Rapid Service Creation & Provisioning on a next generation SDP Framework

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Mobile Cohesion

SDP Context

Non-branded application and content

Branded applications and content

Service Creation Environment

Service Delivery Platform

OSS

BSS

Intelligent terminals

delivery systems
network data
subscriber data & policy

Ref: IBM's SDP "Gearbox"
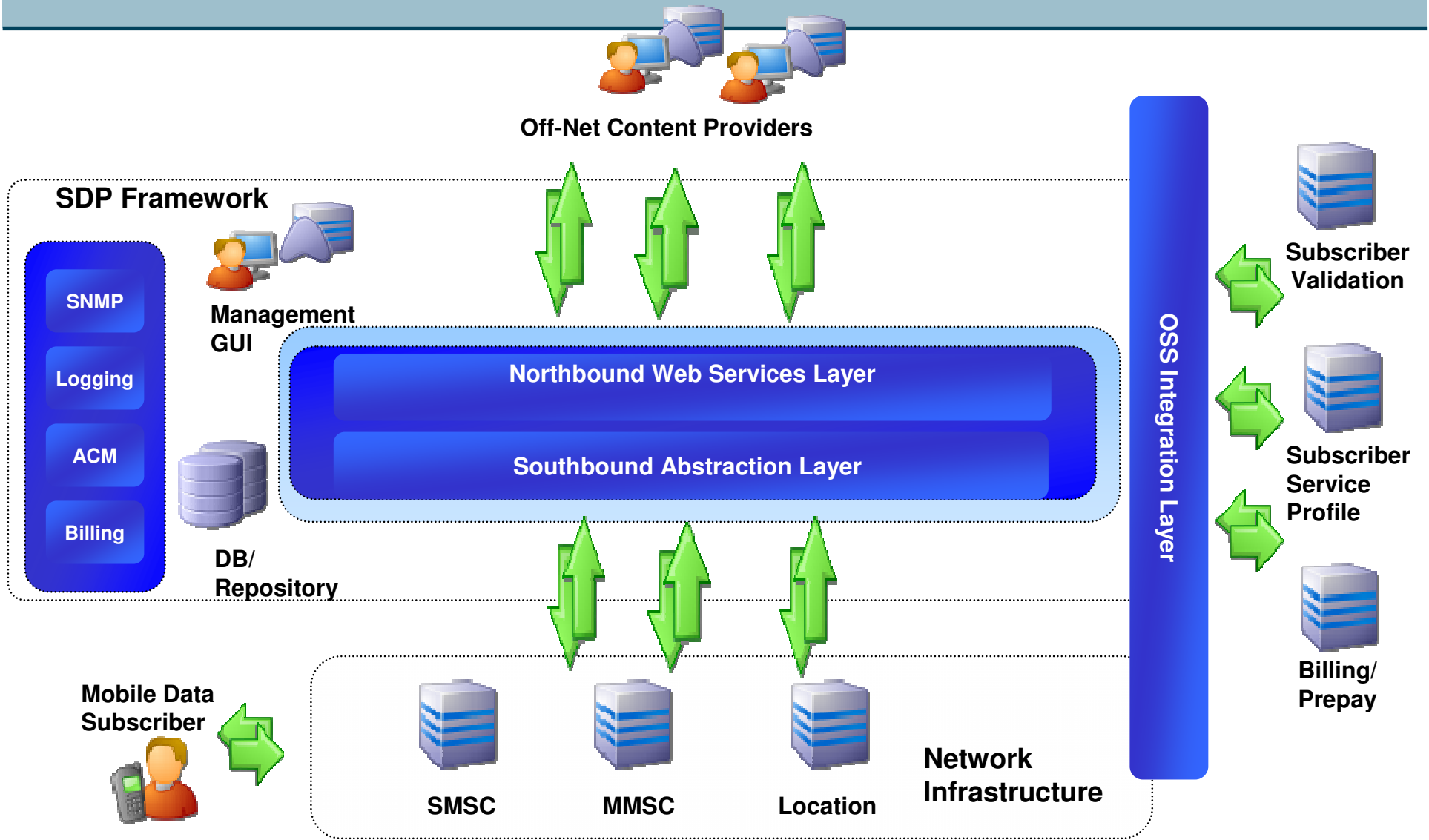
Customer Business Drivers
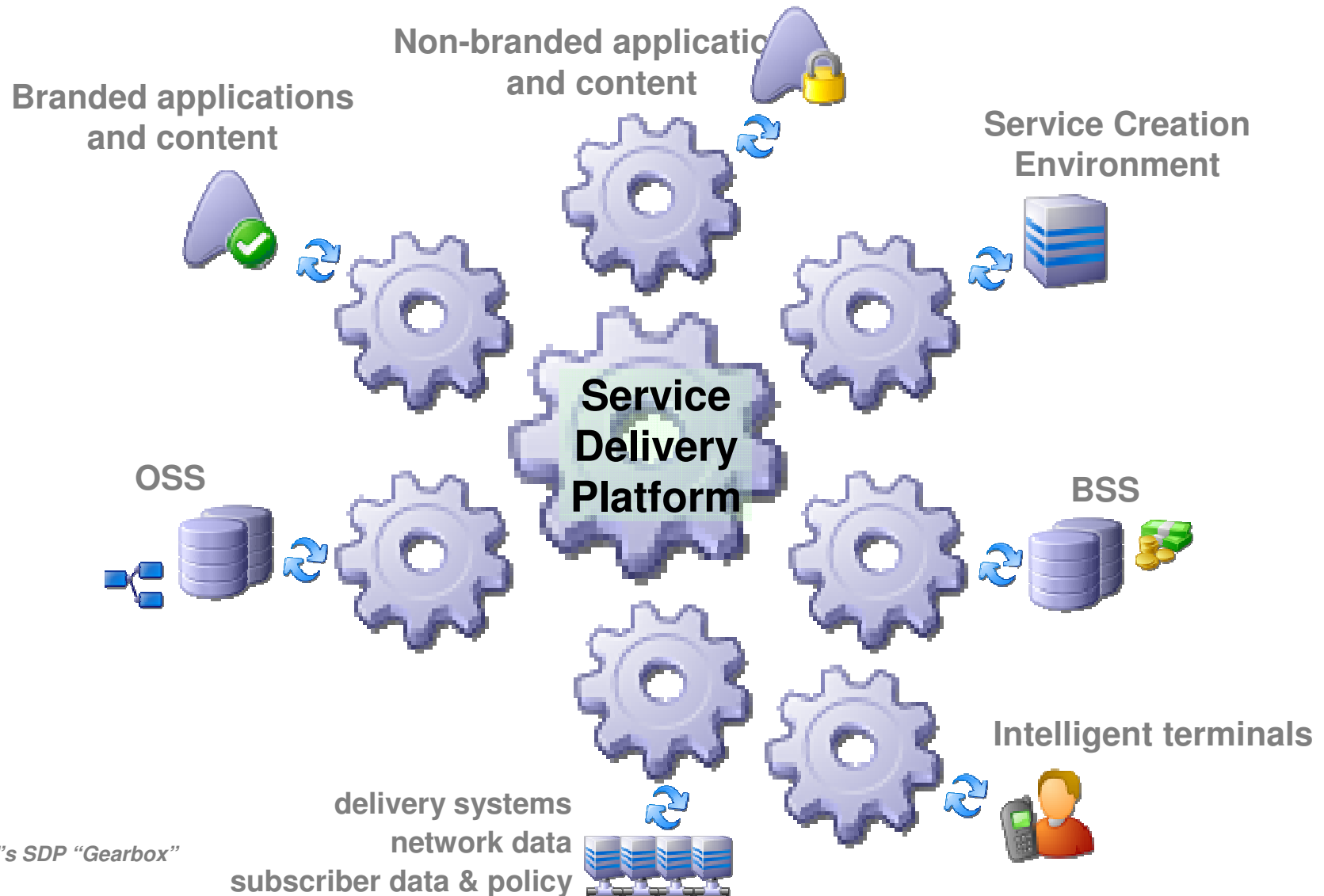
New Revenue Opportunities and lower TCO

- **Customized Solution** ➡ **Standards based Service Architecture**

- **Bespoke Components** ➡ **Product based approach**

- **Limited scale** ➡ **Mainstream, high-volume execution environment**

- **Multiple disparate systems** ➡ **Single Framework for Branded and non-branded Services**

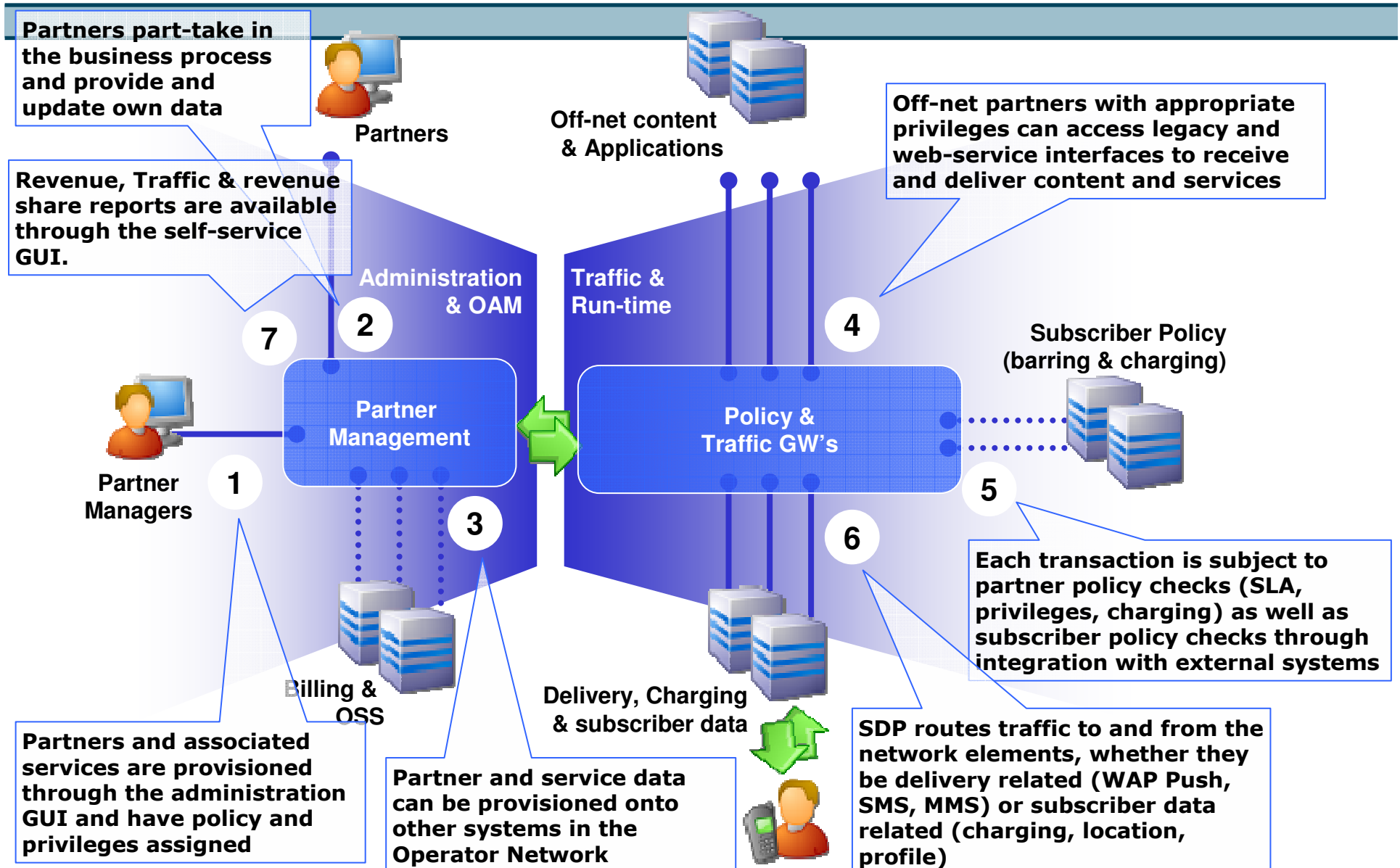- **On-net / branded** ➡ **High volume, wholesale, off-net, non-branded**

Technology Goals

A Web Services based approach for an Intelligent SDP Framework

- Loose coupling

- Network Abstraction

- All IP based Intelligent Information Network Architecture

- Application Oriented Networking vs. Packet

- Standard HW

- Ease of new enabler introduction

- Re-use existing enablers

Customer Case – SDP Architecture

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Off-Net Content Providers

SDP Framework

SNMP

Logging

ACM

Billing

Management GUI

DB/ Repository

Northbound Web Services Layer

Southbound Abstraction Layer

OSS Integration Layer

Subscriber Validation

Subscriber Service Profile

Billing/ Prepay

Mobile Data Subscriber

SMSC

MMSC

Location

Network Infrastructure

SDP Solution Approach

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Partners part-take in the business process and provide and update own data

Partners

Off-net content & Applications

Off-net partners with appropriate privileges can access legacy and web-service interfaces to receive and deliver content and services

Revenue, Traffic & revenue share reports are available through the self-service GUI.

Administration & OAM

Traffic & Run-time

7

2

4

Subscriber Policy (barring & charging)

Partner Management

Policy & Traffic GW's

Partner Managers

1

5

3

6

Each transaction is subject to partner policy checks (SLA, privileges, charging) as well as subscriber policy checks through integration with external systems

Billing & OSS

Delivery, Charging & subscriber data

Partners and associated services are provisioned through the administration GUI and have policy and privileges assigned

Partner and service data can be provisioned onto other systems in the Operator Network

SDP routes traffic to and from the network elements, whether they be delivery related (WAP Push, SMS, MMS) or subscriber data related (charging, location, profile)
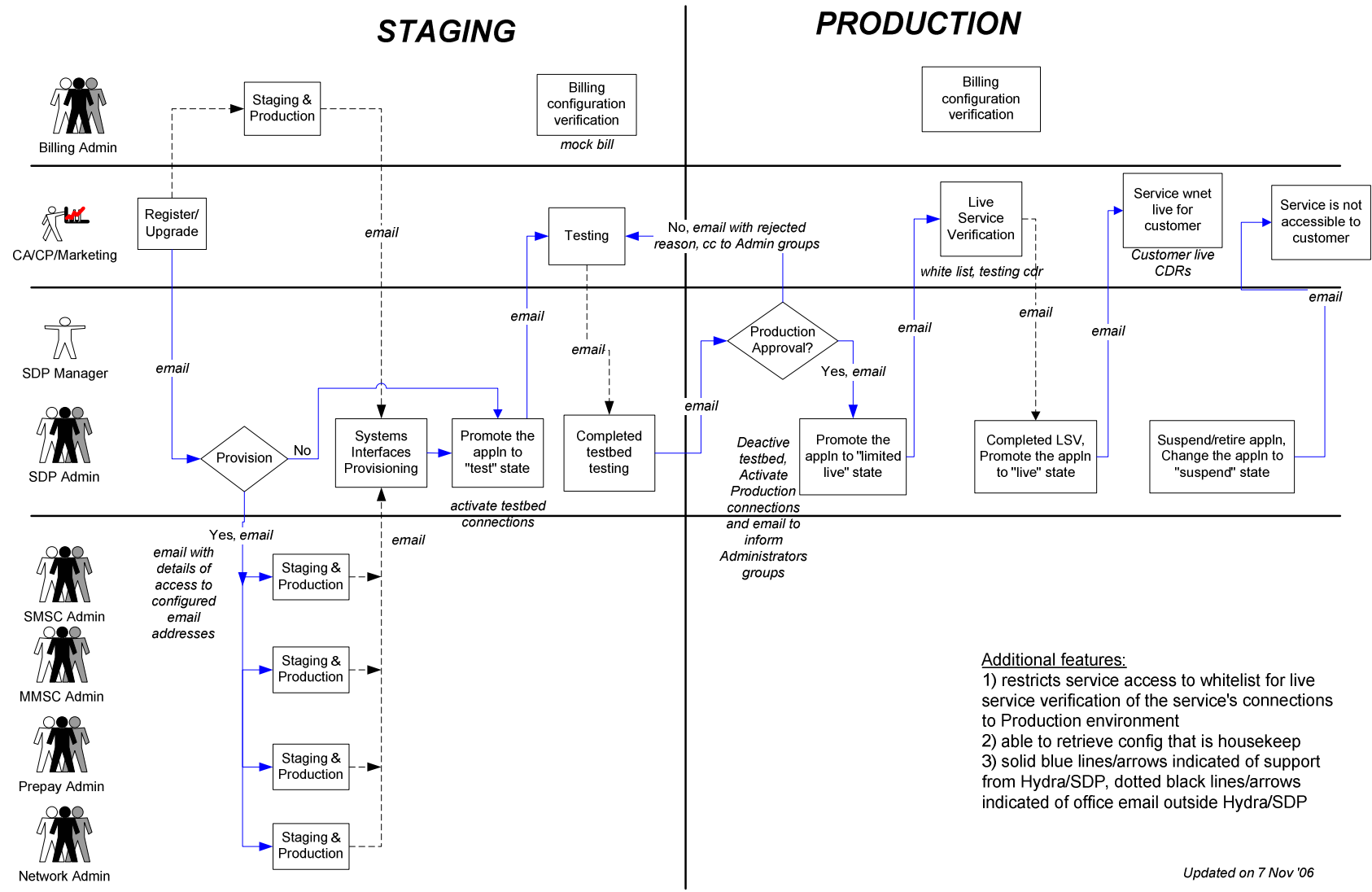
SDP Use cases

- **Automate Partner Management Processes**
  - Lifecycle and settlement
  - Partner Policy Control

- **Messaging**
  - Wholesale transaction environment under charging and policy control
  - In-band charging
  - Multi Level Revenue Share and Settlement

- **Charging & Pre-pay control**
  - Enables off-net: streaming, downloads, messaging
  - Off net top-up: PoS and loyalty schemes

- **Subscriber service control**
  - Barring & subscriptions
  - Dynamic service instance creation

- **Service Creation Support**
  - API's & SDK

Service Lifecycle Support

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STAGING   *PRODUCTION*

Billing Admin

Staging & Production

Billing configuration verification

mock bill

Billing configuration verification

CA/CP/Marketing

Register/ Upgrade

Testing

No, *email with rejected reason, cc to Admin groups*

Live Service Verification

white list, testing cdr

Service wnet live for customer

Customer live CDRs

Service is not accessible to customer

email

email

email

email

email

email

email

SDP Manager

email

SDP Admin

Provision   No

Systems Interfaces Provisioning

Promote the appln to "test" state

Completed testbed testing

Production Approval?

Yes, *email*

Deactive testbed, Activate Production connections and email to inform Administrators groups

Promote the appln to "limited live" state

Completed LSV, Promote the appln to "live" state

Suspend/retire appln, Change the appln to "suspend" state

email

activate testbed connections

Yes, *email*

email with details of access to configured email addresses

email

SMSC Admin

Staging & Production

MMSC Admin

Staging & Production

Prepay Admin

Staging & Production

Network Admin

Staging & Production

Additional features:
1) restricts service access to whitelist for live service verification of the service's connections to Production environment
2) able to retrieve config that is housekeep
3) solid blue lines/arrows indicated of support from Hydra/SDP, dotted black lines/arrows indicated of office email outside Hydra/SDP

Updated on 7 Nov '06

Messaging

- **Wholesale**
  - Maintain policy and charging control for high volume events
  - TV & Radio interactive services (e.g. voting)
  - Allow wholesaler/aggregator to differentiate traffic based on CP
  - Multi-level revenue share and settlement

- **Policies & SLA's**
  - Service and policy differentiation based on partner & application
  - Volume policies: Capacity, throttle, quota's
  - Differentiated Charging policies: Flat-fee, in-band, tariff based, maximum limits
  - Subscriber policy interactions: barring, service types, subscriptions

Charging & Prepay control

- **Eliminate Revenue leakage**
  - "Real" real-time pre-pay control
  - Off-net 2-step reserve/commit

- **Enables charging for**
  - HTTP download events
  - Streaming

- **Partner Subscriber Top-up & Balance management**
  - PoS top-up
  - Loyalty scheme integration

Subscriber Service Control

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Enabling Personalized Rich Services to drive new mainstream Data Services

Who?
- Who is the user?
  - Devices
  - Profile
  - Location
  - Presence

How?
- How can I dynamically control resources?
  - Monitor & charge on a per service / per user basis
  - Enable application awareness

What?
- What can the user do?
  - Within what timeframe
  - To what extent
  - Under what rules

Where?
- Where services can the user access across which networks?
  - Service Continuity
  - Offer all services in all locations

Service Creation Support

- **Web Service Interfaces**
  - WS / SOAP / HTTP
  - Abstracted protocols
  - Synchronous network interaction
  - Focus on practicality & scalability over standardization

- **Java Client Libraries**
  - WS protocol wrapped in client libraries
  - Integration into any Java / J2EE environment

- **Lifecycle based routing**
  - Same end-points and credentials in test and live
  - Reduces test-effort and removes possibilities for error

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