide an independent view of the performance (SLA) of the systems
- This service can optionally provide remote hands in managing and administrating the servers/firewalls/networks remotely.

1.7.5 Private Cloud Computing Managed Platform

This service offers your organisation with the managed computing platform on demand, metered by use. It covers all the security and scalable features required by the enterprise. This is offered as services to the customer over Internet or BT's MPLS based VPN.

2. Networked IT Services – Consulting

2.1 IT STRATEGY, PLANNING AND IT SERVICE MANAGEMENT

2.1.1 Introduction to IT Governance Workshop

This workshop introduces the fundamentals of IT governance, the COBIT® domains and Val IT framework as well as best practices for implementing the IT governance.

Val ITTM provides generally accepted guidelines and best practices to help boards of directors and executives attain maximum return on investment for IT. Val ITTM, which complements COBIT®, is intended to respond to the need for organisations to optimised the realisation of value from IT investments and addresses key management practices for three processes: Value Governance; Portfolio Management; and Investment Management.

2.1.1.1 IT Governance Assessment and Planning

This consultancy service focuses on risk assessment and gap analysis of the current IT governance situation in an organisation. Based on these findings, an implementation plan for gap fixing will be defined.

2.1.1.2 IT Governance Implementation

For IT service to be successful in delivering against business goals for IT, management should put an internal control system or framework in place. The COBIT control framework contributes to filling these needs by:

- Making a link to the business goals
- Making performance against these requirements transparent
- Organising IT activities into a generally accepted process model
- Identifying the major IT resources to be leveraged
- Defining the management control objectives to be considered

2.1.2 Enterprise Architecture Planning

Enterprise Architecture Planning is the process of defining architecture for the use of information technology in support of the business and plans for implementing those architectures. Our code of practices is based on Zachman Framework

2.1.2.1 Introduction to Enterprise Architecture Planning (EAP) Workshop

This workshop introduces the fundamentals of EAP. It covers the following:

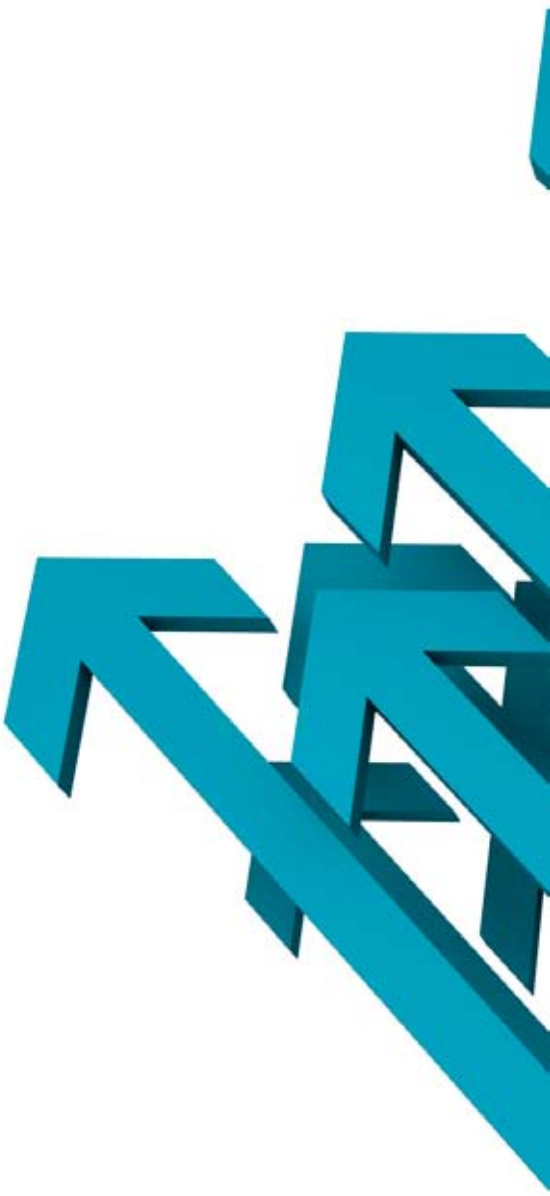
- Planning initiation
- Business modelling
- Enterprise Survey
- Current systems and technology
- Data architecture
- Applications architecture
- Technology architecture
- Implementation plan

2.1.2.2 Enterprise IT Architecture Assessment

This consultancy service assesses your data centre and IT environment on whether the current IT services meet the corporate business users' and stakeholders' interest — basically a gap analysis report.

2.1.2.3 Enterprise Architecture Plan Development

This consultancy service assists your organisation in developing or refining enterprise architecture and its deployment plan. The scope covers data modelling, the current systems and technologies, data architecture, applications architecture, technology architecture, and implementation and migration plan.



2.1.3 IT Service Management (ITSM)

IT Service Management (ITSM) is the top-down, business-driven approach to IT management that specifically addresses the strategic business value generated by your organisation and the need to deliver superior IT service.

ITIL offers the world's most widely accepted approach to ITSM, furthering the goal of aligning IT with business goals and practices. ITIL provides a framework for both the ITSM organisation as well as a cohesive set of industry best practices.

Our ITSM practice focuses on ITIL V3 framework and use the ISO 20000 Code of Practice.

2.1.3.1 ITSM Foundations Workshop

This workshop aims to introduce the foundation concepts for IT service delivery and support. It covers service delivery process:

- Services strategy
- Serviced design
- Services transition
- Service operation
- Continuous system improvement

2.1.3.2 ITSM Gap Analysis

This consultancy service aims to perform an ITSM gap analysis based on ITIL V3/ ISO 20000 Code of Practice. The scope includes the identification of gaps in the current service delivery and support process of the customer environment, and the development of a roadmap to close the gaps in follow-up projects.

2.1.3.3 ITSM implementation

This service is to implement the ITSM following ITILV3/ ISO 20000 Code of Practices. Repeatable, documented processes are essential to improving IT service delivery and management. The ITIL V3/ ISO 20000 framework provides an effective foundation for quality IT service management. This engagement may involve all processes or any particular key process that gives the quick returns on the investment.

2.2 BUSINESS CONTINUITY MANAGEMENT

2.2.1 Business Impact Analysis

This service covers the assessment of the impact to a business in the event of a disaster that affects the IT systems. The analysis will provide the critical systems needed and the Recovery Time Objective (RTO) to meet the business requirements.

2.2.2 Business Continuity Design and Implementation

This service provides business function continuity in an event of a disaster based on the analysis of the business impact. It covers the creation of the documented processes and procedures to continue your business functions before, during and after the disaster.

2.2.3 ITDRP Design and Implementation

This service creates the Information Technology Disaster Recovery Plan (ITDRP) based on the analysis of the business impact.

It covers the creation of processes and procedures to meet the Recovery Time Objective (RTO) of your IT systems before, during and after the disaster.

2.2.4 ITDRP Drill

This service is to lead, conduct and manage the ITDRP drill exercise through the documented process and procedures created during the ITDRP design and Implementation.

2.2.5 ITDRP Audit

This service is to audit the drill exercises but the BCP/DRP is created and managed by other 3rd party vendors.

2.3 TECHNOLOGY RISKS AND COMPLIANCE

2.3.1 Technology Risks

2.3.1.1 Technology Risk Assessment

This workshop focuses on the technology risk assessment and mitigation for your organisation, including asset classification.

3. Networked IT Services – Business and Technology Services

3.1 PROGRAM MANAGEMENT

3.1.1 Project Management Office

To establish project management at your premises on a short-term or long-term basis for the implementation of projects, starting from business/technology consulting, planning, RFP/RFQ generation, evaluation of tender and management of the vendors to implementation of the project.

3.2 STRATEGIC RESOURCING

3.2.1 Resident Consultant

We offer strategic resourcing services for specific IT experts under long-term, yet flexible, contract arrangements.

3.2.2 Technical Training Services

We have been training corporations and individuals for the past 12 years and we are currently the Authorised Education Centre for Sun Microsystems and Symantec. We offer a wide range of courses from Oracle, Linux, IBM, Microsoft, Cisco and many more to meet all your training needs.

3.3 APPLICATION SERVICES

3.3.1 Port Logistic and Healthcare

This service offers the capability for the offshore (India and China) development of applications focusing on healthcare and port logistics verticals.

Offices worldwide

The services described in this publication are subject to availability and may be modified from time to time. Nothing in this publicaion forms any part of any contract.

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