

# IT Infrastructure Map

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# IT Infrastructure Map – Background

- The IT Infrastructure Map represents from our view on a “common sense” component model of a generic IT infrastructure environment.
- According to the component model we identified competence areas (columns) and management layers (rows) and allocated the components accordingly.
- Each component can have its own standards, processes, etc. and can be operated in- or outside the enterprise
- The model can serve as a basis to assess maturity, costs, priorities, application coverage, etc. and visualize it in a so called “heat map”.
- Once heat maps are developed they support communication very effectively – One A4 sheet for a quit complex subject.

# The Elements of a Component Map

A **component** is a part of a theme that has the potential to operate autonomously, for example, as a functional unit, or as part of an outsourcing arrangement.

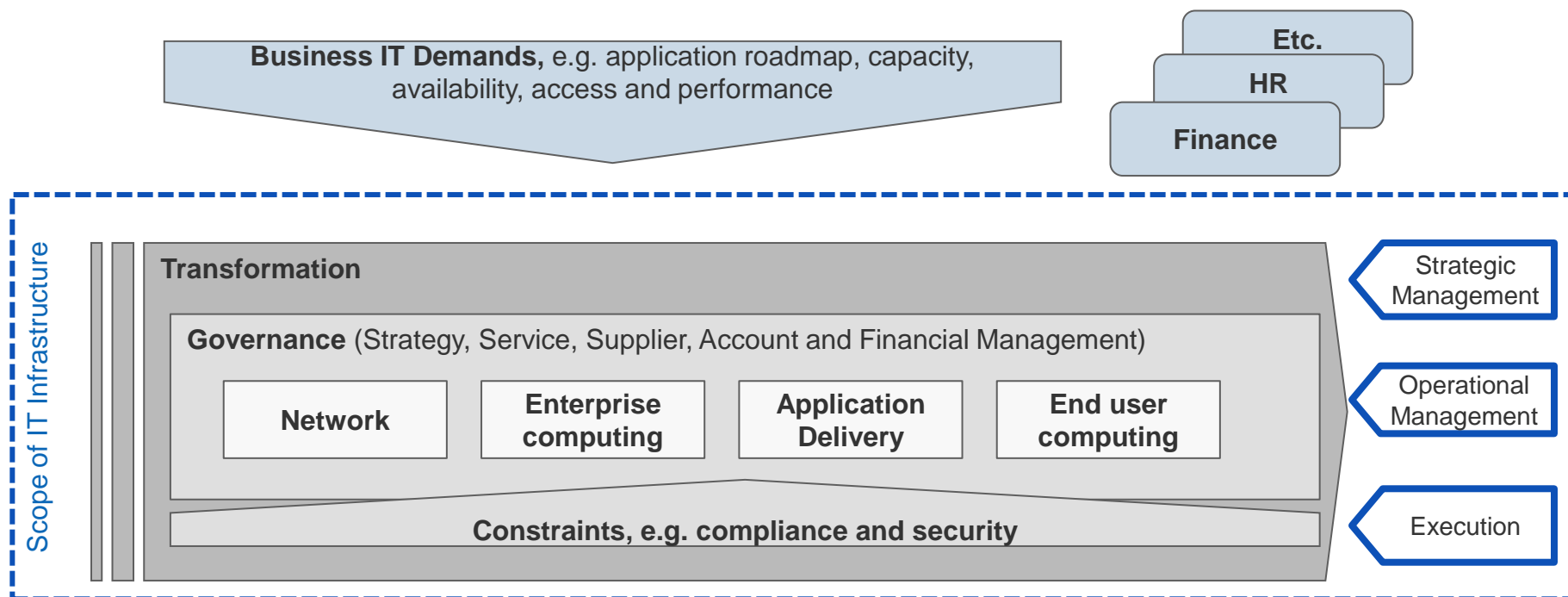
**Columns** are competencies, defined as areas with characteristic skills and capabilities, for example, product development or supply chain.

An **Operational Level** characterizes the scope of decision making. The three levels are:

- Strategic Management is about strategy, overall direction and policy.
- Operational Management is about monitoring, managing exceptions and tactical decision making
- Execution is about doing the work

	Business Administration	New Business Development	Relationship Management	Servicing & Sales	Product Fulfillment	Financial Control and Accounting
Strategic Mgt	Business Planning	Sector Planning	Account Planning	Sales Planning	Fulfillment Planning	Portfolio Planning
Ops Mgtl	Business Unit Tracking	Sector Management	Relationship Management	Sales Management	Fulfillment Planning	Compliance
	Staff Appraisals	Product Management	Credit Assessment			Reconciliation
Executio n	Staff Administratio n	Product Directory	Credit Administratio n	Sales	Product Fulfillment	Customer Accounts
	Production Administratio n	Marketing Campaigns		Customer Dialogue	Document Management	General Ledger
				Contact Routing		

# IT Infrastructure Map - Structure



- To grasp the complexity of IT Infrastructure we distinguish 7 different competence areas that are in direct scope and are further structured into
  - Strategic Management
  - Operational Management
  - Execution

# IT Infrastructure Map – Overview

	Governance	Compliance & Security	Network	Enterprise Computing	Application Delivery	End User Computing	Infrastructure Transformation
Strategic Management	Infrastructure Strategy, Architecture	Compliance & Security Framework	Strategy and Roadmap	Data Centre Strategy & Roadmap	Application Strategy	Messaging & Collaboration Strategy	Project Portfolio Management
	Technology Strategy	Business Continuity Management		Data Centre Concept & Design		Client / Mobile / Messaging Roadmap	Transformation Strategy & Business Alignment
	Sourcing Strategy			Cloud / Virtualization			
Operational Management	Service Management	Quality Management & Sec. Management	Network planning	Capacity Planning	App Life Cycle Management	External Collaboration Platforms	Change Management
	Financial Mgt; Pricing & Cost Allocation	Process & Document Management	Bandwidth and Service Management	Printer Management	Factory Management	Mobile Integration	Program & Project Management
	Supplier Management	Security Infrastructure Management	Intrusion Prevention Management	Data Centre Management	Asset & Licence Management	Directory Management	Program & Project Office
	Account Management	Identity Management					
Execution	Service Management Reporting	Manage PKI, Certificates	WLAN, LAN, WAN	Data Centre Operations	Packaging	Client Operations	Project Delivery
	Procurement	Security & Compliance Reviews	Voice		Distribution and Patching	Messaging Operations	
	Contracting	Anti Virus Ops	Acceleration		Virtualization	Support through Service Desk	Training
	Selling	Identity & Resource Operations	Firewall		Monitoring & Reporting	Staging and Deployment	

# IT Infrastructure Map – Governance

	<b>Governance</b>	<b>Sets overall framework for IT infrastructure [objectives, plans, initiatives, financials and resources], steers the infrastructure towards to the overall objective and controls the objectives on a regular basis</b>
<b>Strategic Management</b>	Infrastruct. Strategy, Architecture	Description how infrastructure serves the overall IT / business development (alignment), infrastructure Governance Strategy with objectives, initiatives, KGIs, financials, HR, road map and architectural view (components, layers) → TOGAV
	Technology Strategy	Particular view of strategy, what technology development is expected (market view) what technology is needed or how technology will be used for different part of business and IT / infrastructure services. [can be combined with Strategy] → Personas
	Sourcing Strategy	Describes how sourcing for operations and projects will be organized. Major elements are target model, required initiatives, contractual constraints / models, financial impact and risk management.
<b>Operational Management</b>	Service Management	Description of service landscape, process overview and service levels → ITIL
	Financial Mgt; Pricing & Cost Allocation	Based on services this is the description of service elements, their pricing, budget impact, basic agreement with the business for adequate charge back mechanisms, regular review and adaptations → TCO
	Supplier Management	Processes, Systems, Policies and Guidelines to transparently manage suppliers according to the Sourcing Strategy
	Account Management	Maintains the link between Business-IT, and IT Infrastructure. Define demand on longer term, needed technology and financial constraints
<b>Execution</b>	Service Management Reporting	Based on Service Management and Financial Management this is the day-to-day reporting of the KPIs against the defined targets in the SLAs
	Procurement	According to the Sourcing Strategy and Supplier Management this is the day-to-day handling of requests, POs, exceptions, time capturing, skill selection, forecasting and reporting.
	Contracting	Long and short term contracting of suppliers, contract handling and contract reporting
	Selling	Selling services to the business IT

# IT Infrastructure Map – Compliance & Security

	<b>Compliance &amp; Security</b>	<b>Defines and maintains all required processes, policies and resources to become and remain compliant to the relevant regulations.</b>
<b>Strategic Management</b>	Compliance & Security Framework	Overall compliance and Security framework. Defines objectives, governance / organization to become and remain compliant with the relevant external / internal regulations. Makes sure policies and ownership are defined. → CSV, ISEC
	Business Continuity Management	Provides and maintains a framework, analysis and management of risks and adequate counter measures on IT infrastructure level to ensure business (IT) continuity.
<b>Operational Management</b>	Quality Management & Sec. Management	Management of QM and Security processes in operations and projects. Provides trainings and makes sure necessary compliance level is being kept.
	Process & Document Management	Provides and maintains necessary tools to manage all lifecycle system and project management documents as well as security documentation on a corporate level.
	Security Infrastructure Management	Ops Management of security relevant infrastructure e.g. access mechanism, firewalls, corporate virus protection, etc
	Identity Management	Manage processes for end-to-end identity process management. From HR through App management to infrastructure access management based on identities, Policies and processes for certificate management; Agreement with customers & partners for certificate acceptance
<b>Execution</b>	Manage PKI, Certificates	Ops management of certificates (user and device) , PKI infrastructure, incident management
	Security & Compliance Reviews	Execution of regular system and organizations reviews to ensure minimum compliance to the defined policies
	Anti Virus Ops	Day-to-day operations of virus identification, pattern update, corporate reporting
	Identity & Resource Operations	Day-to-day management of (company wide) identities

# IT Infrastructure Map – Network

	<b>Network</b>	<b>The network as the “connectivity” element in the IT infrastructure is core for today’s collaboration services and business applications. A clear road map and service management are crucial for reliability and security.</b>
<b>Strategic Management</b>	Strategy and Roadmap	Particular strategy and roadmap for the overall network, technology, providers and financials. Infrastructure services as well as Business IT development have to be considered. In scope are WAN, LAN, Voice, Video and WLAN communication. Components are Router, Switches, Firewalls, etc. Close collaboration with security e.g. for device certificates, etc. Integration of mobile devices networks and their network providers
<b>Operational Management</b>	Network planning	Short and mid term planning of extensions based on demand forecast, Determine where and what acceleration can be used
	Bandwidth and Service Management	Define and maintain network services with associated costs
	Intrusion Prevention Management	Overlap with security infrastructure management?? Management of on network level
<b>Execution</b>	WLAN, LAN, WAN	Daily operations of WLAN, LAN and WAN. Incident / Problem solving, monitoring, extensions, etc, physical management and wiring
	Voice / Video	Voice and Video services on network layer, monitoring
	Acceleration	Monitor acceleration software in network and client parts, manage use of acceleration for other services e.g. software software distribution
	Firewall	Operate firewall services, monitor events, provide exceptions for testing, keep software up to date.



# IT Infrastructure Map – Enterprise Computing

	<b>Enterprise Computing</b>	<b>Provides enterprise wide computing based on data centres and / or cloud services. A well planned and aligned approach with business, security legal and compliance ensure adequate service levels.</b>
<b>Strategic Management</b>	Data Centre Strategy & Roadmap	Define and maintain DC mid- and long term development. Observe DC technology, define locations, give financial forecast, determine demand from business (IT); High level processes, <b>Printer concept</b>
	Data Centre Concept & Design	Design of DC: Layout, Floor plan Management, green DC approach, disaster recovery
	Cloud / Virtualization	Observe cloud market. Define criteria when move application to the cloud, liaise with legal, security and compliance
<b>Operational Management</b>	Capacity Planning	Short term capacity planning and floor plan management, equipment, service forecast, financial planning,
	Printer Management	Service Management, reporting, provider management
	Data Centre Management	Skills planning / management, HR / Shift management, configuration- and change management, reporting, financial management
<b>Execution</b>	Data Centre Operations	Operate Servers, NAS, network, security, physical access, power infrastructure, A/C management, (housing) etc.

# IT Infrastructure Map – Application Delivery

	<b>Application Delivery</b>	<b>Provides an enterprise wide infrastructure to distribute software, changes and patches to a variety of devices</b>
<b>Strategic Management</b>	Application Strategy	Defines how applications are built and what distribution / access mechanism they have to support (e.g. web enabled apps, Virtualized apps, fat apps, etc.) Define and maintain the strategy how new applications, changes and patches are distributed to the IT infrastructure (Clients, Servers, mobile devices). Describes how end users have access to the software repository and how licenses are being (back) charged.
<b>Operational Management</b>	App Life Cycle Management	Defines and maintains apps life cycle management process, maintains software inventory and provides policies for standard software
	Factory Management	Manages the software request process, acts as interface to the SW packaging team maintains, sets up software configuration management to manage the software dependencies, identifies and trains applications owners
	Asset & Licence Management	Tracks assets and licenses, manages the overall asset and licence management processes, provides reporting to the management
<b>Execution</b>	Packaging	Prepares packages and patches for the entire environment. Follows the processes and reports against KPIs
	Distribution and Patching	Prepares distribution and replication on enterprise level, patching of devices (clients, servers, mobile devices)
	Virtualization	Makes sure virtualization infrastructure is up and running
	Monitoring & Reporting	Monitoring & Reporting

# IT Infrastructure Map – End User Computing

	End User Computing	End User Computing delivers collaboration and application services in a managed way to the (mobile) user.
Strategic Management	Messaging & Collaboration Strategy	Define how to increase efficiency and effectiveness in collaboration based on technologies, processes and principles.
	Client / Mobile / Messaging Road-map	A road-map which shows how the collaboration will be developed in terms of functionality (technology) and geographical scope over time.
Operational Management	External Collaboration Platform	Define and maintain a “simple” (web based) temporary access for externals to shared information without to follow complex registration process ; Alignment with legal and security
	Mobile Integration	Define and maintain integration of mobile devices e.g. for email, encrypted email and other collaborative applications
	Directory Management	Directory Management, manage resources (computers, printers, certificates, GPOs, groups etc.)
Execution	Client Operations	Client Operations, maintain standard builds, 3 <sup>rd</sup> level support
	Messaging Operations	Messaging Operations, maintain back-end
	Support through Service Desk	Service Desk, follow the sun concept, 1 <sup>st</sup> level support (SPOC) and request management, reporting
	Staging and Deployment	Staging and Deployment of end user devices – support the whole life cycle (HW acquisition, staging, delivery, return, wipe re-stage)

# IT Infrastructure Map – Infrastructure Transformation

	<b>Infrastructure Transformation</b>	<b>Ensures that the IT infrastructure unit is able to adapt to changing requirements e.g. from business as well as to new opportunities coming from new technologies.</b>
<b>Strategic Management</b>	Project Portfolio Management	Translation from Strategy to Portfolio and Project definition; includes periodic project prioritization exercise
	Transformation Strategy & Business Alignment	Defines how the entire IT infrastructure unit is being transformed to the target operation model; where the priorities are and what financial impact is seen. Also the realistic absorption of change in the organization will be considered.
<b>Operational Management</b>	Change Management	Makes sure communications, professional coaches and change readiness support changes in the individual's role, environment and behaviour. → see also Behavioral Transformation Map.
	Program & Project Management	Program & Project Management to deliver transition projects, leadership, planning, reporting, escalation
	Program & Project Office	Maintains Program & Project Office for financial management, change, risk and issue management and centralized harmonized project reporting
<b>Execution</b>	Project Delivery	Carry out the project work according to plan, develop team and improve delivery mode
	Training	Training within Project; Trainings according to compliance requirements, trainings for Methods, PM, project content related trainings e.g. new system usage.

# IT Infrastructure Map - Example Project Scope

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Not in Scope	Partly in Scope	Fully in Scope
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# IT Infrastructure Map - november ag's Expertise

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Some involvement    Experience    Experts

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