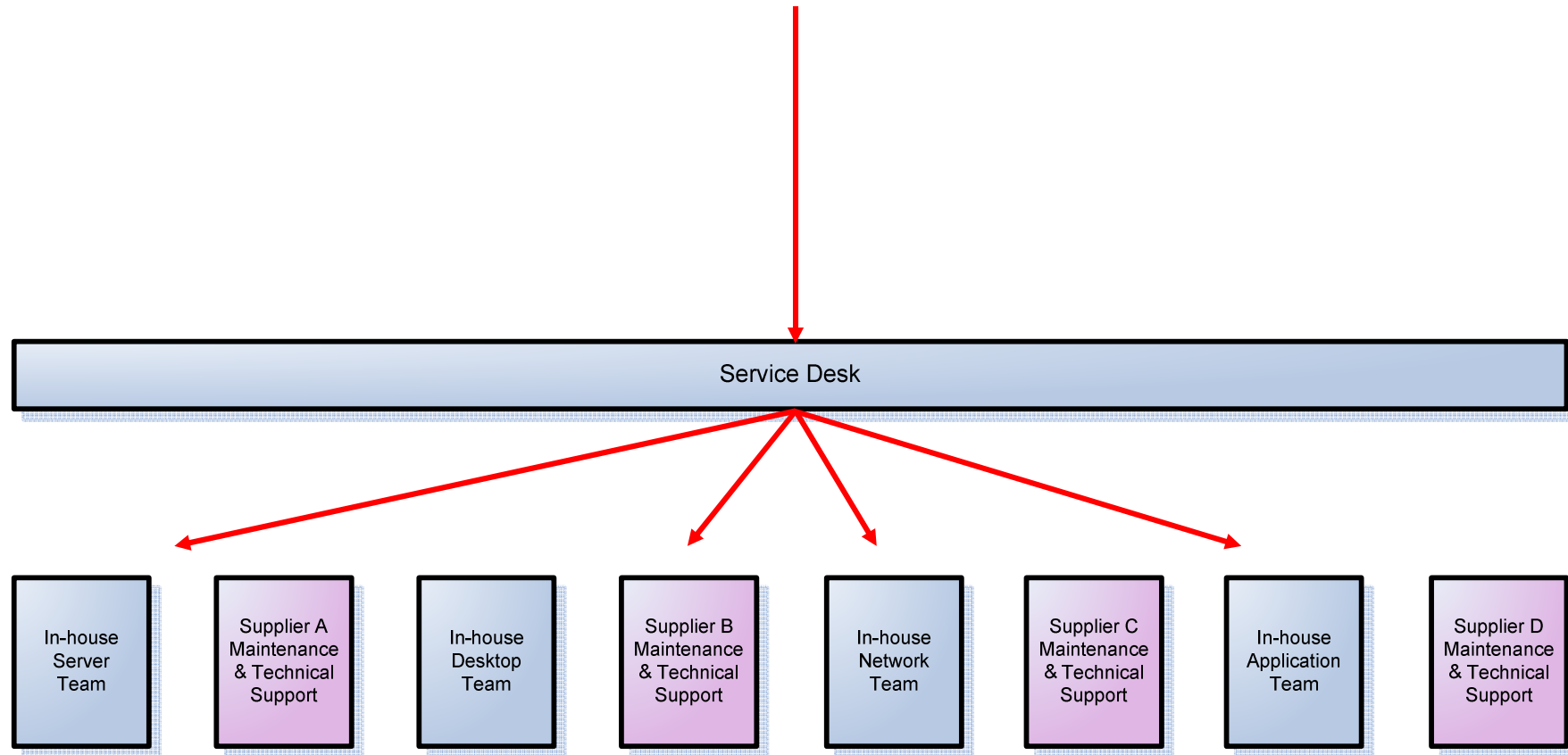


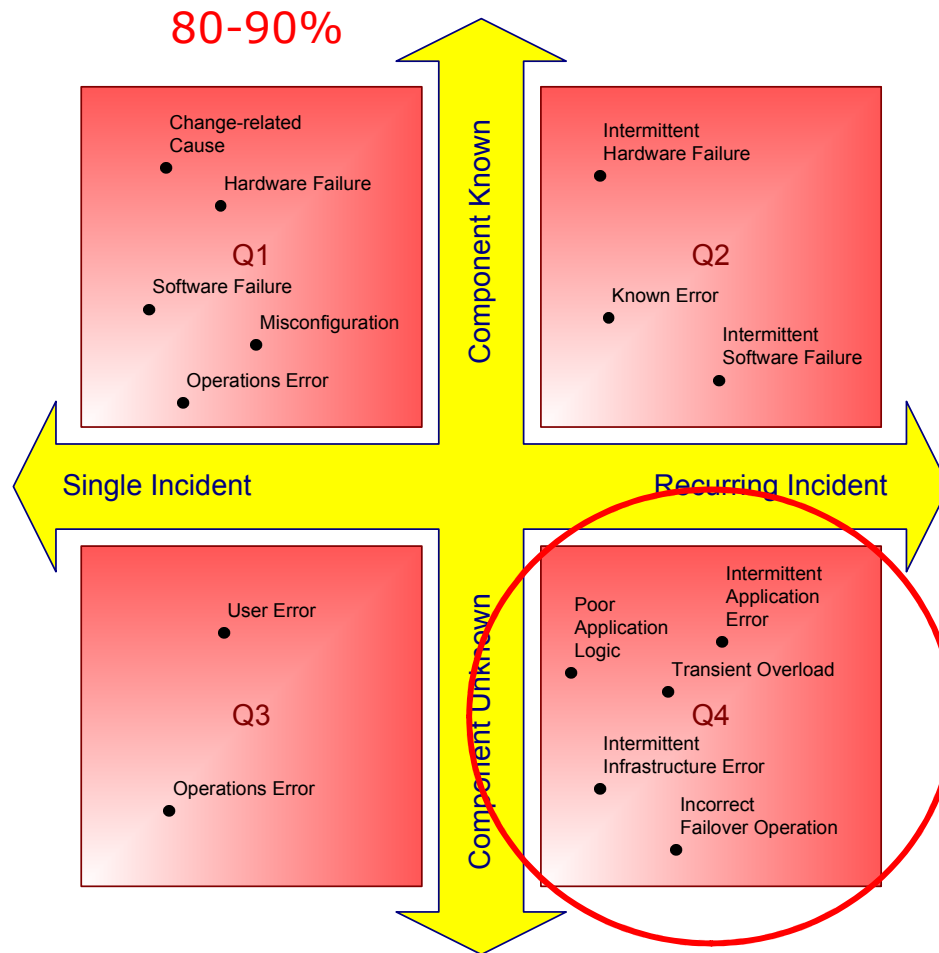
How method-based problem diagnosis can cut downtime by 97%

*Presented by: Paul Offord, Development Director
www.advance7.com*

Routing of Problems



Grey Problem Characteristics



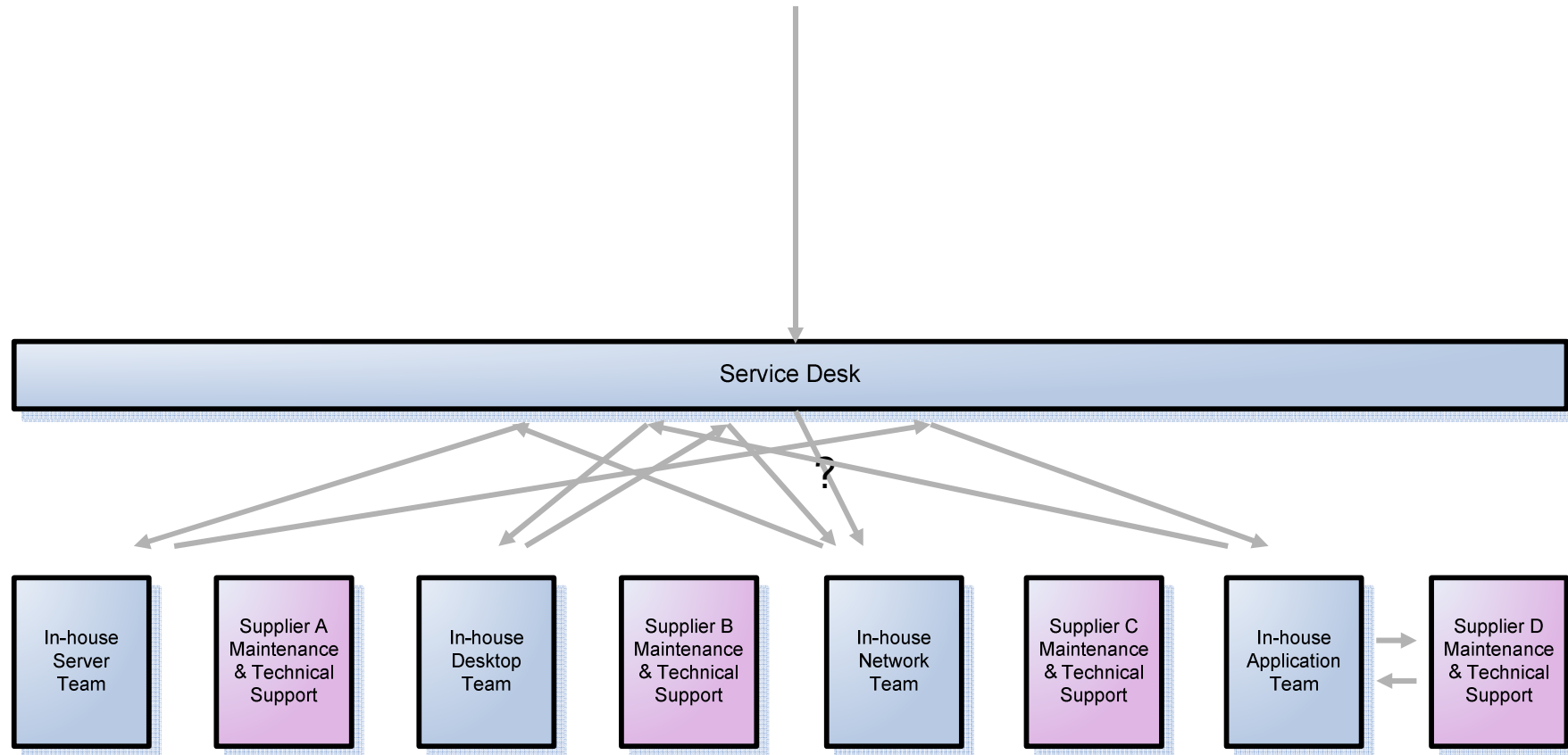
Grey Problems are typically:

- What forms the bulk of ongoing recurring problems
- Medium or low priority (high impact / low urgency)
- Slow to resolve
- Heavy on IT resource
- A sign of problems to come
- What gets remembered
- What defines IT performance

Additional impact:

- Close down IT options
- Create a fog
- Business adjusts

Grey Problems



Problem Phases

Incident

- Phase 1
 - Dealt with by Help Desk / 1st line support
 - Simple problems and user errors
 - Service recovery based on knowledge and procedures
 - Service recovery within 16 hours worked

Problem or Major Incident

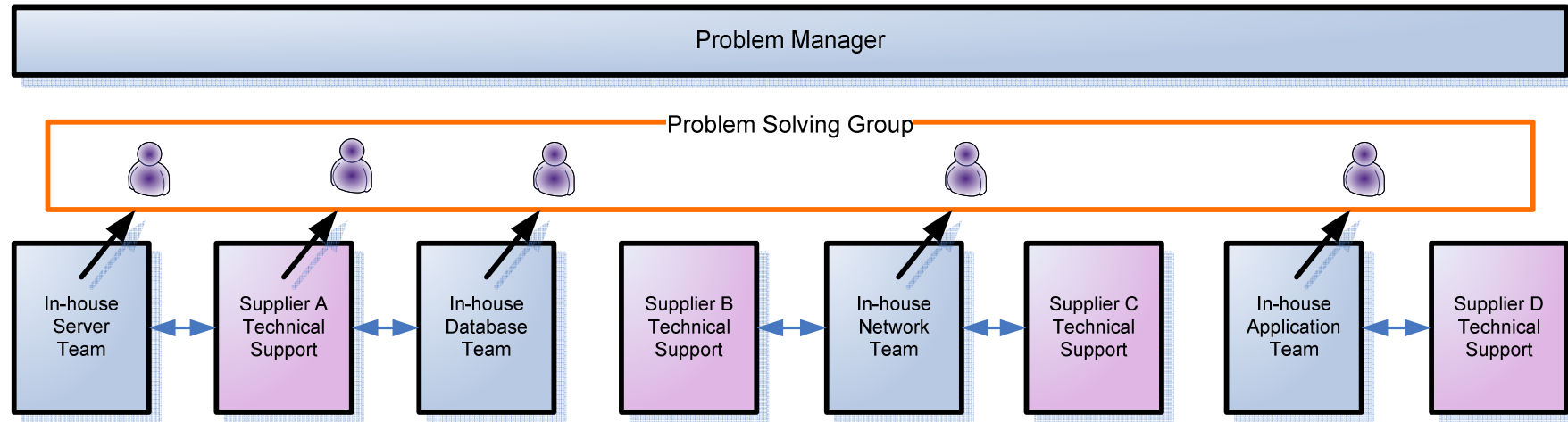
- Phase 2
 - Dealt with by 2nd / 3rd line support
 - Issues caused by faults, overload or misconfiguration
 - Service recovery or fixed knowledge, tools and knowledge-base access
 - Achieved within a further 24 worked hours

- Phase 3
 - Dealt with by 3rd line support with supplier product specialist
 - Complex problems, often performance related and/or intermittent
 - Fixed through pattern method, detailed product knowledge and advanced tools
 - Fixed within further 24 worked hours

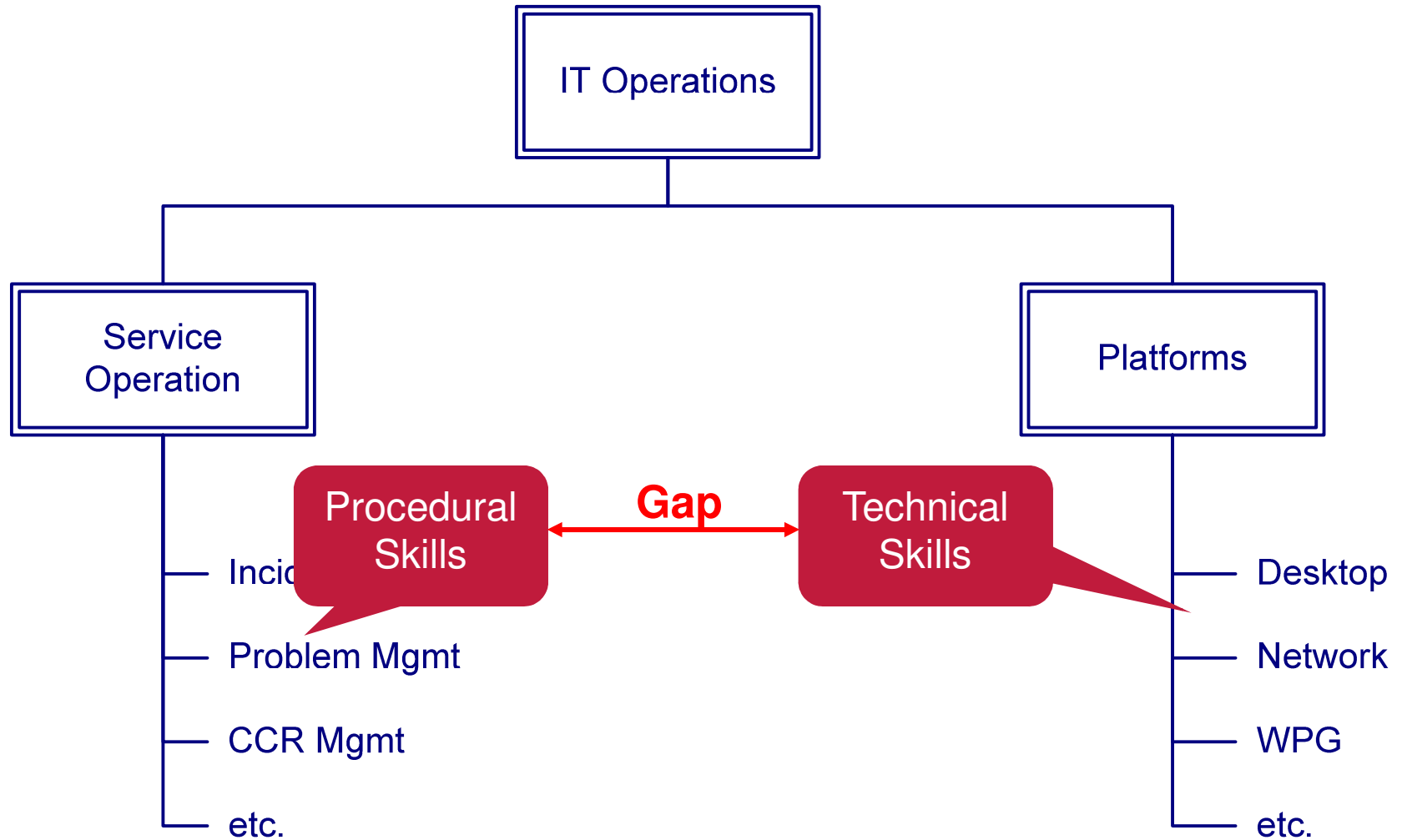
- **Phase 4**
 - **More and more people get involved**
 - **Complex problems that have dropped through Phase 3 with root cause unknown**
 - **Attempts to fix through holistic method, gut feel, random upgrades, etc.**
 - **May be fixed within from 10 days to 2+ years or may never be fixed**



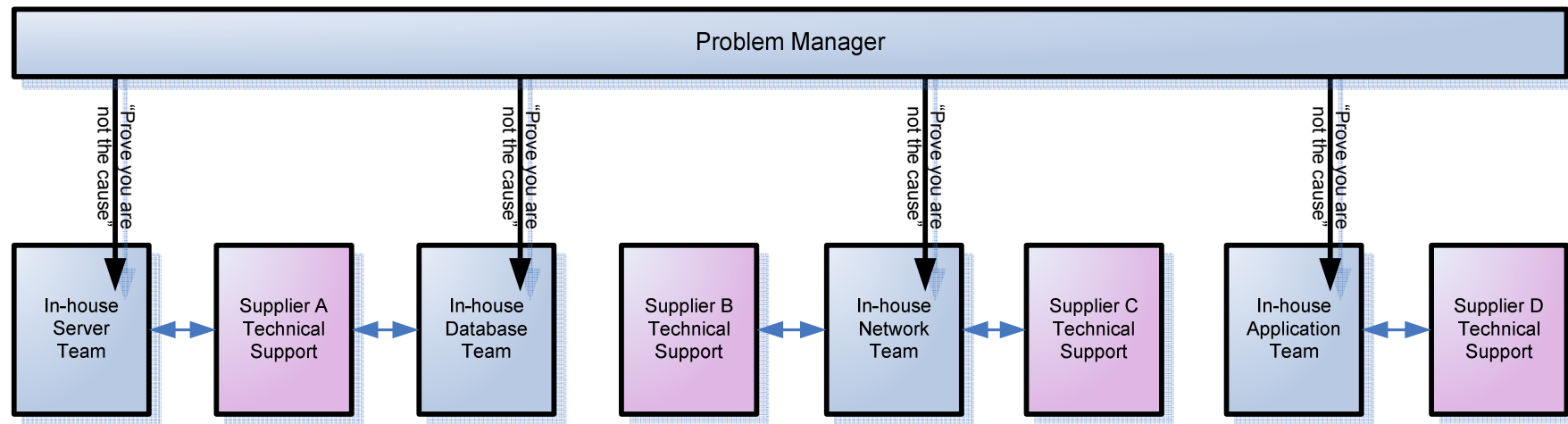
The ITIL Solution



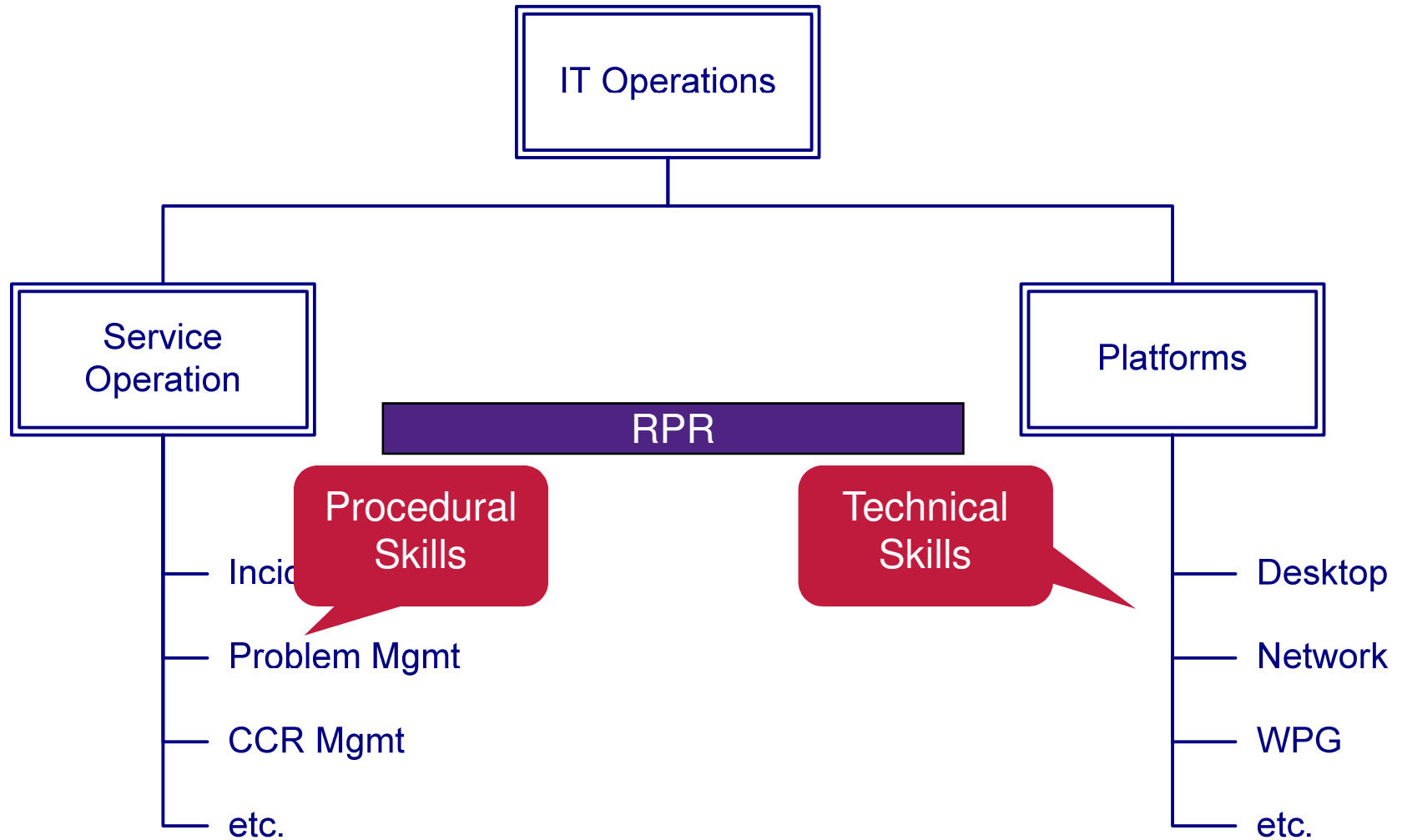
Problem Diagnosis Gap



Typical Resulting Model



Bridge The Gap

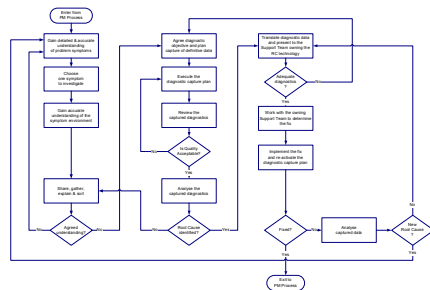


RPR - What to Do & How to Do It



Core Process

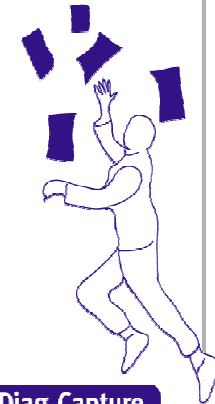
- Discover
 - Gather & review existing information
 - Reach an agreed understanding
- Investigate
 - Create & execute a diagnostic plan
 - Analyse & iterate if necessary
 - Identify Root Cause
- Fix
 - Translate diagnostic data
 - Determine & implement fix
 - Confirm Root Cause addressed



Supporting Techniques



Initiation & Planning



Diag Capture

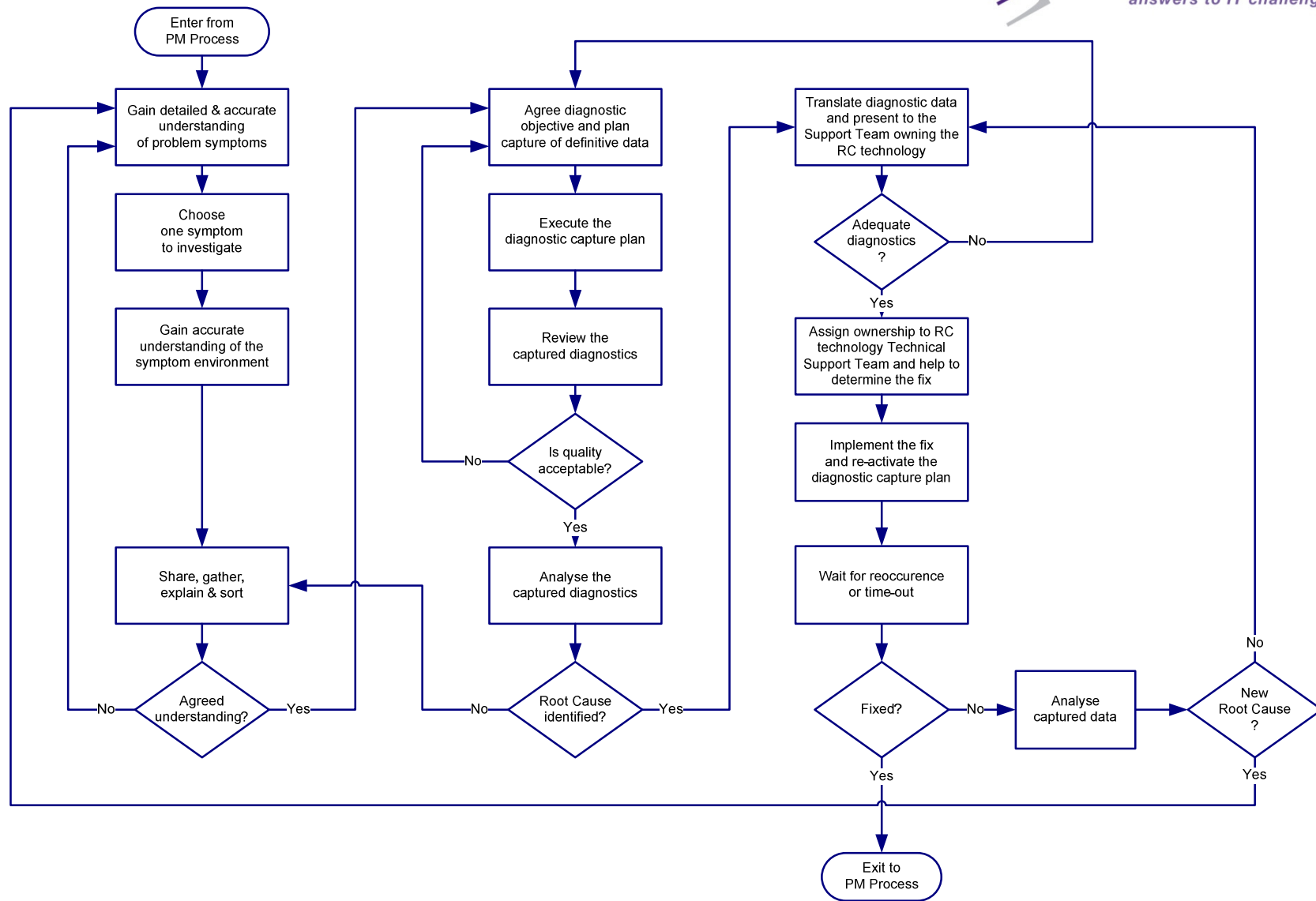


Analysis



Tools

Core Process



Definitive Diagnostics



- Direct diagnostic correlation
 - User experience ↔ Diagnostic events
- Statistical data typically of little use
 - Lack of time correlation
 - Detail lost in averaging
- Timestamped diagnostic event recording needed
 - Diagnostic logs
 - Network traces
 - Process traces
 - Web logs
 - etc.

When to Change Tack



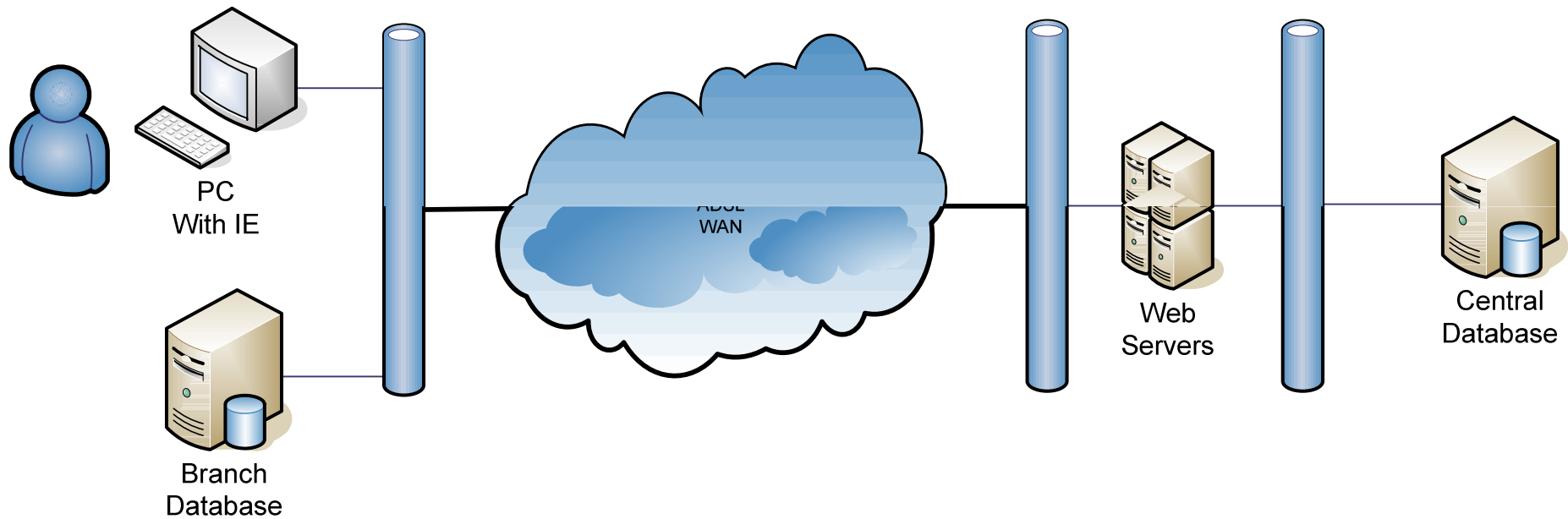
Giveaway terms:

“We’re just going to try one more thing”

“We made a change and it’s improved a bit”

Illustration of Definitive Diagnostics

Sports Coaching System



"It's slow"

Fingers Were Pointing

- Must be a network problem because **other branch applications are slow**
- Must be a database problem because **we've had other similar problems**
- DBA said that it can't be the database as **all of the stored procedures profiled**



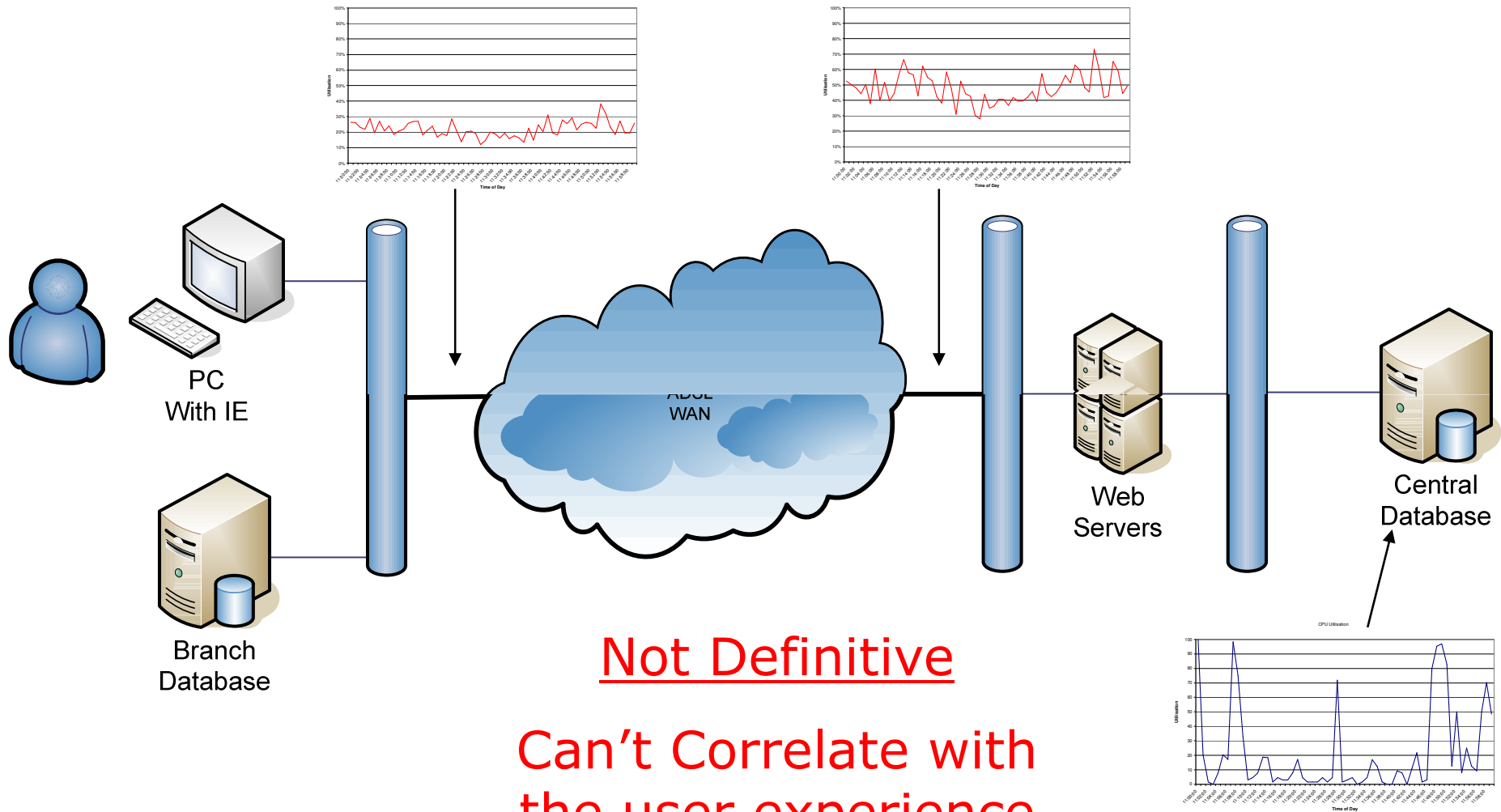
“The Sports Coaching System is Slow”



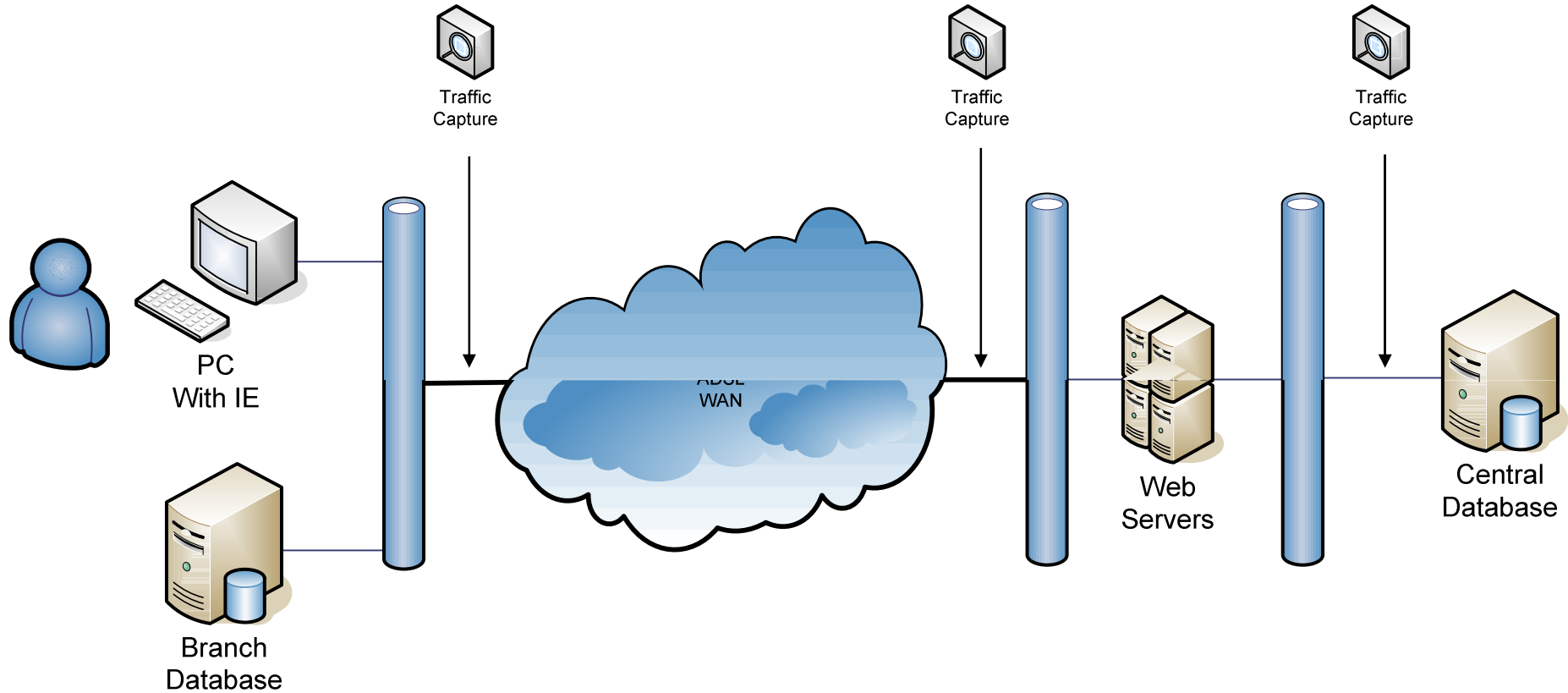
Actual Problem

Click on Appointments in the menu bar it
intermittently takes 10+ seconds to respond

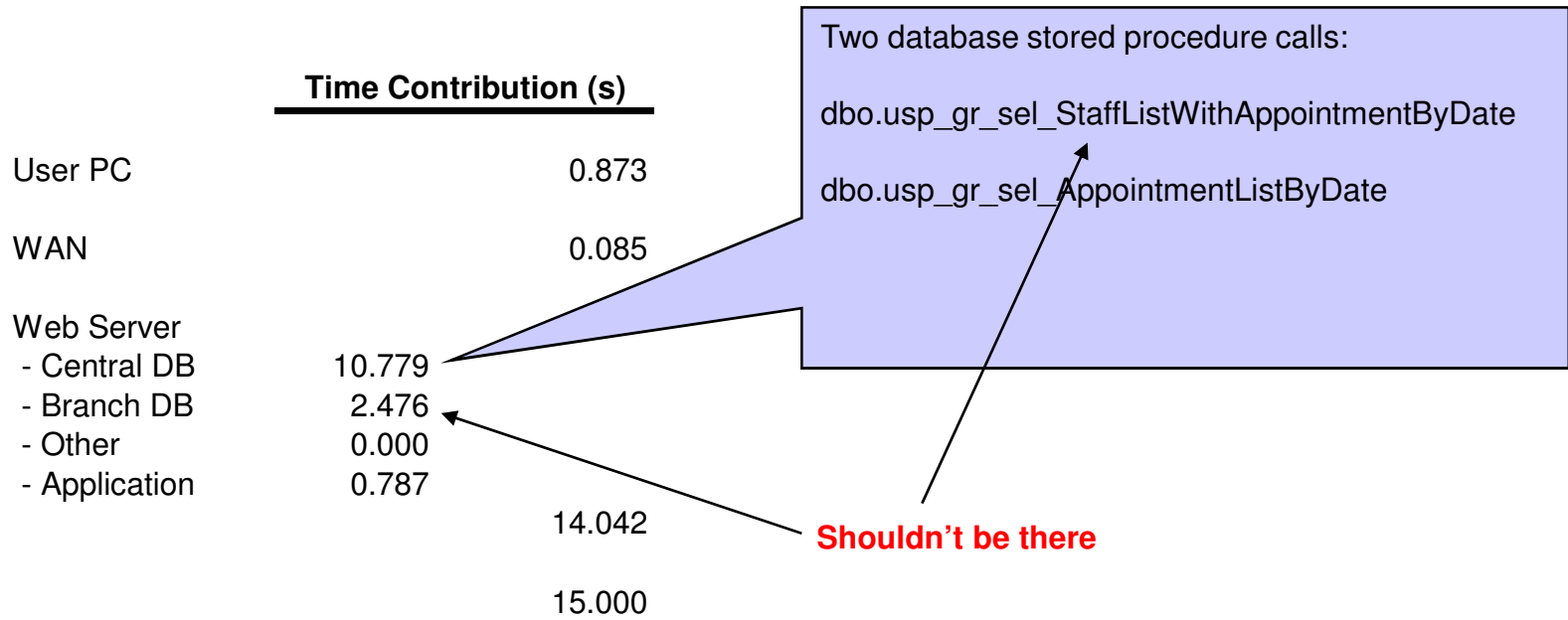
Interpreting Wiggly Graphs



Multi Trace Correlation



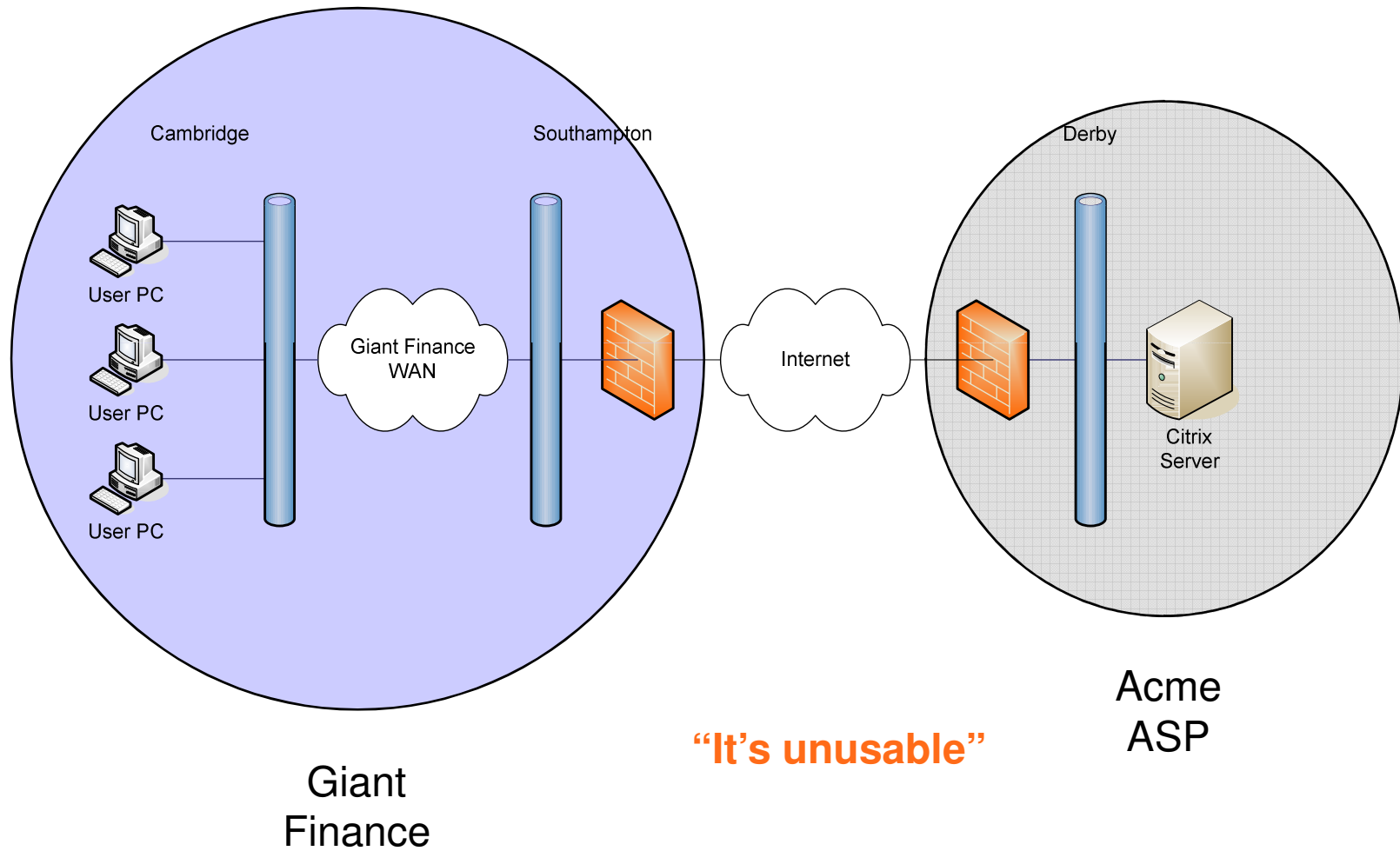
Time Accounting



A Supporting Technique

The Whiteboard

TopFund Scenario



Whiteboard example



- **Symptoms**

- Topfund users get type-ahead delays
 - Giant users get slow web access

- **Boundaries**

- Only users in Cambridge
 - No other Acme users get the problem
 - Only happens with > 1 user

- **Other Observations**

- Cambridge users get no other problems
 - No problems with other 3rd party apps
 - No one else has problems with TopFund

- **Possible Causes**

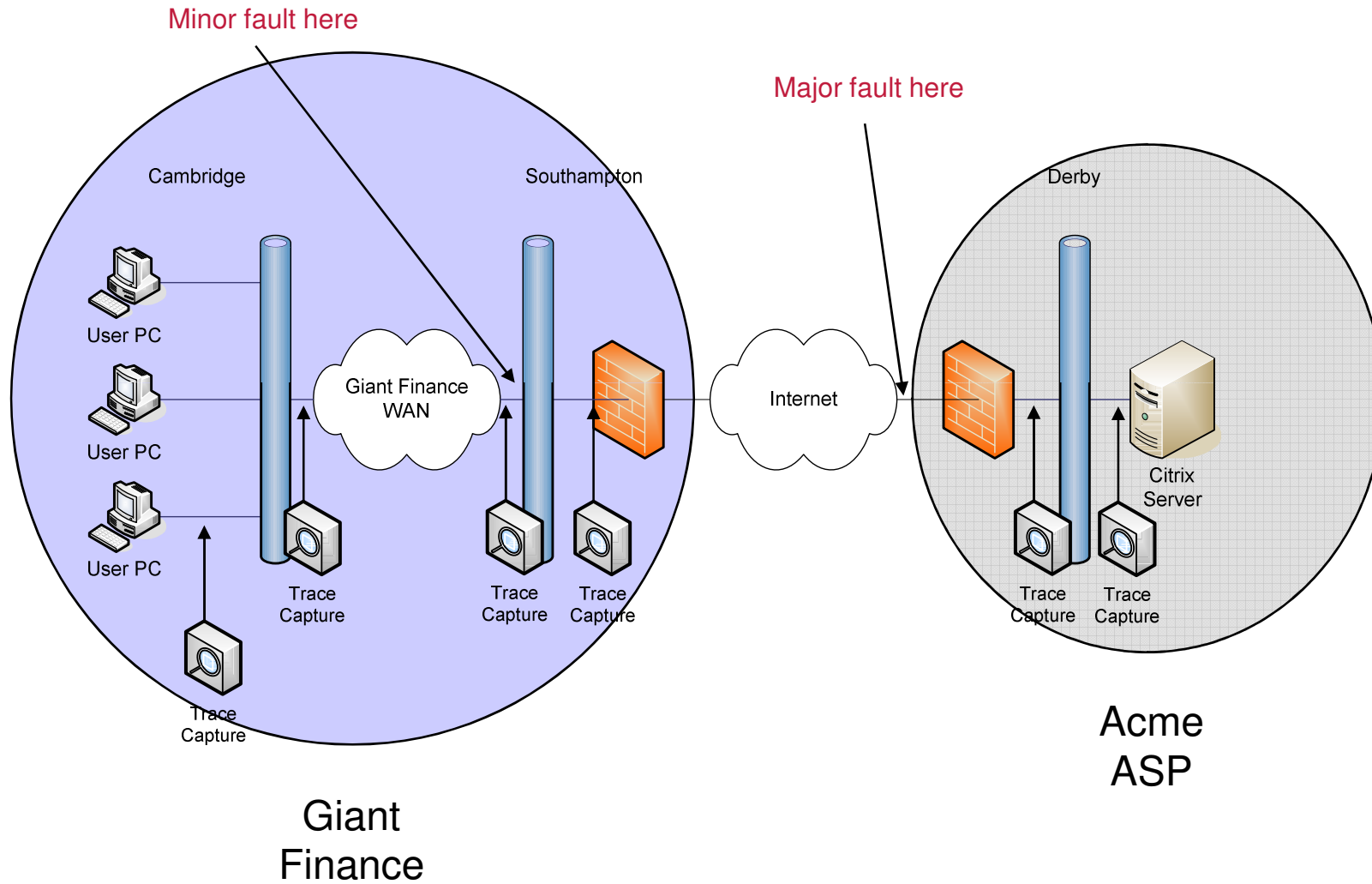
- User PC
 - Cambridge LAN
 - Corporate WAN
 - Southampton LAN
 - VPN
 - Derby LAN
 - Citrix Servers

- **Action Plan**

- Trace at user PC, Cambridge router, S'ton router, VPN S'ton firewall, VPN Derby firewall, Citrix servers

“That doesn't explain why.....” is banned

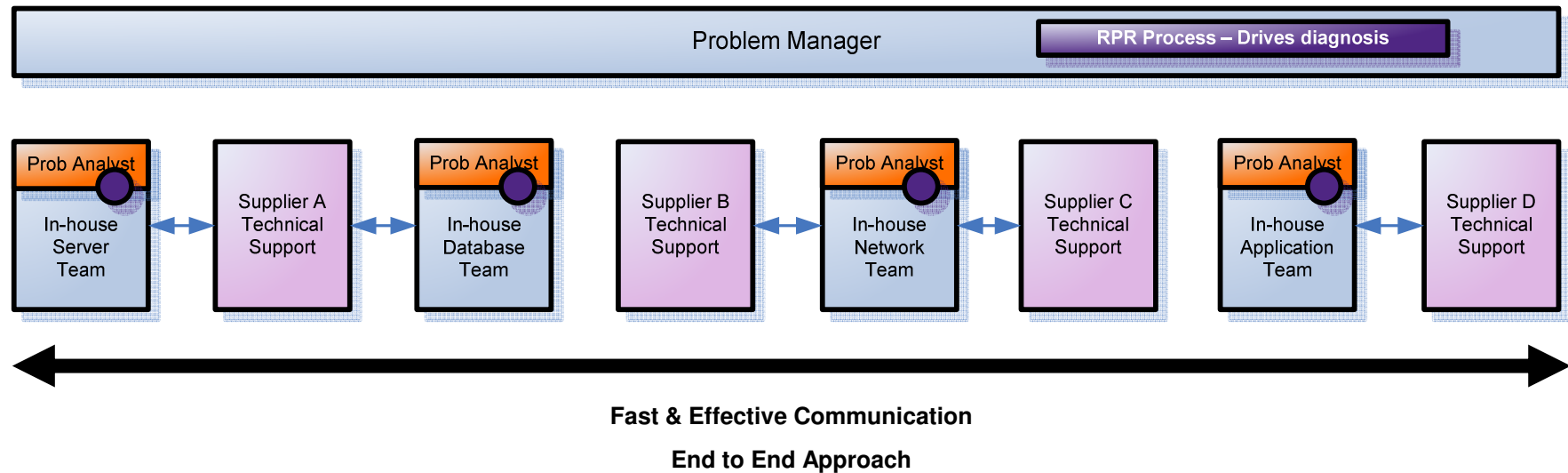
TopFund Analysis



Putting It Into Practice

A Workable Model

Use RPR to Create 4th Line Support



 RPR Supporting Techniques

Examples

- Fund manager had an application start-up problem impacting 1,200 users for 8 months
 - Root cause identified in 2.5 days with RPR
 - Fixed in 3.2 days
- Bank had a system problem impacting 900 offshore users for 13 months
 - Customer ran £1.2m SIP for 10 months
 - Root cause identified in 1.5 days with RPR
 - Fixed in 4 days
- Mortgage company users suffered intermittent Citrix-hosted application failures for 11 months
 - Root cause identified in 5 days with RPR (thru' REACT)
 - Downtime cost - £271k
 - REACT cost £9,800 => payback 12.5 days

Key Features & Benefits

- Based on definitive diagnostics
 - Easily deals with intermittent & transient problems
- Inherently evidence based
 - Bad information has little or no impact
- Spans technology silos
 - Deals with Service problems
- Deterministic process
 - You regain control, customer regains confidence
- Initial objective is Root Cause Identification
 - It's consistently faster

How You Can Benefit – Now!

Set your own
criteria for Phase 4



Information
Wikipedia
www.advance7.com



Ban

“That doesn't explain why.....”

“We're just going to
try one more thing”

