

IMPACT OF IT In Loss Reduction



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Foreword

Information technology and business are becoming inextricably interwoven

The mission is management of large and dispersed area of operation, for customer's satisfaction & loss reduction through Information Technology driven services

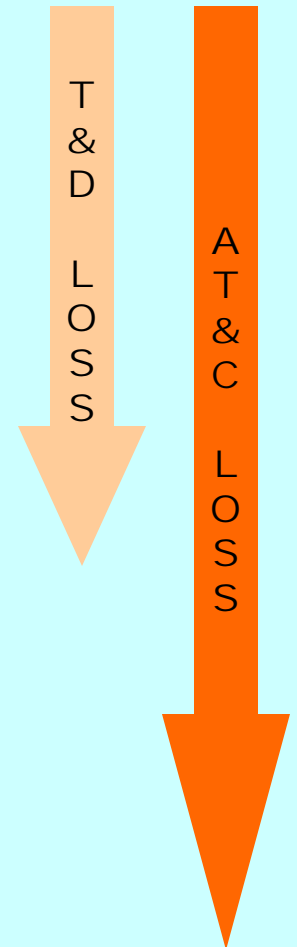


.....enhance through technological innovation

Understanding AT&C Loss

All figures are hypothetical

Energy Input/purchased	100 units	Distributed to consumers
Energy Consumed	86 units	The contributing factors are technical losses like iron & copper losses at transmission/distribution
Energy Billed to consumer	68units	The contributing factors are Meter tampering & bypassing, Misuse of category, Meter problems (stopped, slow, burnt), Meter not read, Billing gaps (under billed, provisional billing, others) and theft (direct hooking)
Amount Billed to consumer @ Rs.2.40/unit	Rs.163	Bill sent to consumers
Amount recovered from consumer	Rs.151	This is due to recovery gap like part payment, bills not delivered, consumer not paid, others
Hence Energy recovered	63 units	AT&C Loss of 37%



IT Effectiveness

Planned implementation of IT projects effectively helps in arresting & reducing these gaps which in turn helps in

- Loss & Cost Reduction
- Data integration & collation of vital business information from wide Geographical/Functional Arena
- Efficient Asset Management
- Improvement of performance quality

IT Projects to Reduce Loss & success determinant

- AMR at all energy input points and for all Grids thru GSM technology
- Enforcement tracking to monitor theft
- Surveillance & recovery process
- AMR for key consumers
- Electronic meter & handheld with automated meter reading process
- Pre & post audit module to reduce billing v/s revenue gap
- Various payment options and on-line payment facility through automated processes
- For high-value consumers; web based services. AMR & IVRS
- Outage Management system, linked to call centre, for proper outage information
 - flow in-turn reducing outage time and hence reduce commercial losses
- SAP PM & MM module dove-tailed with GIS to streamline & back-up operations
- SCADA to monitor operations and perform Energy Audit
- Integration of different functions and applications
- Strong IT infrastructure
- Skilled workforce

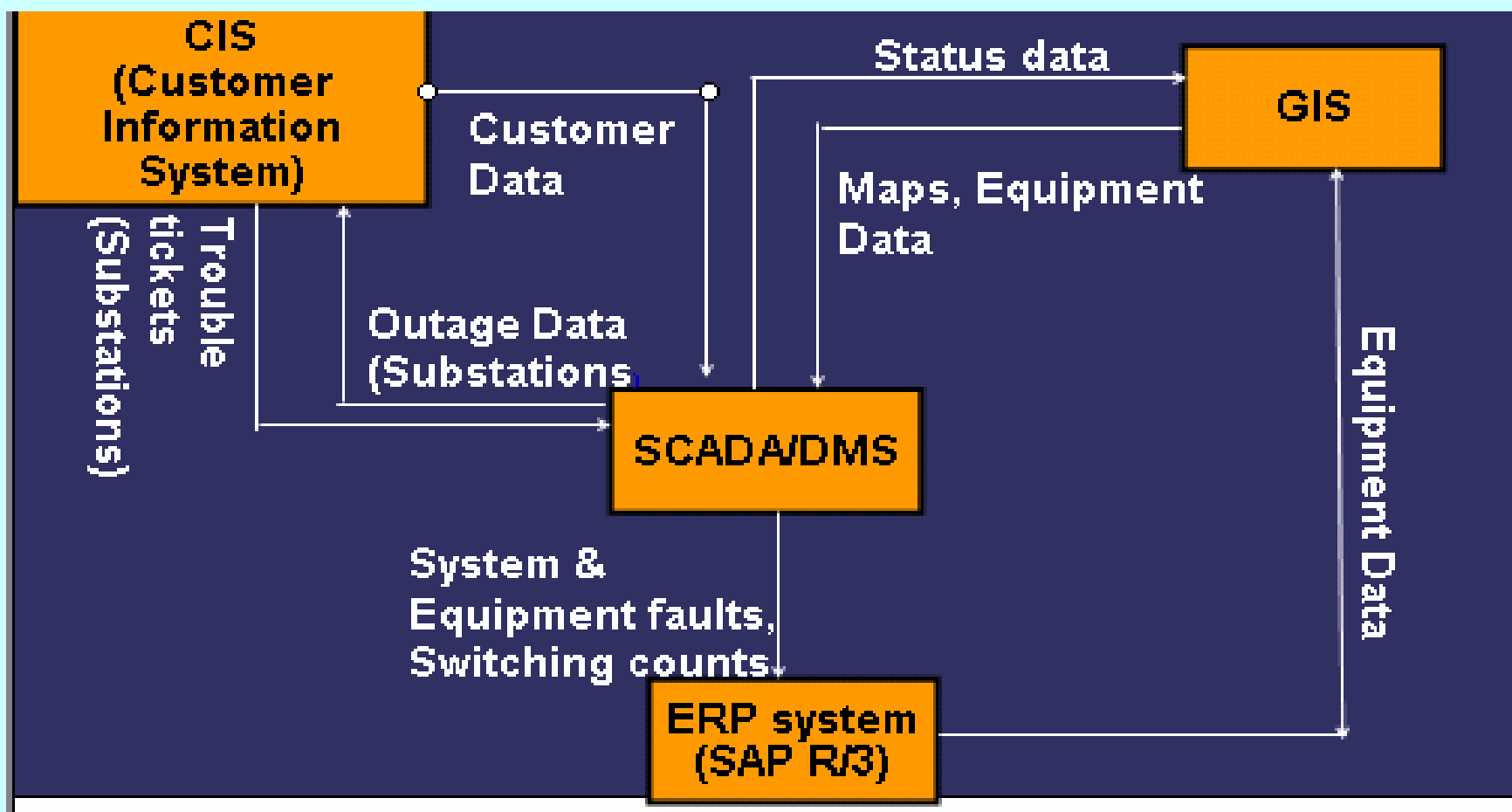
Need of the Hour



- Virtualisation
- Technology Integration for information collation
- Excellent Networking and Communication channel
- Energy Accounting Mechanism
- IT Security

All these should precede with Change Management
for adaptation of these initiatives

Integration

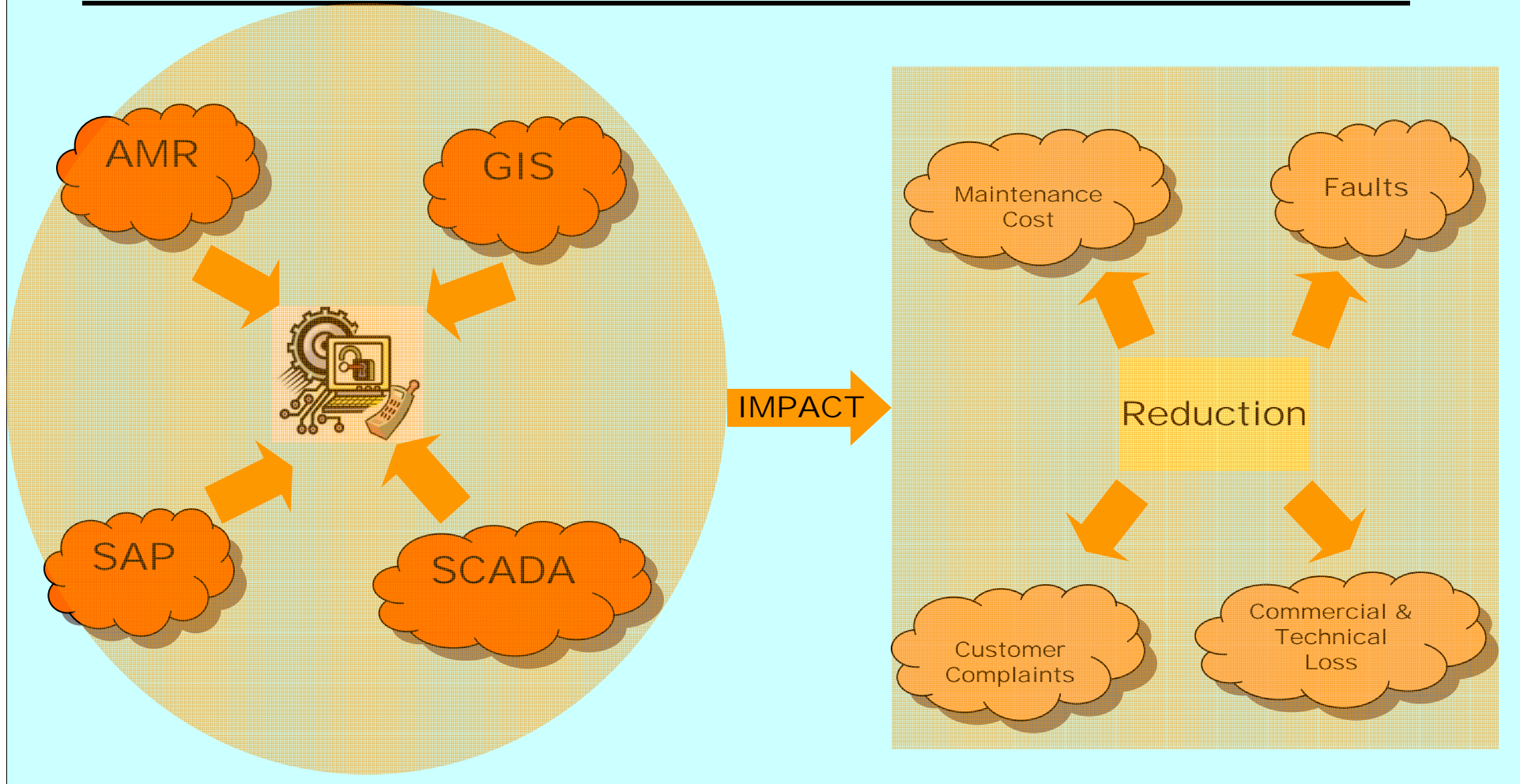


Benefits Garnered

- Operational Efficiency
- High Productivity & Cost Control
- Energy Accounting & Audit
- Improved Information sharing & Planning
- Improvement of Reliability Index
- Optimisation of Network & Load Forecasting

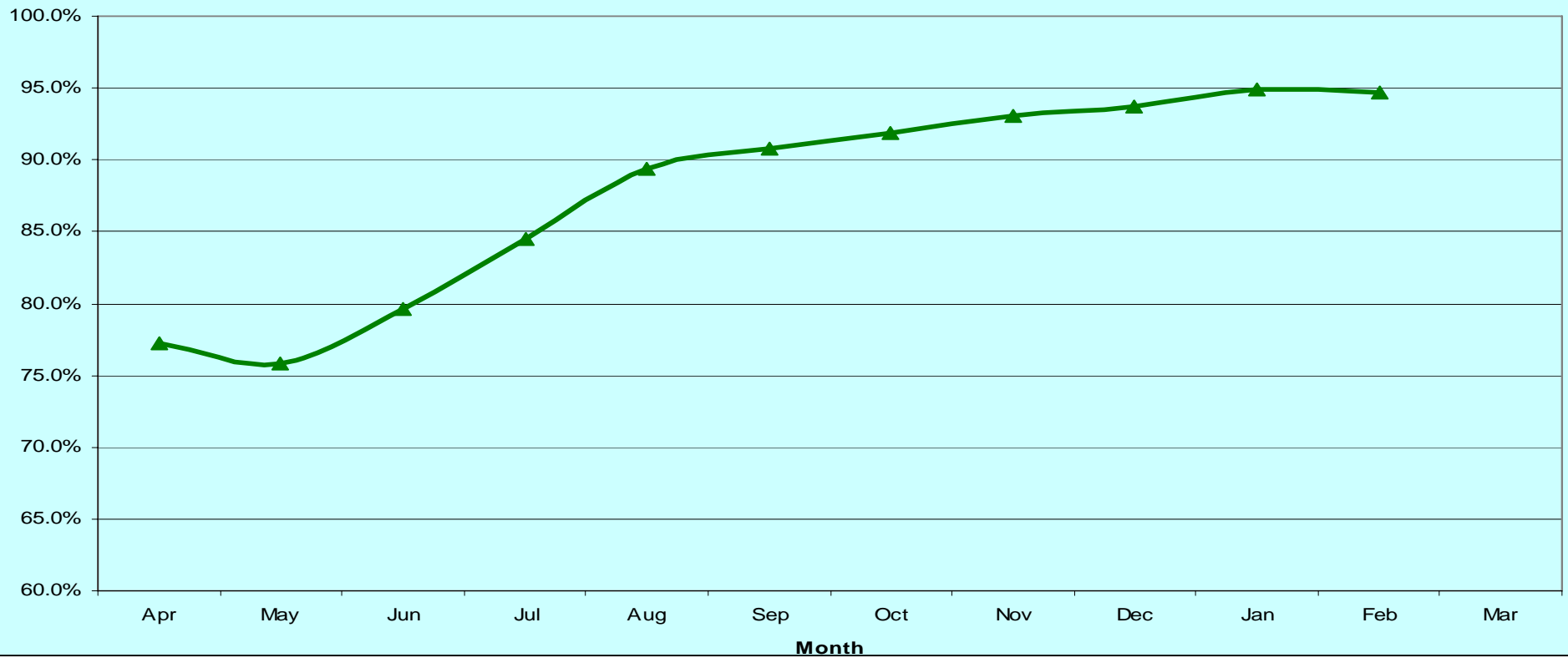


Integration vs. Impact



Impact Analysis

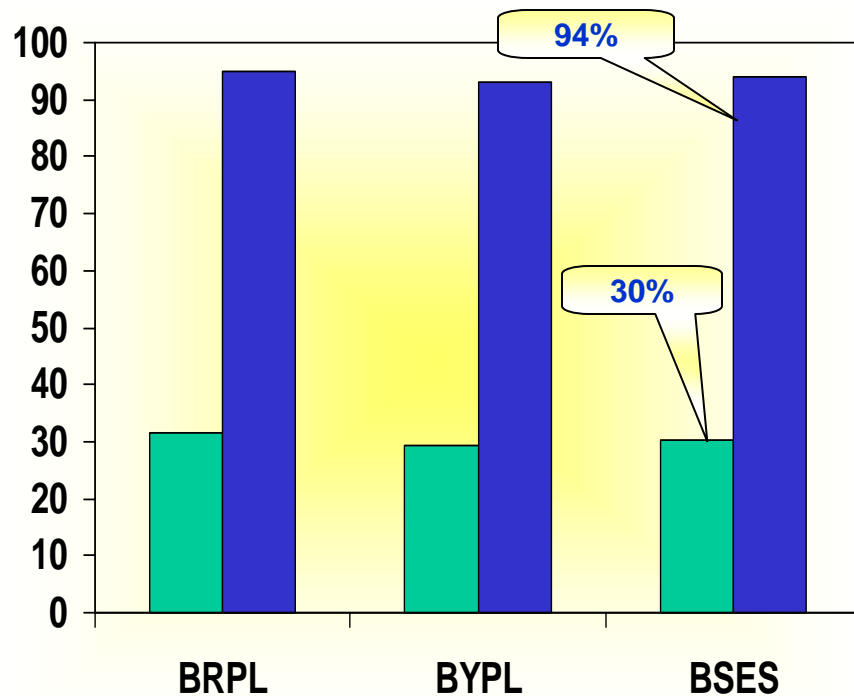
Improvement in Meter Reading using CMRI



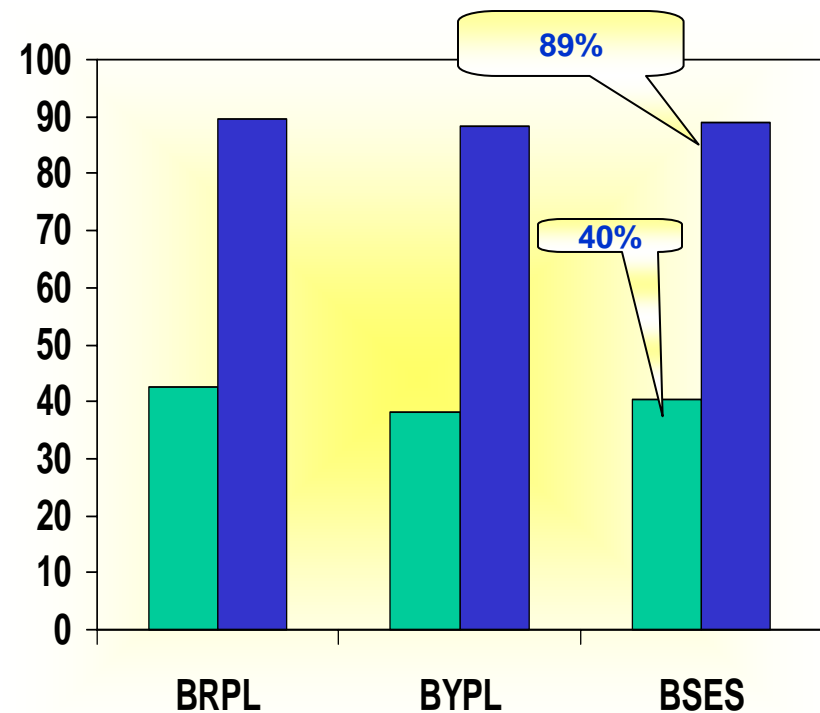
Impact Analysis

Improvement in operations due to implementation of OMS & SCADA
Discoms Fault Rectification in Less Than 2 hours

EHV Breakdowns



HT Breakdowns



FY 2002-03 (Jul 02 – Mar 03)

FY 2006-07 (Apr 06 – Oct 06)

Benefits after SCADA implementation

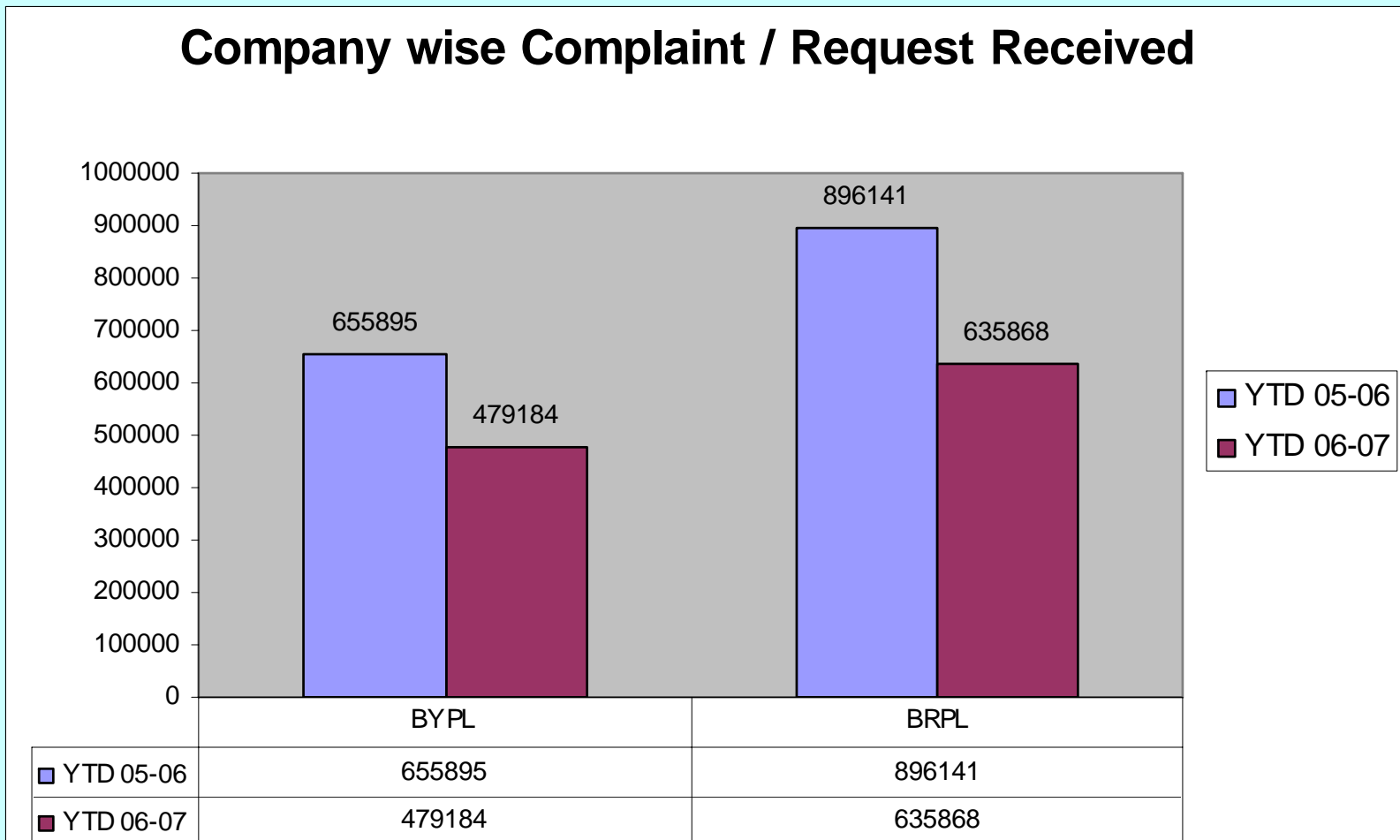
- **Reduction in Maintenance cost: 10 % reduction in network & component maintenance due to better operation of network, better planning & co-ordination**
- **Reduction in losses on account of better optimal network operations equals**
- **Reduction in Outages: The number of outages and the outage times**
has decreased due to faster fault isolation and restoration, better switching procedure management, higher level of automation, and new and more efficient tools/operator functions

Delhi SCADA Centre



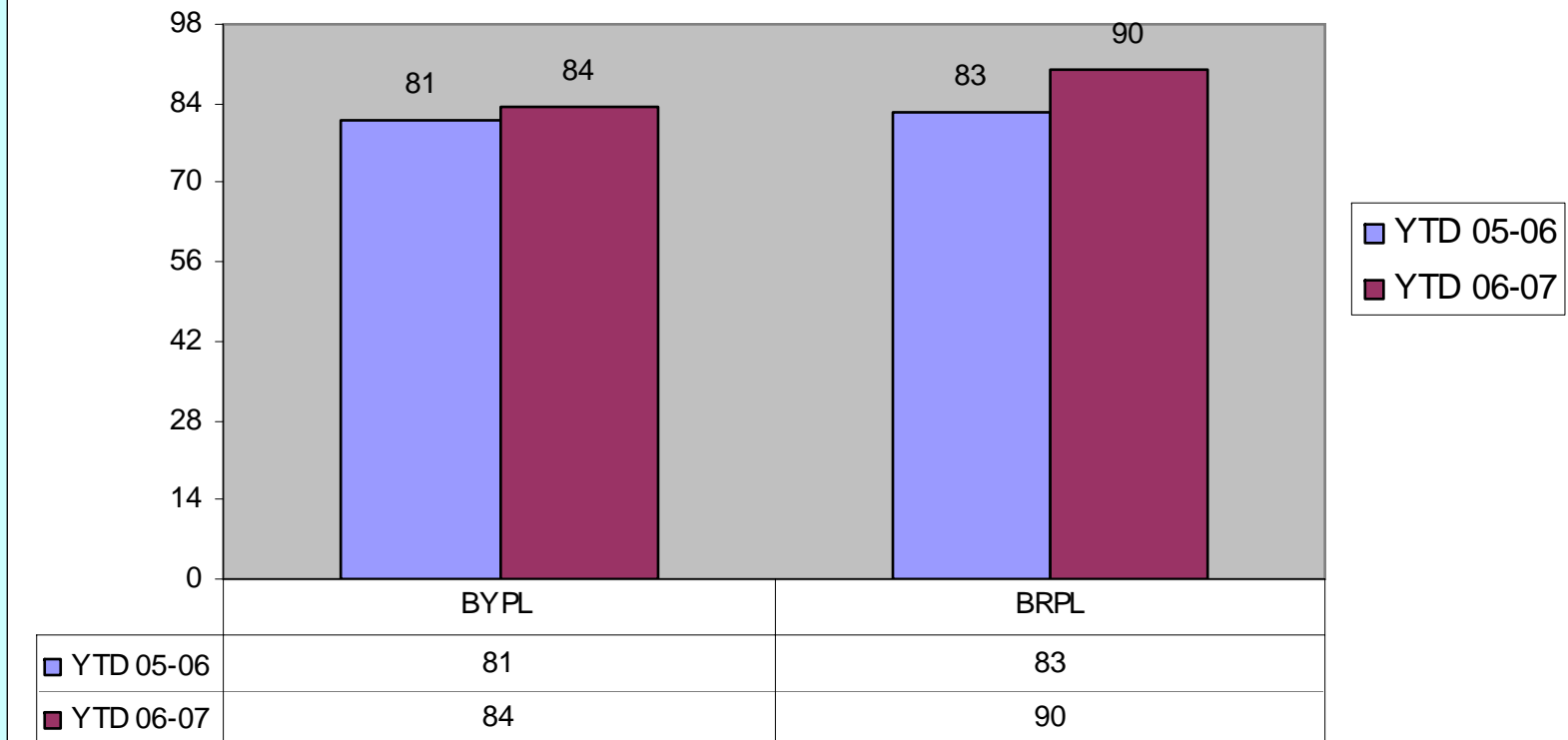
Impact Analysis- Commercial

Company wise Complaint / Request Received



Impact Analysis- Commercial

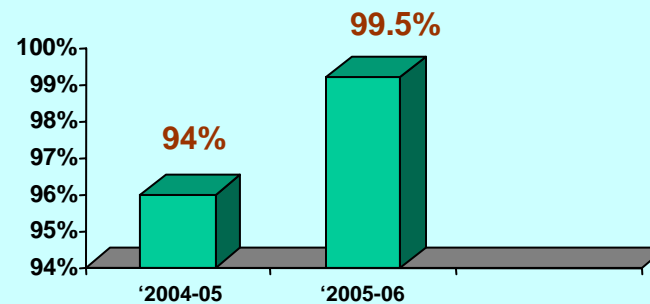
Company wise Complaint / Request Resolved % within DERC
Timeline



Impact Analysis

Reliability Indices – BSES Delhi

Consumer Hours served / Total Consumer hours to be Served (ASAI)



Customer Care

- ❑ **BSES Office**
 - ✓ 33 Customer Care Centers
 - ✓ 110 Complaint Redressal Office
- ❑ **Fixed location for payment run by BSES– 800 nos.**
- ❑ **Mobile facilities – 10 mobile vans**

To manage this operation we have

- ❑ **Installed 3500 PC & 1000 printers**
- ❑ **413 online offices working 24x7**
- ❑ **35 Servers**
- ❑ **49 offices on unified telecom**
- ❑ **94 Fibre optic lines & 314 ISDN connections**
- ❑ **1250+ Commercial application users**



Payment Gateway

Payment Options	IT Enablement
BSES Website	A registered consumer of BSES can also pay his bill through the BSES website bsesdelhi.com. Consumer can make the payment of his bill through Credit Card by this option
Cash Collection Centers	Consumer can pay their electricity bills through Cash/Cheque/DD on any of the BSES collection centers. These centers are fully networked and well connected. POS machines & QMS applications are also installed on different locations for collections
Easy Bill	Consumers can make their payment through Easybill outlets and the same gets updated in our database.
ECS	Consumers can pay their electricity bill by registering for paying through ECS.
SMS	Consumers can opt for getting their bill amount each month through SMS

The Path Ahead

Implementation of the following:

- SAP ISU
- Middleware
- ADS
- Citrix
- Learning Management System
- Distribution Management System
- Storage consolidation
- Implementation of Disaster Recovery site





Thank You