Pulse
Comes to You

IBM

Managing the World's Infrastructure

Partnering for Success

Smarter IT infrastructure at Bharti Airtel

© 2009 IBM Corporation

Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Hello ! Everybody

Speaker Mehul Shah
CIO – Bharti Airtel (Telemedia)
Chief Architect-Bharti Airtel

Co-speaker Arun K Madan
SSF Leader & Lead Enterprise Architect
IBM India (GTS - SO)

© 2009 IBM Corporation

Agenda

- About Bharti Airtel
- Enterprise Architecture
- Managing Infrastructure
- Secured Sign On Framework (SSF)
- IT Systems Management Framework (ITSMF)
- Session Summary
- Q & A

Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Bharti Airtel

© 2009 IBM Corporation

Bharti Airtel

consumer

mobile

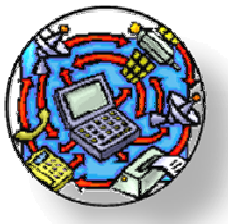
broadband

television

DTH and IPTV

business

smb



enterprise

business parameters

	Mar, 2004	Mar, 2009
Customers (M)	7	96
Revenues ($M)	1,113	6,752*
Employees (K)	5.5	25.5
Call center agents (K)	5	30
CDRs/day (M)	150	2,900

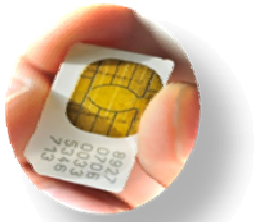
* As of Mar, 2008

IT parameters

Airtel	Mar, 2004	Mar, 2009
Servers	500	3,500
Storage (TB)	125	2,500
Bandwidth (MBPS)	550	11,500
IT employees	300	175
Outsourced employees	15	3,200

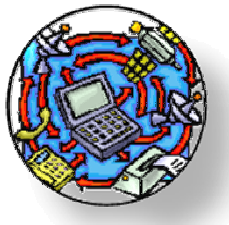
Bharti Airtel

continuous innovation



consumer

smb



enterprise

AIRTEL LIVE

Web2.0

IBM

SDP: SERVICE DELIVERY PLATFORM

Content Applications Messaging	Commerce Advertising User generated	Gaming Media Community

Mobile | Broadband | IP | Satellite

continuous expansion

Sri Lanka - Asia

Seychelles

INDIA

- 88 Million subscribers
- Coverage of over 400,000 non-census towns and villages
- 55% of net adds coming from rural India

SRI LANKA

- Launched 2.5g and 3.5g service in Jan'09
- 100,000+ customers within 100 hours of launch

CHANNEL ISLANDS

- Jersey Airtel and Guernsey Airtel – 2G and 3G mobile services operational
- Successful launch of MNP

Pulse
Comes to You

IBM

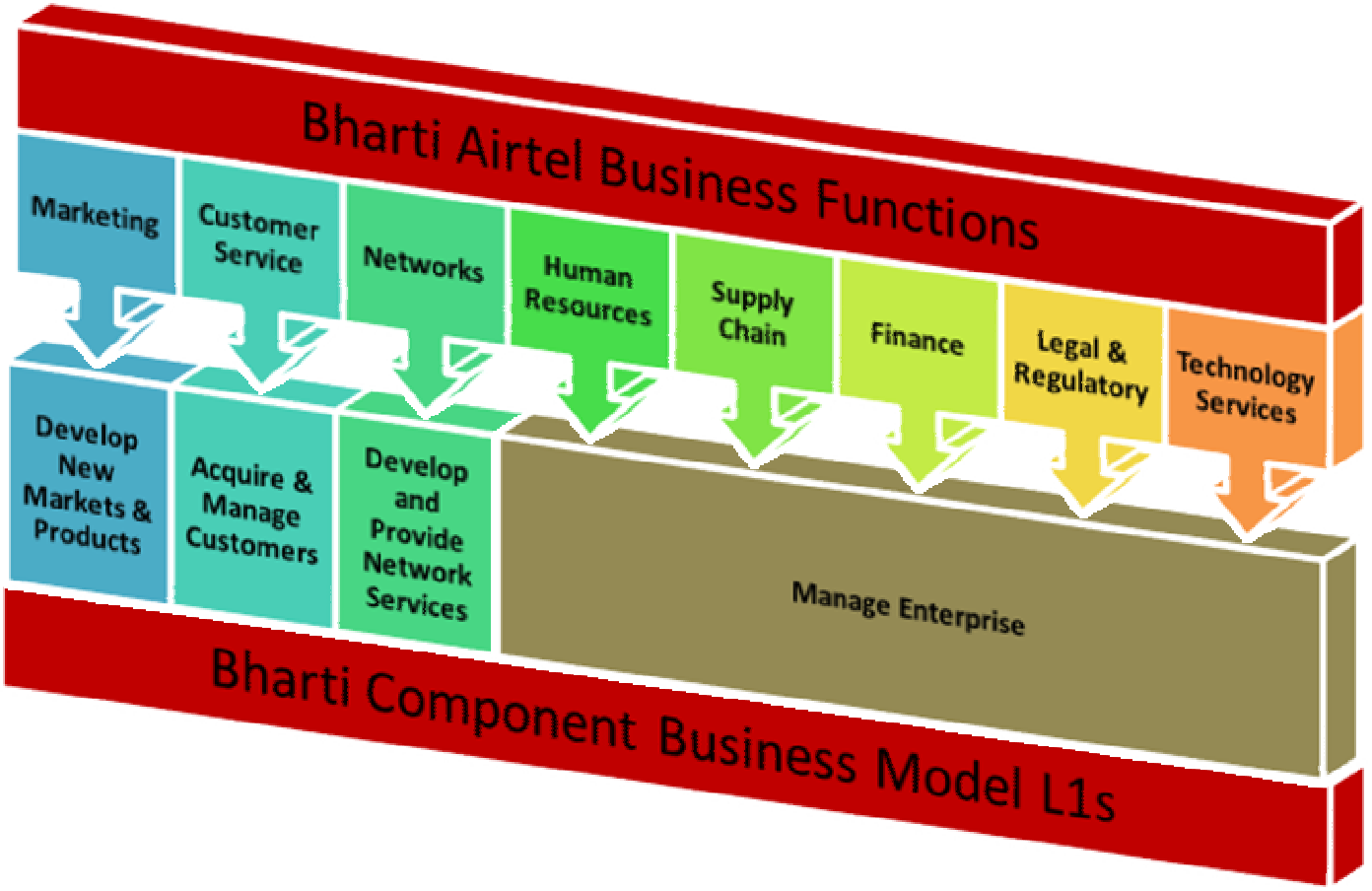
Managing the World's Infrastructure

Enterprise Architecture

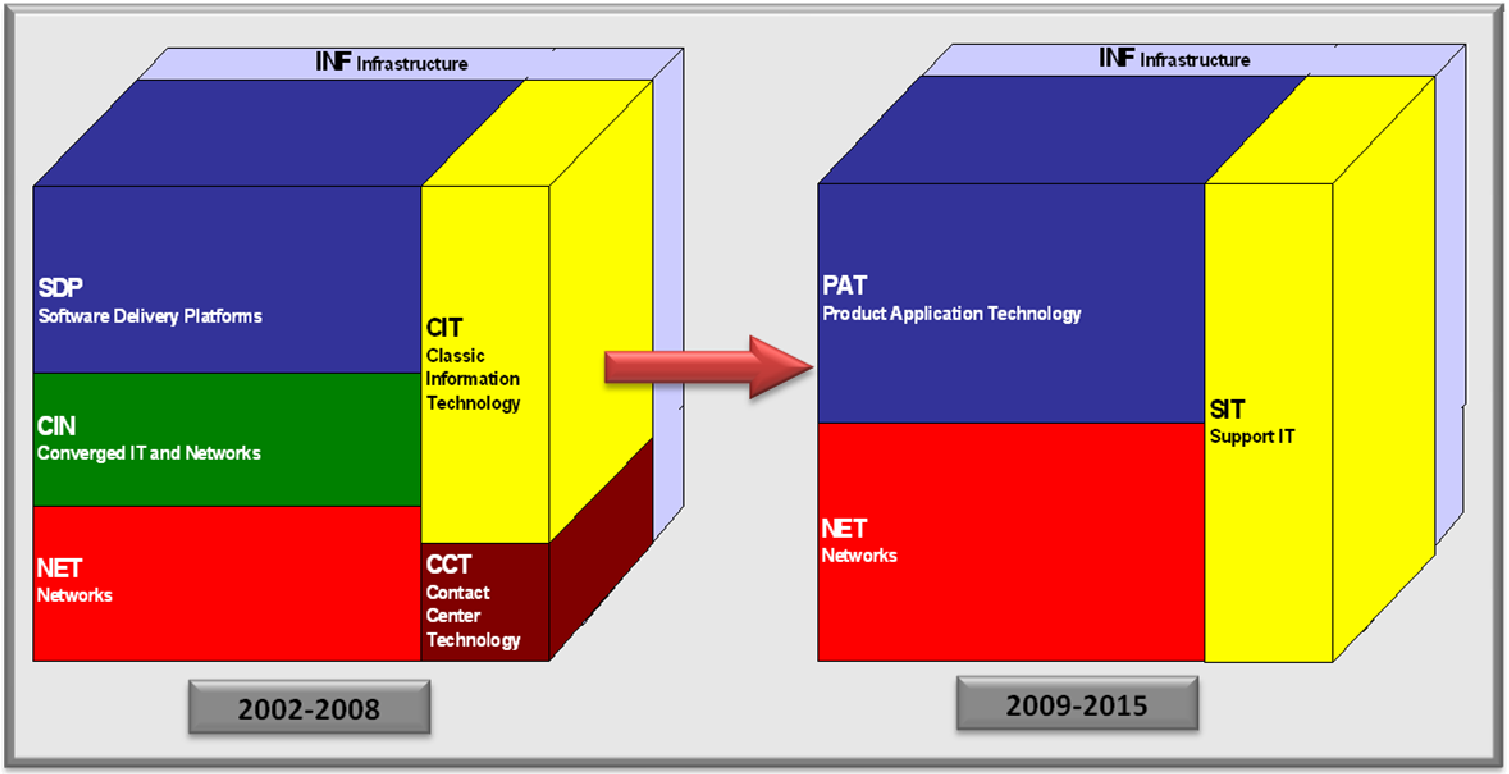
Bharti Airtel

© 2009 IBM Corporation

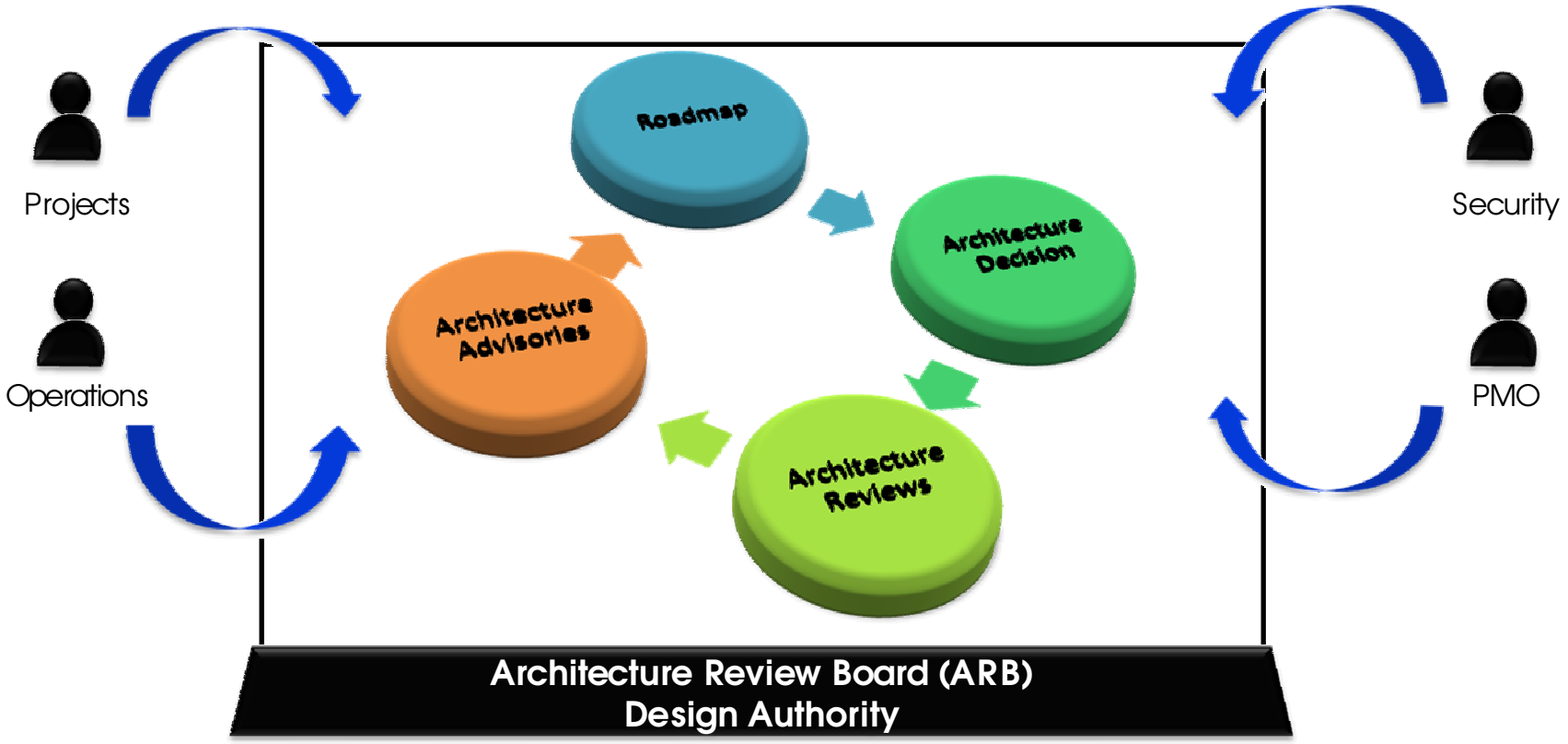
IT- Business Alignment



Macro Architecture Cube



Architecture – Building Blocks



Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Managing Infrastructure

Bharti Airtel

© 2009 IBM Corporation

Infrastructure Frameworks

Secured Sign on Framework (SSF)

IT Service Management Framework (ITSMF)

Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Secured Sign On Framework (SSF)

© 2009 IBM Corporation

Why SSF

Employee Convenience

- Single Sign On to multiple applications
- Enhanced On-boarding experience,
- Self services for password reset

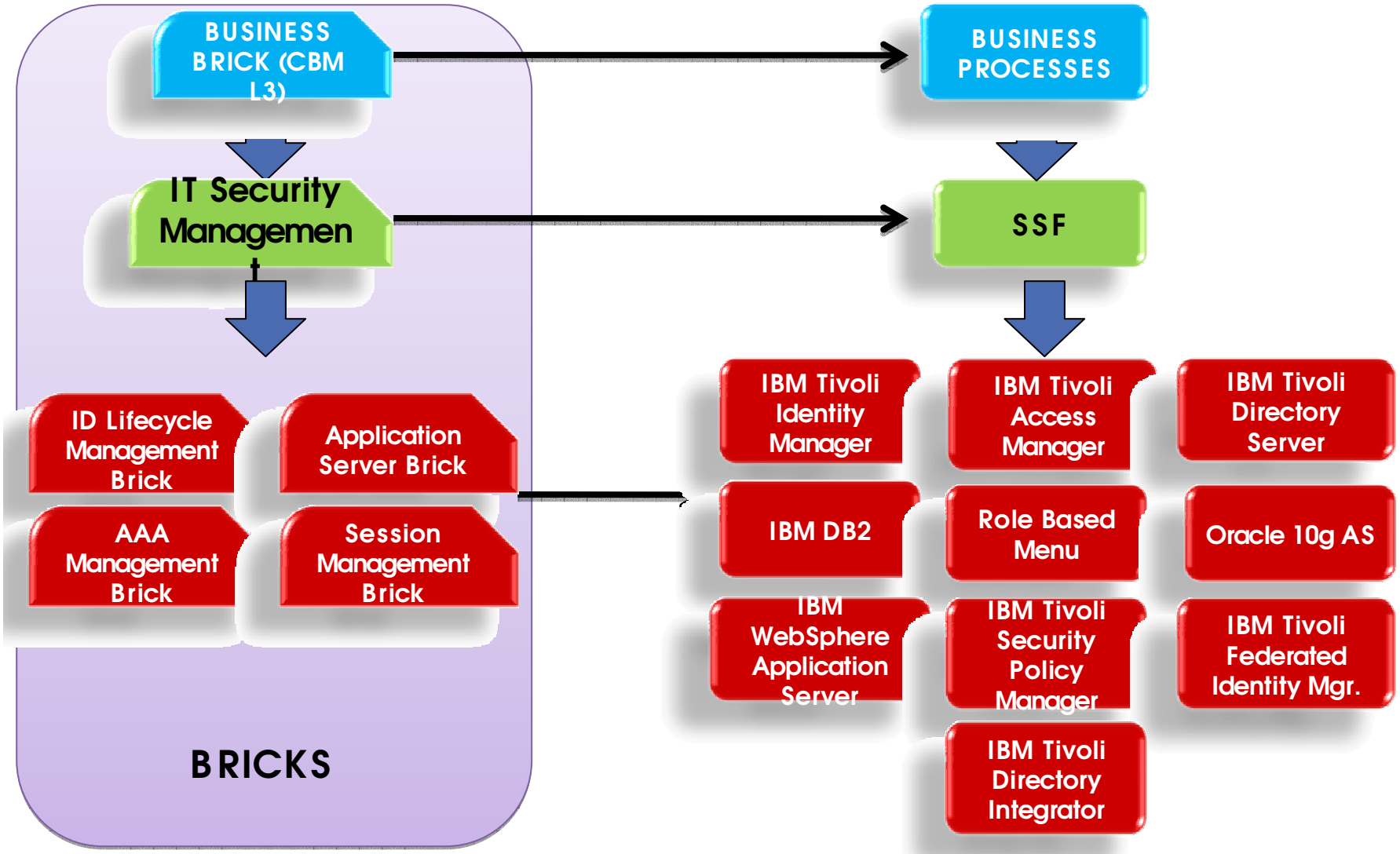
Enterprise Level Security Control

- AAA security
- Role Based Access
- CBN audits
- QEV audits
- ID Lifecycle Management

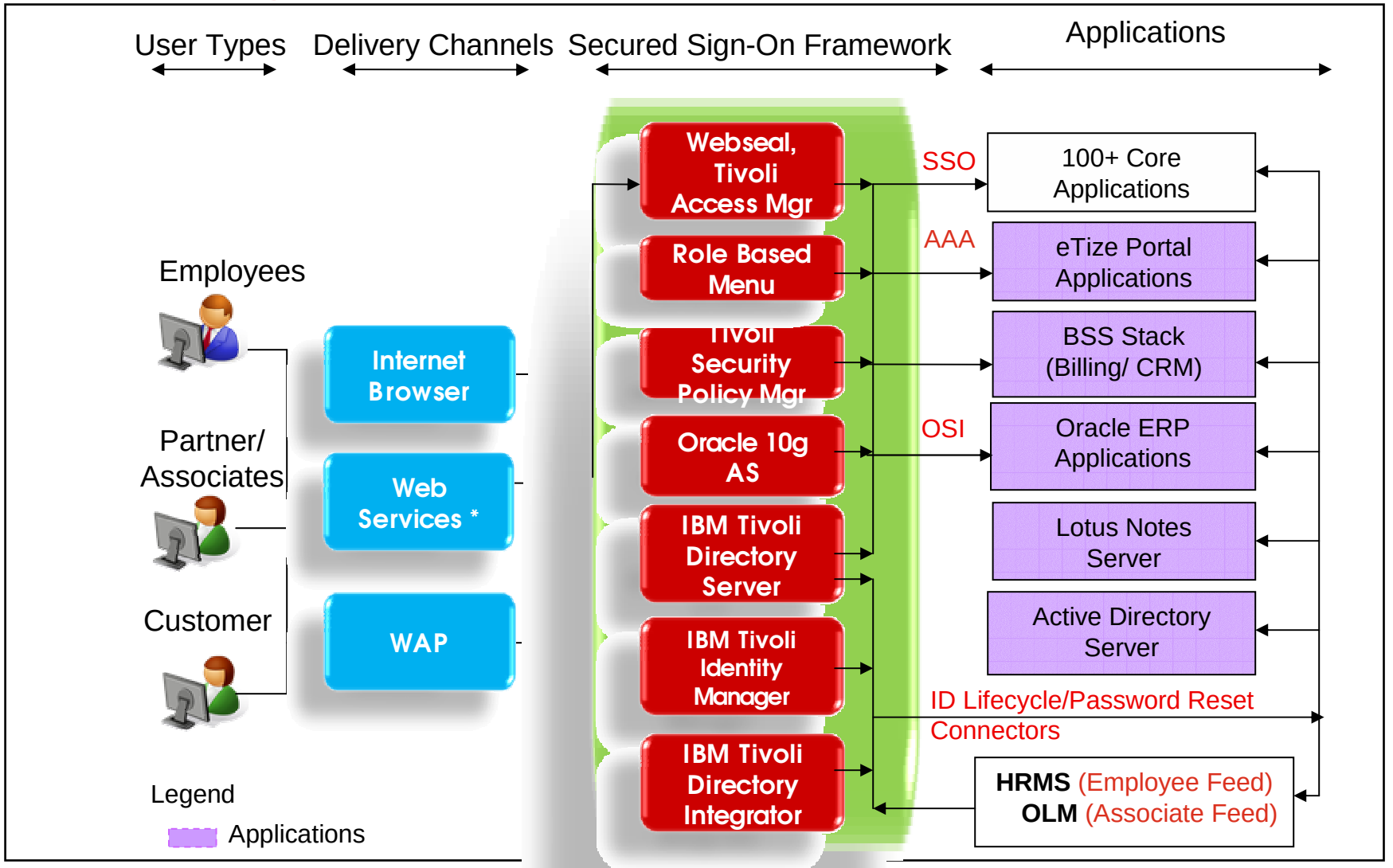
Operations Automation

- Automated user-id/password creation
- User notifications by Email/SMS
- Automated provisioning & approvals

IT Security Management



Secured Sign On Framework – Architecture



Business Benefits

- Enhanced productivity of employees and associates due to
  - SSO convenience
  - Self services/ SMS password reset/ Account unlock
  - Automated provisioning
- Enhanced on boarding experience for new joins
- Operations automation
- Security compliance
- Enhanced Reporting and Audit logging

SSF Impact

	Before SSF	After SSF
Average number of ID's/PW per user	20 Id/user	1 Id/user Single Sign On
Time required for Password reset or Account Unlock	2 hour	0.1 hour Self Services/SMS
New employee's Email/User ID creation and Delivery to New employee	24 hour	1 hour
Time taken for getting account provisioned to each application	2 Days	1 hour Automatic Provisioning

Pulse
Comes to You

IBM.

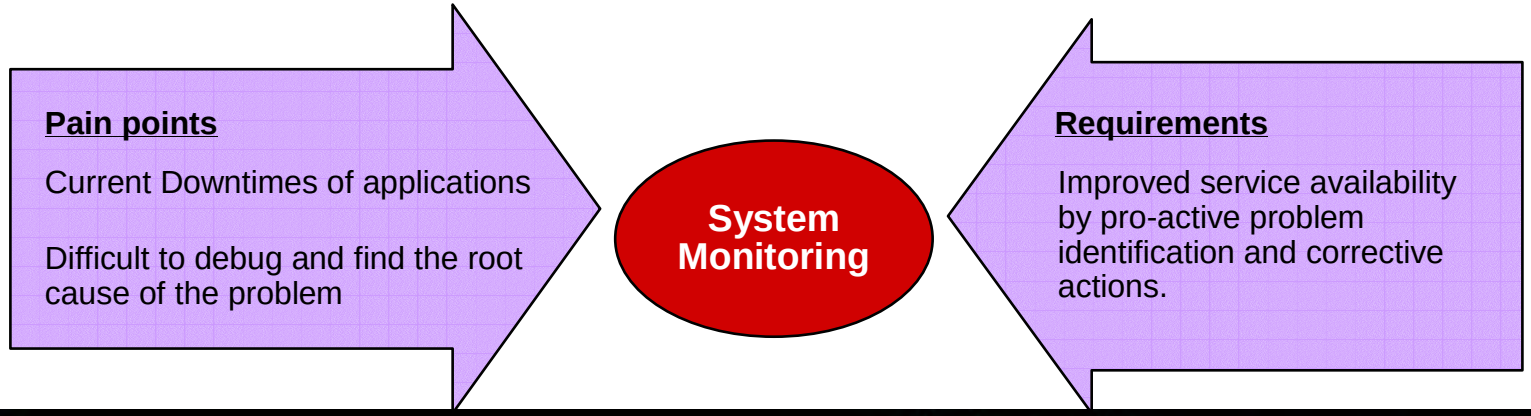
Managing the World's Infrastructure

IT Service Management Framework

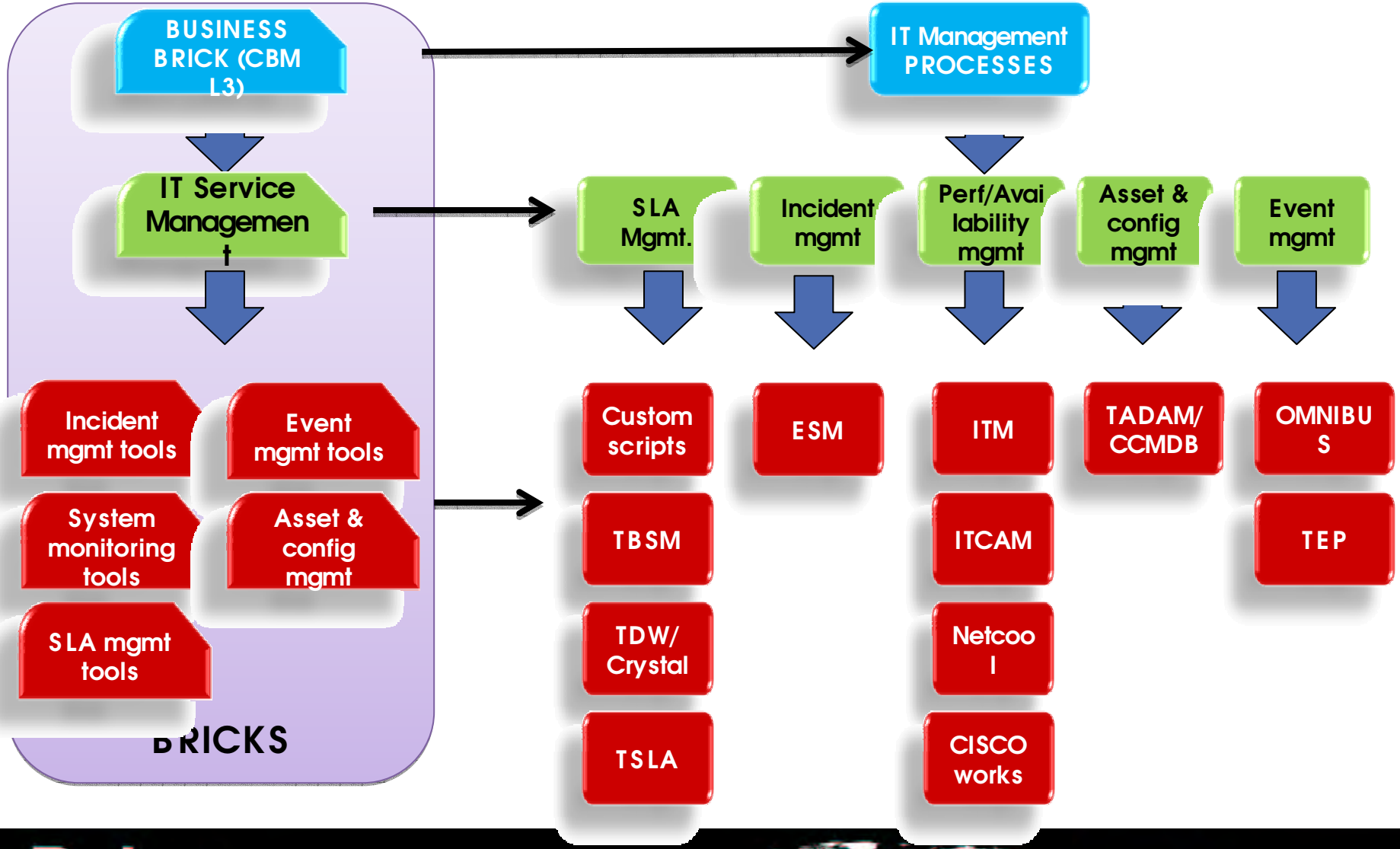
© 2009 IBM Corporation

Why ITSM Framework

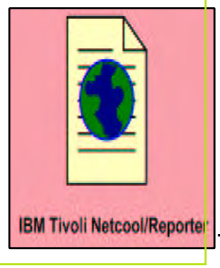
- Improve application availability by
  - Pro-actively identifying problems and take corrective action
  - Reducing the time to respond to systems incidents.
- Provide performance and availability details
  - For operations team
  - For Business executives
- Automated SLA measurement



IT Service Management



ITSM for SSF*



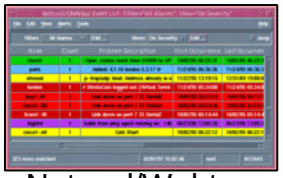
TBSM (SM dashboard)

ESM DB/MAXIMO

Service Desk

SMS, email, TEP

SMS & email gateway



Netcool/Webtop (Network ops dashboard)

TSLA (SLA Reporting)

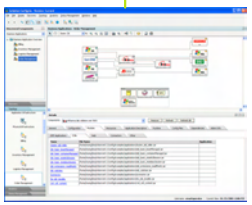
Service views

Auto ticketing

Event Notification

SLA Aggregation & Reporting

Config info



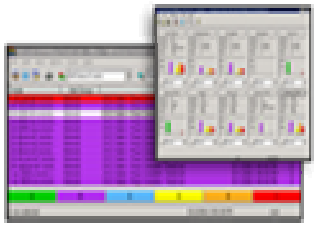
CCMDB

TADDM & other sources

Display Application Dependencies

Event Enrichment

Impact



Events & Correlation

OMNIbus

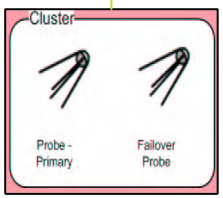
TDW

Historical Data

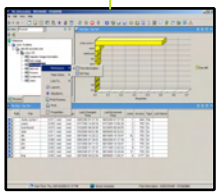
Historical Data Collection

Network Reporting

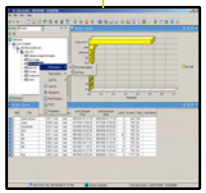
ITNM-IP/Proviso



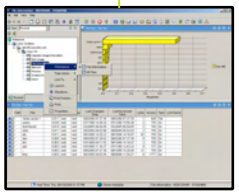
NetCool



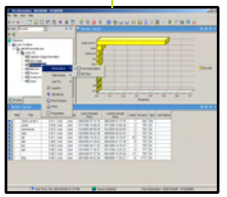
OMEGAMON-XE for messaging



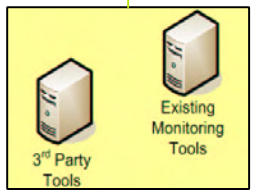
ITCAM-RT



ITM for OS, DB



ITCAM-WebSphere



Other Tools

* WIP

Business Benefits

- Higher availability
- Automated logging
- Proactive fixes
- Shorter time to repair
- Instant Notifications
- Enriched Communication
- Enhanced CSR experience
- Effective SLAs monitoring
- Customised Dashboards

Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Session Summary

© 2009 IBM Corporation

We have covered …

- Large Dynamic Organization
- Complex IT Environment
- Architectural Challenges
- Infrastructure Frameworks
- Reliable Backbone using Tivoli Products
- Secured Sign On Framework (SSF)
- Systems Management Framework (ITSMF)
- Business Benefits

Pulse
Comes to You

IBM.

Managing the World's Infrastructure

Q & A

© 2009 IBM Corporation

Thank You

Contact Details

Speaker . Mehul Shah, Chief architect, Bharti Airtel mehul.shah@airtel.in

Co-speaker. Arun K Madan, Lead Enterprise Architect, IBM arunmada@in.ibm.com

© 2009 IBM Corporation