

**AFEI - International Conference on  
Net-Centric Transformation -  
"Going Live with SOA"**

**Managing Net-Centric  
Systems: The Complexity  
of Web Services  
Management**

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# Gartner Report on Web Service Management

Gartner (2002)-

Web Services (WS) management tools must address the traditional "FCAPS" areas: Fault, Configuration, Accounting, Performance and Security management. While there isn't yet a complete tool from one vendor, Gartner says 75% of enterprise companies implementing Web services will be deploying more than one WS management tool.

# "FCAPS" in a Nutshell

- F**      Fault Management: Fixing what is broken.
- C**      Configuration Management: Controlling the operational parameters of something so it works the way you want.
- A**      Accounting Management: Knowing who is using how much of what, and maybe billing them for it.
- P**      Performance Management: Making sure it all works robustly (fast).
- S**      Security Management: Controlling who can do what.

# "FCAPS" Details - Model for Network Management

Fault Management	Configuration Management	Accounting Management	Performance Management	Security Management
alarm handling	network recovery	track service usage	data collection	control access
trouble detection	network provisioning	bill for services	report generation	enable services
trouble correction	auto discovery		data analysis	access logs
test and acceptance	back-up and recovery			intrusion detection
network recovery	database handling			

**A Example Subset of "FCAPS" Services**

# Managing WS Complexity

- It is the **human element** that dictates success or failure – not software and code.
- Well architected systems consider the human element at every stage
  - Development
  - Deployment
  - Management
  - Monitoring
  - Maintenance
- **Complexity must be expected**, mitigation strategies anticipated and adopted

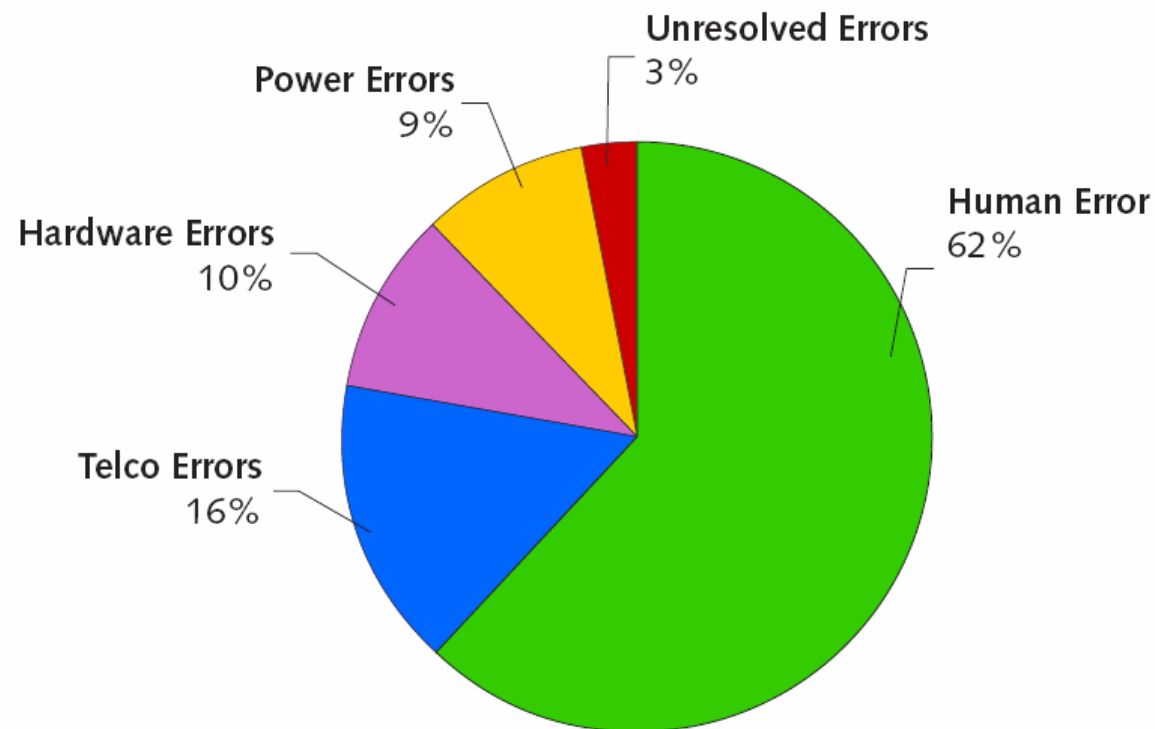


*Web Services Management*

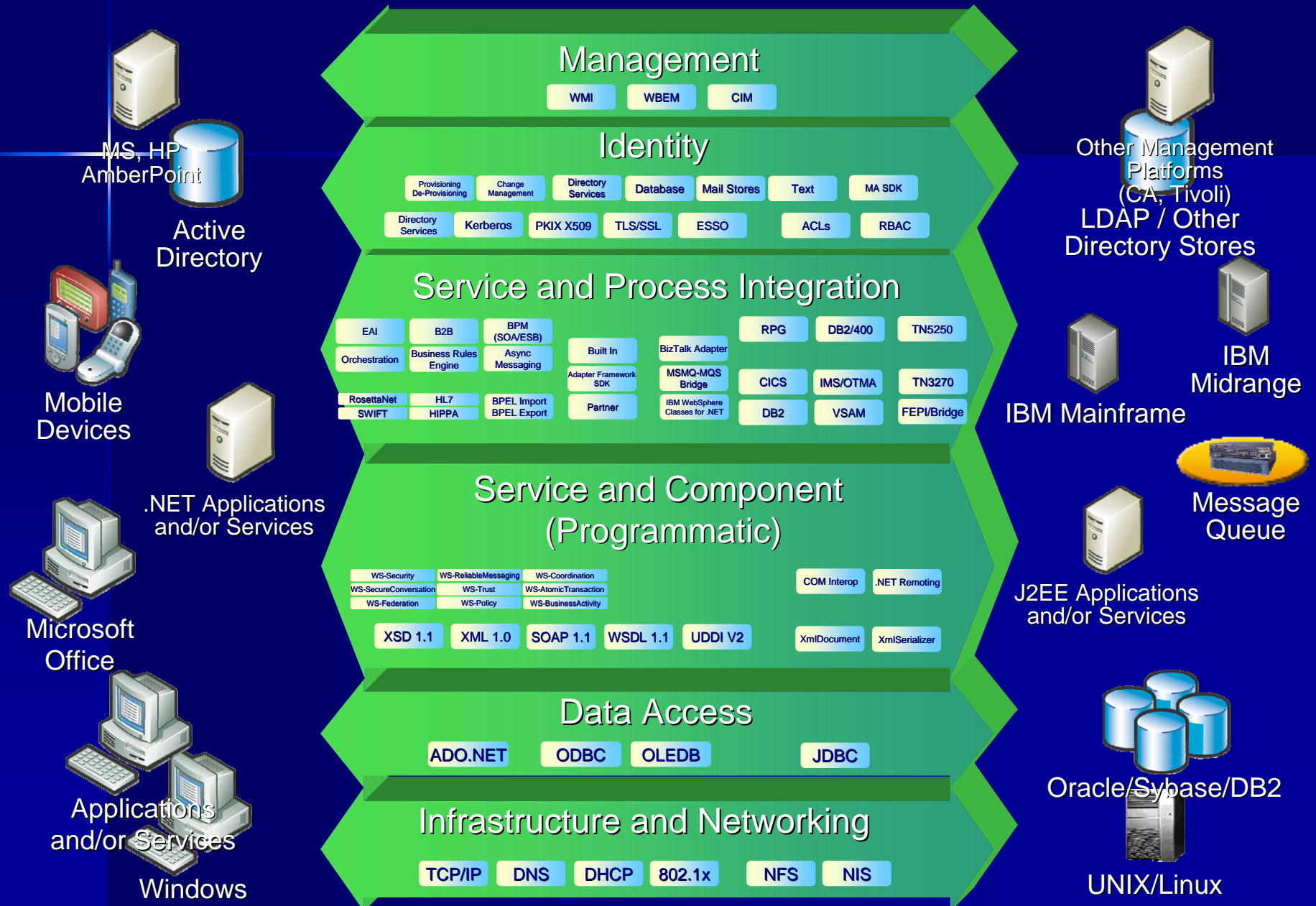
# Why is the Human Element Important to WS Management?

## Human Error Is the Leading Cause of Network Downtime

Source: *The Yankee Group 2002 Network Downtime Survey*



# The Complexity of Web Services "FCAPS"



# Setting the Stage.....

- Net-Centric Service Management is Complex.
- Net-Centric Service Management in Distributed, Heterogeneous Environments is Very Complex.
- Significant New Challenges Must Be Addressed Before "Going Live with SOA."
- Apply an Established Network Management Model, Like "FCAPS", Helps Us Manage the Complexity.
- Web Services Management Tools Will Continue to Improve and Evolve.

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