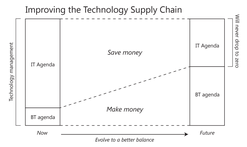


Customer Led
Fast & Connected
Insights Driven

Increase Revenue
Reduce Costs
Manage Risk

adapt at "blistering" speed

balanced with

Business Technology (BT)
technology, systems, and processes to win, serve, and retain customers

Information Technology (BT)
technology, systems, and processes to support and transform an organization's internal operations

Infrastructure Services
the invisible, indispensable foundation of every customer experience

Business Development
> Delivery on promises to clients is key to our success
> We need a differentiated customer experience
> We need infrastructure to innovate at speed of our clients

Customer Service
> Customer engagement more important than a "faster" app
> Resolving issues more important that closing incidents on first call
> Escalations require more sensitivity than first calls

Research & Development
> Entering new markets requires a rapid response team
> How can infrastructure improve the quality of our products
> Deliver on time, on budget and to quality standards

Chief Executive
> We want to tie infrastructure success to customer success
> We want real-time analytics that help us across the organization
> Infrastructure performance ties to business performance

Operations Administration
> Infrastructure should contribute and support business objectives
> Need continuous improvement across entire organization
> We don't want to recreate the wheel - share best practices

Legal & Regulatory
> We need an early warning system before too late
> Human error is costly
> Need proactive "eyes" on infrastructure before it breaks

Finance & Accounting
>We need to control how we buy infrastructure to save money
> Uptime is key and we must reduce response times
> We need better asset utilization
> Infrastructure spend as percent of revenue a good measure

Human Resources
> Our human capital needs to be productive and effective
> Hiring/training infrastructure employees not core competency
> Align and transform employees to business strategy

Criteria for Service Provider

Cost/Price
One-time and ongoing costs
Transparency of costs - nothing hidden
Review historical prices trends - cost changes

Provider Viability
Reputation of the service provider
Types, size and number of clients
Duration of time been in business

Transparency
How much operational data is shared
Audit trail provision and logging
Ensure compliance requirement met

Security and Privacy
Provide end-to-end security
Physical, application and personnel security
Privacy identity and access management

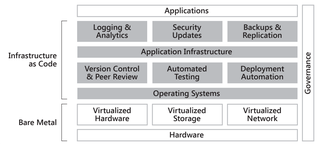
Data Management
Data storage, backup, confidentiality, privacy
Geographic location of data secure/safe
Contingency plan for data center/service failure

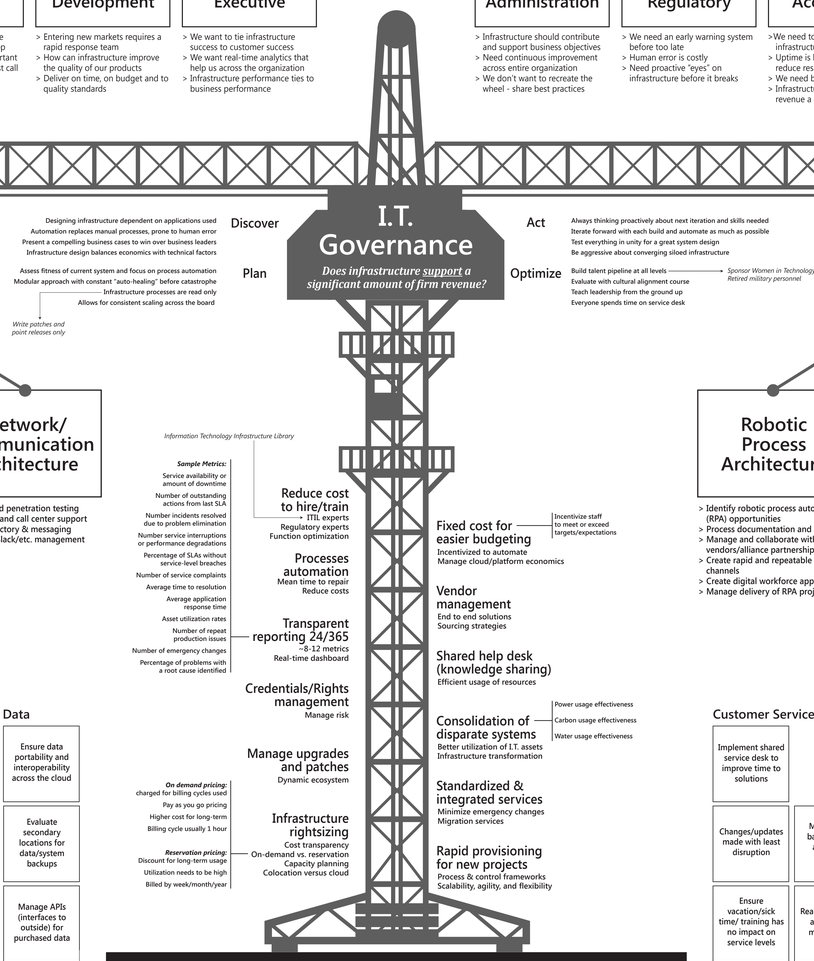
Service Level Agreements
Quick to add/implement new technologies
Includes penalties in case of noncompliance
Flexible to meet changing/evolving client needs

Infrastructure-As-Code (Automation)

Instead of using consoles/UIs, infrastructure-as-code
Write software that provisions servers within minutes
Code that maintains unique configuration of each server
Insert patches/updates into code and update all at once

Server/image templates around specific needs at company
Use code to replicate server, patch/update and then test
Any InfraOps person can quickly understand the enterprise
Can add security (SecOps) into the same source code





Application/ Integration Architecture
> Data needs to work across disparate applications and database types
> Secure code review systems
> Integration with app support teams
> Software as a service (SaaS) apps

Cloud/Platform Architecture
> Cloud or rack servers or rent servers
> How new cloud services integrate into existing infrastructure
> Migrating legacy systems to cloud
> Consistent image management across all platforms
> Platform as a service (PaaS)

Information/ Big Data Architecture
> Data access policies
> Shift to NoSQL databases
> Backups and archiving
> Solutions for content management and enterprise-wide search

Mobile/Desktop Architecture
> Collaboration solutions
> "Bring your own device" support
> Workforce productivity
> End user experience needs to be flexible and meet business demands
> Office 365 management

Network/ Communication Architecture
> Firewall and penetration testing
> Telephony and call center support
> Active Directory & messaging
> Email/IM/Slack/etc. management

Robotic Process Architecture
> Identify robotic process automation (RPA) opportunities
> Process documentation and analysis
> Manage and collaborate with vendors/alliance partnerships
> Create rapid and repeatable delivery channels
> Create digital workforce applications
> Manage delivery of RPA projects

Security/ Compliance Architecture
> Prevent malware and ransonware
> Disaster recovery architecture
> Document regulatory compliance
> Prevent business email compromise
> Security information and event management (SIEM)
> Security operations center (SOC)
> Computer security incident response Team (CISRT) leadership

Sensor/Internet of Things Architecture
> Manage projects with sensor, embedded system and network data
> Develop rule engine applications for sensor data to trigger certain actions
> Program logic controllers and build human machine interfaces
> Collect and process data generated by sensors and connected devices
> Wireless/Virtual sensor networks

Systems Architecture
> Disaster recovery and business continuity planning
> Proactively apply patches
> Monitor the stack
> Service Level Agreements (SLA)
> Needs to be more than a collection of technologies

User Experience Architecture
> Navigation, taxonomy, user flows, system flows, use cases, personas, task analyses and wireframes
> Human computer interface (HCI)
> Aesthetics and usability
> Content strategy and communication
> Social network analysis/management

Manage Service Provider

Evaluate different service providers and make recommendations	Recommend private or public cloud solutions depending on need
Monitor bandwidth and volume of requested resources	Migrate current systems to cloud as needed
Enable interoperability between different service providers	Hold service providers accountable for availability guarantees
Vendor governance quality of service (QoS) and policy enforcement	Create and enforce service level agreements with service provider

Hardware

Balance CPU, memory and storage needs with need
Lead efforts to modernize infrastructure
Assess GPU/FPGA/ASIC needs in infrastructure
Manage increasing software and hardware complexity

Cost Effectiveness

Optimize the cost/benefits of the infrastructure	Represent clients negotiating best deals with cloud providers
Reduce IT infrastructure footprint and maintenance costs	Leverage emerging, best of breed technologies
Cost optimize scheduling - move large jobs to off-peak times	Analyze and mine cloud usage to identify usage patterns
Review every invoice before submitted to finance for payment	Evaluate cost/benefits of cloud-based application solutions

Renegotiate service provider contracts
Rightsize Client Access Licenses and ensure complance

Software

Automatic configuration and updates using software code	Manage upgrading and patching operating systems
Build backup/disaster recovery capabilities	Telephony management
Virtual desktop management	Maintain a rich set of resource management controls
Network bandwidth allocation and monitoring	Batch different user demands - request many, transfer once

Data

Ensure data portability and interoperability across the cloud
Evaluate secondary locations for data/system backups
Manage APIs (interfaces to outside) for purchased data
Synchronize data between multiple services

Customer Service

Implement shared service desk to improve time to solutions	
Changes/updates made with least disruption	Manage load balancing and application placement
Ensure vacation/sick time/ training has no impact on service levels	Real time support and incident management
Deliver superior internal/external customer experiences	Deliver real-time support across multiple time zones

Revenue

Rapid service deployment and customization
Service level agreements that are aligned to business
Ability to scale and provision hardware quickly
Minimize any adverse effects on business operations

HR/Talent

Hard to find and retain top talent
Highly skilled workforce brings continuity
Hard for client to justify full-time infrastructure team
Integrate talented client staff into services team

Management

Monitor, upgrade and patch applications on top of infrastructure	
Meet with teams to help forecast upcoming infrastructure needs	Manage offshore resources
End user computing management	Create business cases for any changes to infrastructure
End-to-end bundled solution	Manage for consistent performance over time

Security/Regulatory

Provide 24/7 monitoring of all infrastructure	Prevent denial-of-Service countermeasures
Encryption, digital key, identity and access management	Monitor security alerts and quickly patch infrastructure
Automate incident response capabilities	Prepare for increased sophistication of attacks
Stop malware before it touches infrastructure	Reduce the number of people touching the infrastructure

Prepare for any regulatory agency audits
Comply with Sarbanes-Oxley Act regulatory requirements
Manage a changing regulatory environment

ENTERPRISE INFRASTRUCTURE MANAGEMENT AS A SERVICE

Process excellence + service responsiveness + cost effectiveness = Modern Infrastructure

Advanced metering · Application Security Manager · Asset management · Automated Backups · Budget analysis · Business Cases · Business Service Management · Capability Maturity Model Integration · Capacity Management · Change Management · Citrix and Horizon · Cloud migration · Complex event processing · Contract management · Convergence · Data Center Management · Data Replication · Data Resiliency · Disaster Discovery · Dispatch · DNS Management · EDI integration · eDiscovery · End Point Management · End User Services · EndPoint Protection · Endpoint security deployment · Enterprise Command Center · Enterprise server farms · ERP extensions · Failover · Federated Identity Management · Field support · File area networks · Functional Optimization · Governance, Risk, and Compliance (GRC) · I.T. Process Design · Implementation Roadmaps · Incident Management · Information Technology Infrastructure Library · ITSM Tools · Lightweight Directory Access Protocol · Load Balancing · Mobility Solutions · Network convergence · Office 365 governance · Packaging and deployments · Perimeter Defense · Physical server management · Problem Management · Public and private clouds · Quality Control · Reduce ongoing maintenance · Remote Administration Protocol · Request Management · SAN management · Security Architecture · Security Engineering · Security Governance/Compliance · Security Operations · Security Tool Support · Server Update Services · Service Asset Configuration · Service Desk · Service Level Agreements · Single Sign On · Software Defined Data Center · SOX compliance · Streamline data center · Transition Service Agreements · Unified Communications · Unified Logging System · vCISO · VDI and Desktop/Laptop · Vendor Management · Virtual directories · Virtual server environment · Virtualization & Backup · Voice & Data · Vulnerability Management

Infrastructure as a Service (IaaS)
Rent servers, but you manage them

aws · IBM SOFTLAYER · rackspace · Microsoft Azure · "Bare Metal" · Google Cloud Platform · DIGITAL REALTY Data Center Solutions · Cyrus One

Rapid provisioning and releasing of resources on-demand from a shared pool of configurative computing resources

Employees are bypassing company policies and buying infrastructure directly