HP and the communications industry
Some interesting facts

- HP has more than 25 years of telecommunications experience
- The Communications, Media and Entertainment industry is HP's largest industry segment
- Over 400 service providers use HP OSS software products today
- HP OSS software products are in use at all of the top 10 largest Telecom Operators (by revenue)
- Nearly 60 telecom operators and more than 140 million subscribers depend on the HP Fraud Management System
- HP supports 90% of the North American CDMA e911 deployments

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HP architectural views

	Business considerations	Technical considerations
General	**Business view** Why do we need to worry about OSS? • Why needed • What context • How measured	**Technical view** How do we need to build the OSS? • How structured • How constructed • How constrained
Specific	**Functional view** What does the OSS need to do? • What information • What is it used for • What qualities	**Implementation view** With what do we build it? • With which products • How deployed • How validated

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Why do we need to worry about OSS?

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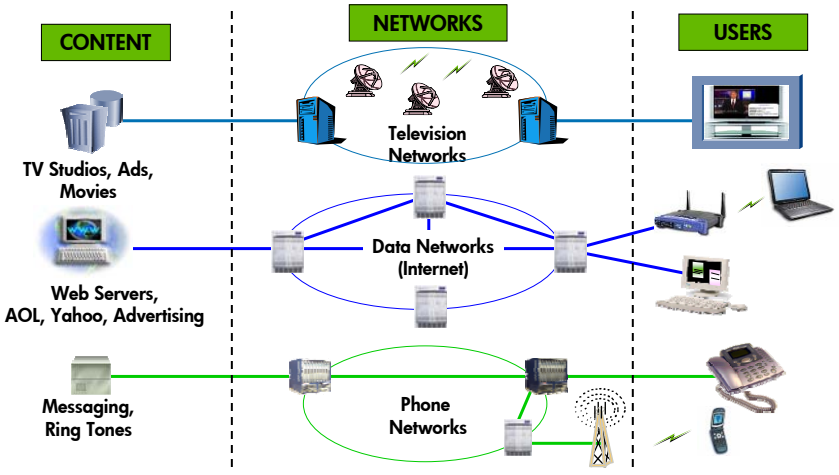
Working toward a vision

- We envision a world where businesses and individuals tap into information and services - whenever they want and wherever their day takes them
- A world where these services are personal, rich with content, and adapt to human ambition
- A world where network, service and content providers are highly adaptive, and able to anticipate and meet the needs of their customers

Today's infrastructures



Independently designed for specific content & devices; closed ecosystems

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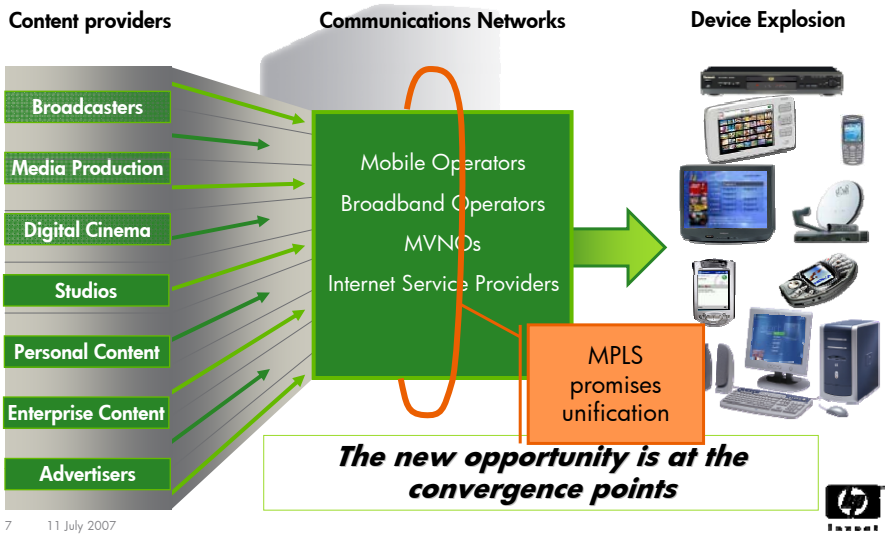
It's time for the next step



Service provider initiatives

- Convergence
  - Network infrastructure
  - Value-added/enhanced services platforms
  - Voice, video, and data services (triple- and quadruple-play)
- OpEx/CapEx reductions
- Shorter service lifecycles
- Increased focus on customer experience
- Automaton of business processes

The OSS must support, and sometimes lead, these initiatives

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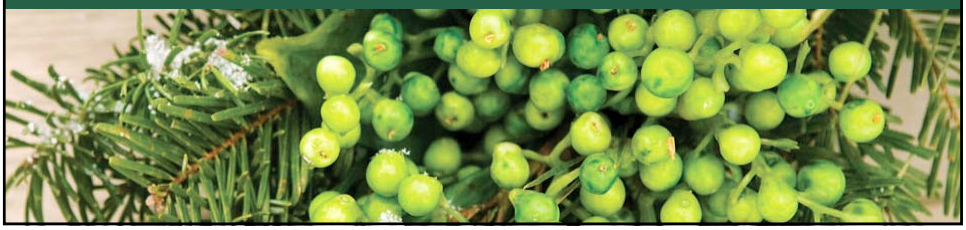
"Carriers will probably not be able to successfully converge their networks on a common MPLS transport unless more attention is paid to the management of the MPLS infrastructure."

Leif Hoglund
RHK, August 2004



What does the OSS need to do?

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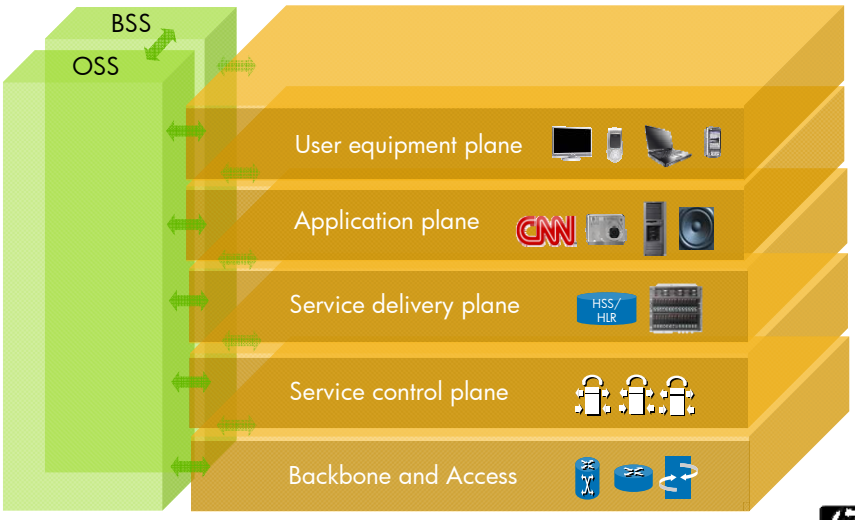
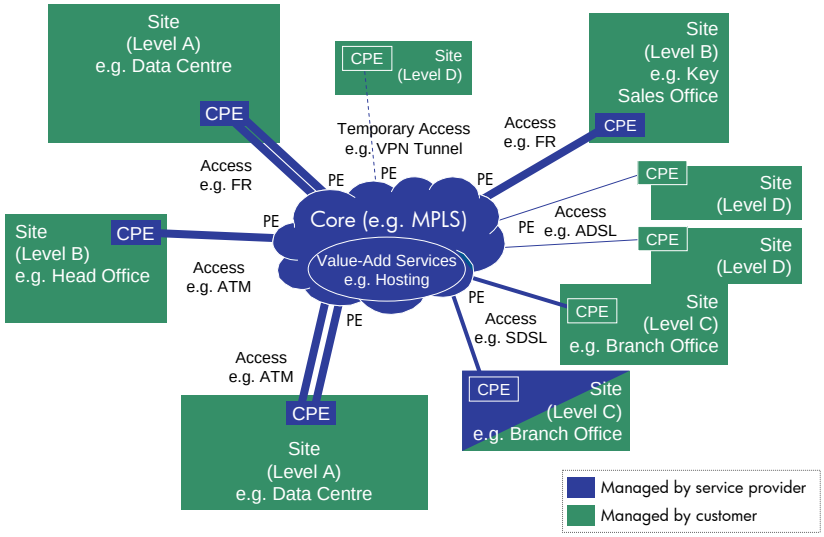
Manage end-to-end, top-to-bottom



End-to-end management
Customer layer 3 VPN example



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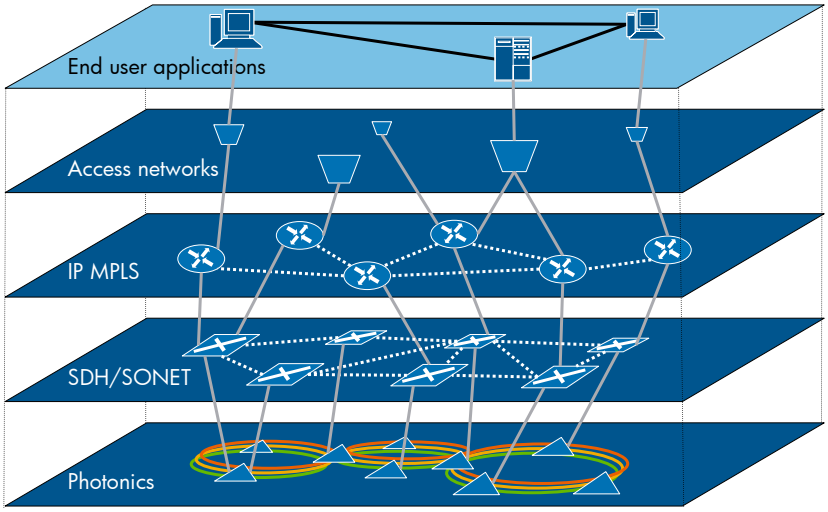
Manage top-to-bottom



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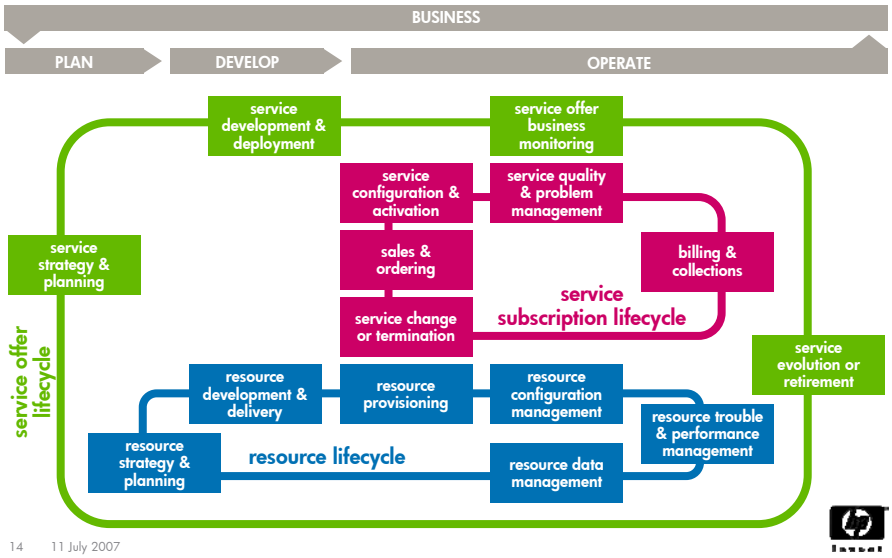
Lifecycles drive the functional view



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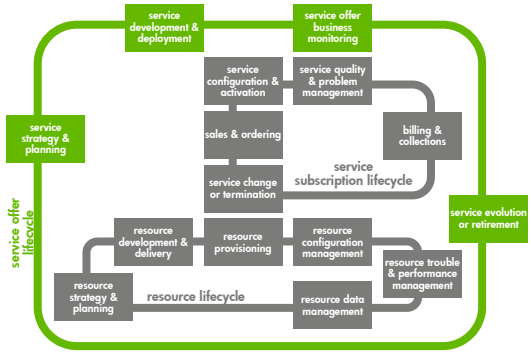
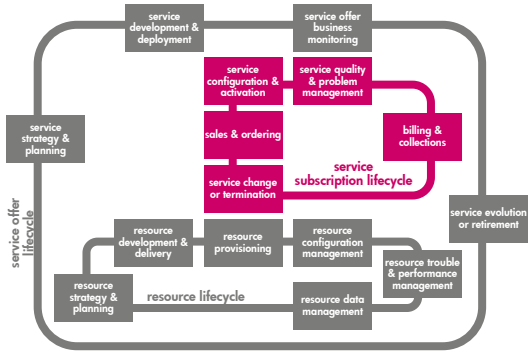
The service offer lifecycle



- Provides business view
- Focuses on the service or product offers available
- Does not consider individual customers or technology domains
- Driven by line of business manager
- Heavy SDP, light OSS & BSS involvement

- Product planning
- Service and infrastructure specification
- Uptake forecasting
- Project planning
- Portfolio planning
- Cross-BU alignment
- Service integration and bundling
- 3rd party integration
- Trend analysis
- End-to-end testing
  - Testing of new/upgraded service components
- Revenue assurance
- Change management
- Business reporting

The service subscription lifecycle



- Provides end-to-end service view
- A service being used by a particular customer
- Each service subscription may contain multiple service sessions
- Driven by account manager, CSR, and customer
- Heavy OSS and BSS involvement

- End-to-end service view
- Order management
- Service provisioning and activation
- Service level monitoring
  - Service level agreement
  - Quality of experience
- Customer incident management
- Charging and billing
- Service instance capacity monitoring (up sell)
- Fraud analysis
- Service testing

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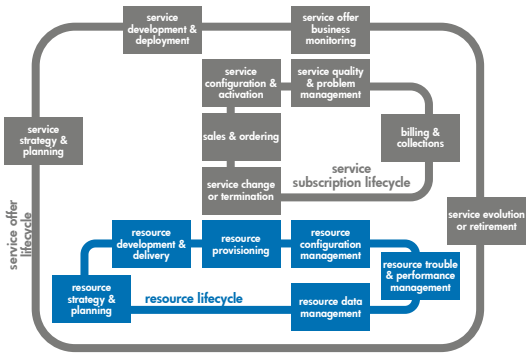
The resource lifecycle



- Provides domain specializations
- Encompasses traditional network management
- Different domain-specific resource lifecycles may exist
- Driven by network engineering
- Heavy OSS involvement

- Network planning and engineering
- Inventory (physical and logical)
- Fault monitoring
  - Root cause analysis
  - Service impact analysis
- Performance data collection
- Capacity planning
- Traffic engineering
- Usage data mediation
- Configuration management
- Change management
- Diagnostics and repair
- Resource activation

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How do we need to build the OSS?

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Emerging OSS visions

- Because
  - OSS needs to support the business objectives
- and
  - the goal is speed (to market), flexibility/adaptability and cost reduction

➢ Service-Oriented Architecture (SOA) is at the heart of most OSS strategies and current implementations
  - SOA, with its ability to loosely couple and reuse generic services, is seen as key to simplifying integration

Some SOA-based OSS
- TeleManagement Forum NGOSS
- MTOSI
- OSS/J
- HP Integrated Service Management

"Service oriented architectures for OSSs [are] an inevitable direction for every vendor and service provider looking to compete effectively in today's rapidly changing telecom environment."

Stratecast Partners
April 2006

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What is a Service-Oriented Architecture?

- SOA is all about decomposing applications into "services" that can be combined and recomposed into new, flexible business process
- An approach to building OSS and BSS that exposes OSS and BSS services, making them available and discoverable.
- Enables business processes to be composed of services and exposed as services

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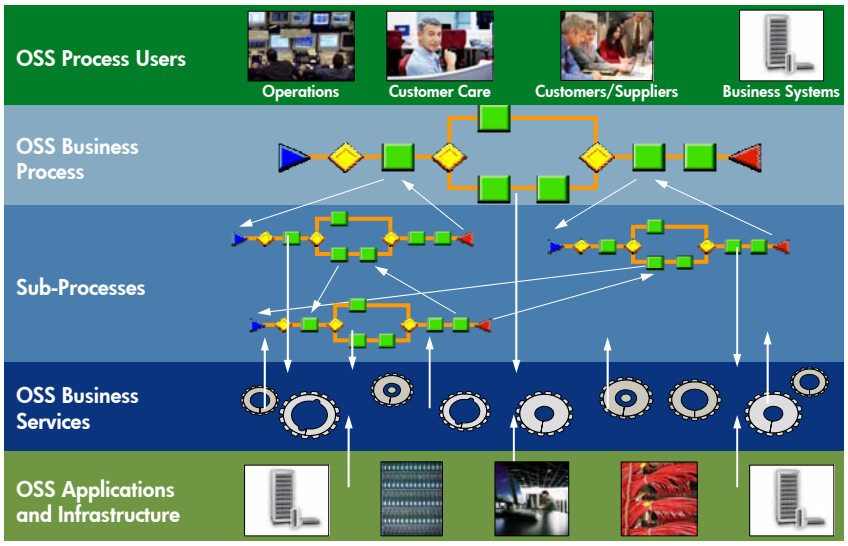
What does a SOA-based OSS look like?



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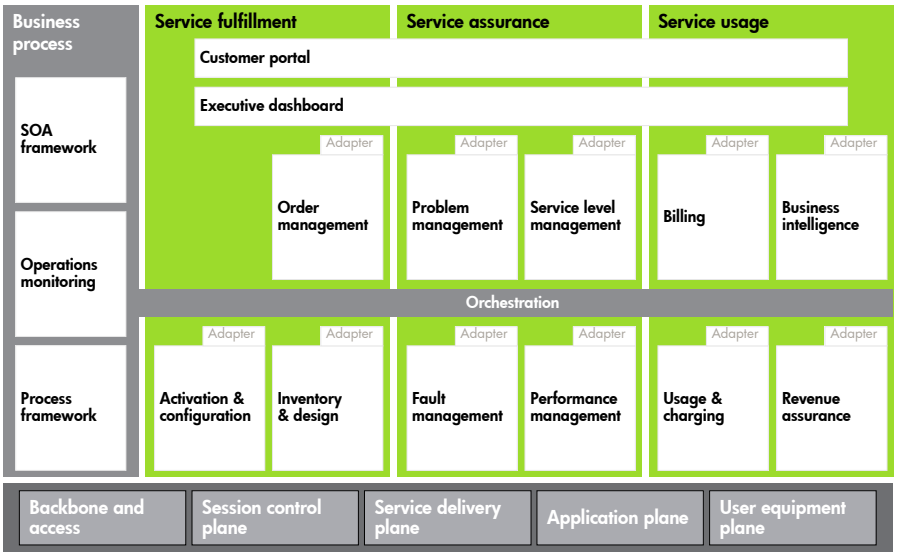
HP ISM technical architecture



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With what do we build it?

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Architecture

SOA is about architecture

Architects need to work out how to:

- Build the right service,
- At the right level of granularity,
- With the right points of articulation,
- And all the while assuring loose coupling through contracted interfaces and policies

HP ISM adds the necessary domain knowledge, products and services

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"The real meat of a SOA component is behind the interface."

Stratecast Partners
April 2006

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Summary

- Managing next generation networks is not the same as managing traditional networks
- For the business to succeed, you need to manage
  - Across all technology domains
  - Considering the full management lifecycles
- HP has helped others succeed and can help you
- For more information, go to
  - www.hp.com/go/ism

  and
  - openview.hp.com/solutions/telm

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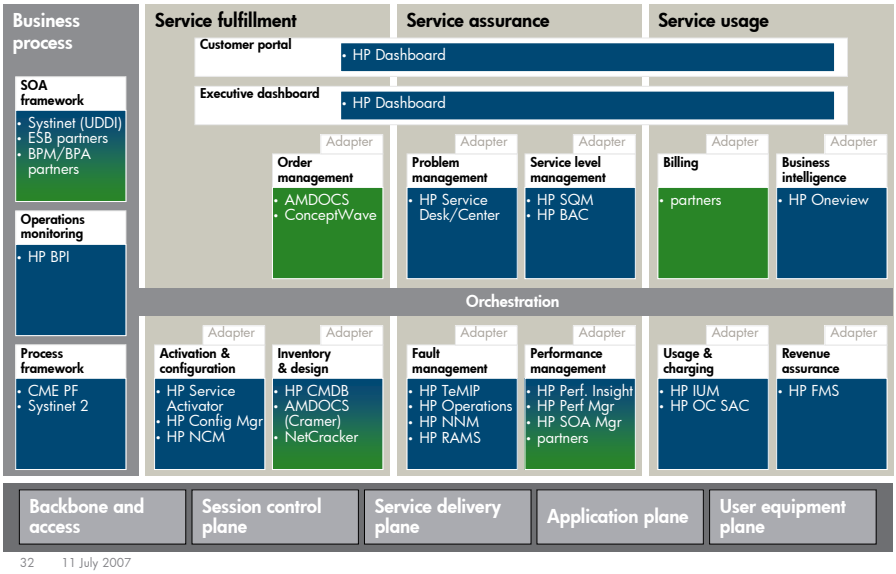
ISM consulting services

HP's value:
- Orchestrating and architecting OSS system & processes to reach strategic and tactical goals.
- Bringing HP's OSS experience and leadership
- Broad set of best practice processes and methodologies

- Exploring & visioning
  - Define the desired state in terms of organization, capabilities and technology.
- Assessment & analysis
  - Measure and assess current business agility based on key business processes.
  - Define path from as-is to desired state.
- Architecture & design
  - Design OSS processes and system
- Implementation
  - Speed time to production
  - Improve and maintain continuity, stability, and performance

HP Software and partners empower ISM



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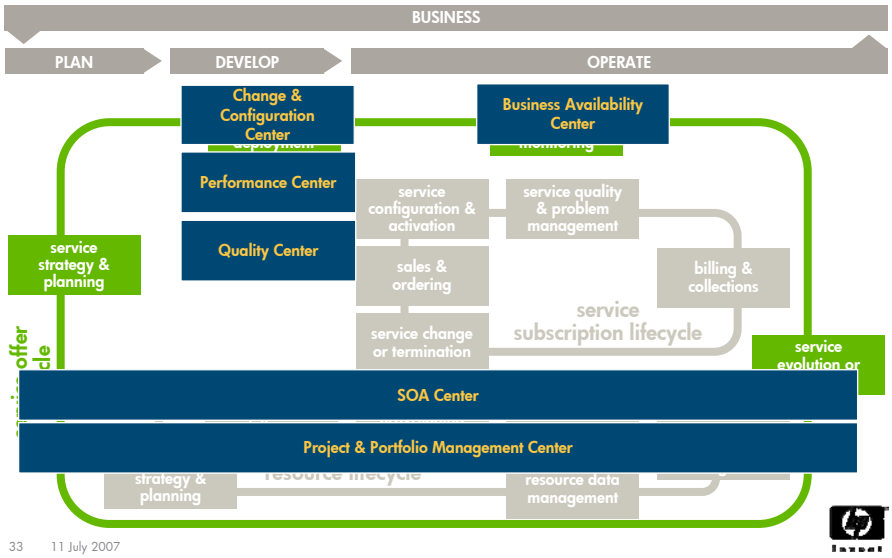
HP Software in the service offer lifecycle



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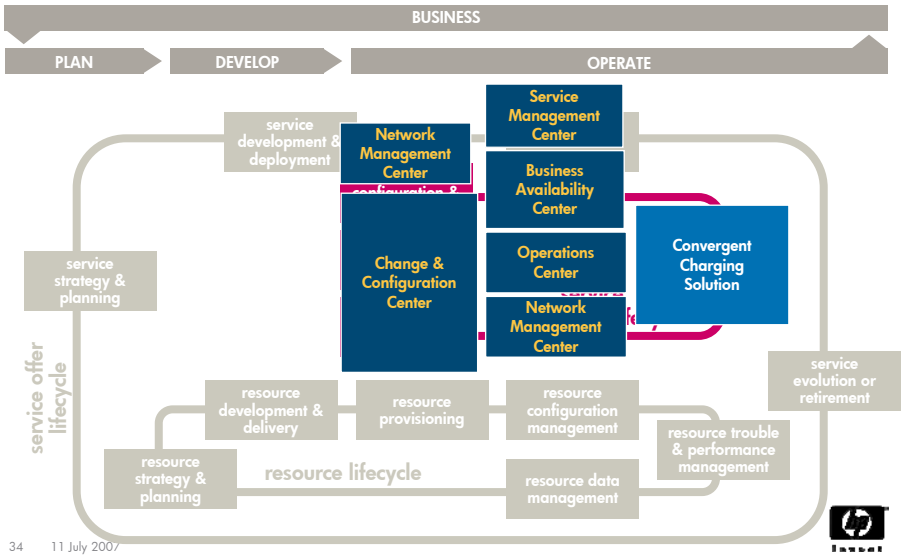
HP Software in the service subscription lifecycle



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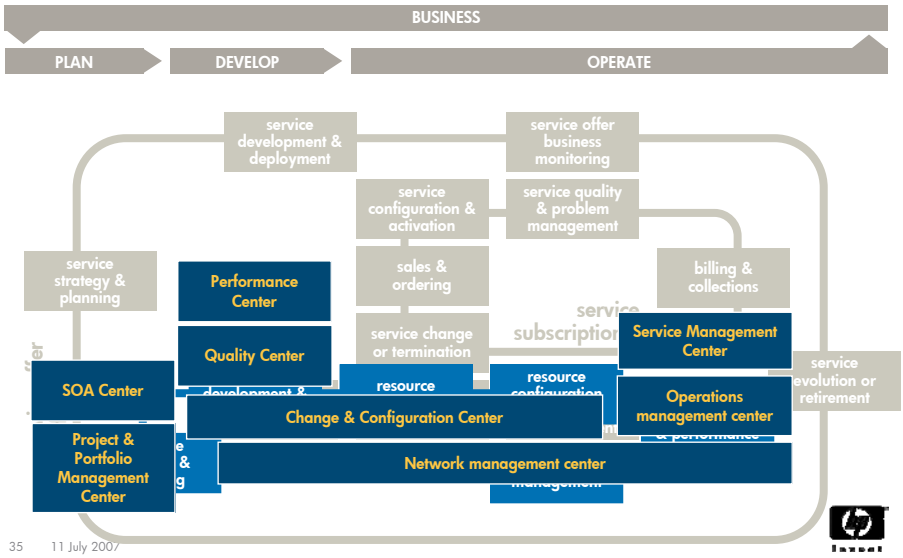
Lifecycles drive the functional view



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