

Session 41A Apdex Process

Apdex Process

Session 41A

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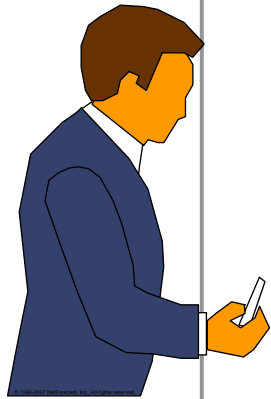
Apdex Symposium

8:00-9:00	40A	Application Performance and How Apdex Makes it Better
9:15-10:15	41A	Apdex Process
1:15-2:15	43A	Measurement Tools and Reports
2:45-3:45	44A	Setting Performance Objectives Using Apdex
4:00-5:00	45A	Apdex Case Studies

We thank the Contributing Members for their financial support of the Alliance



Outline

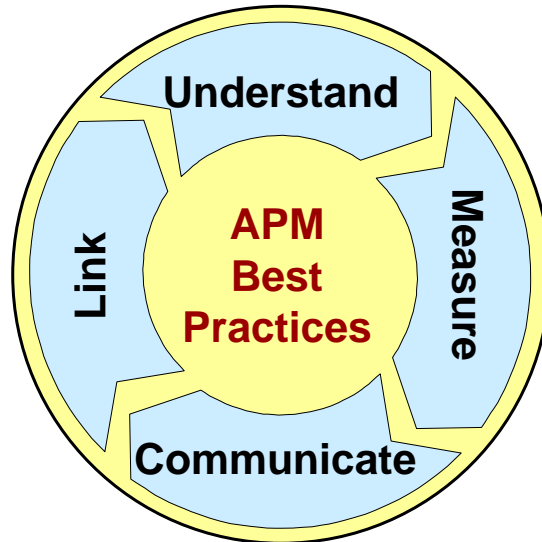


- **APM Best Practices**
- **APM Process**
- **Measuring Performance**

APM Best Practices

- **Understand**
 - Know your applications, users, and requirements
- **Measure**
 - Properly measure key aspects of application performance
- **Communicate**
 - Provide relevant performance reports to management
- **Link**
 - Show specific business-performance links

Continual Service Improvement



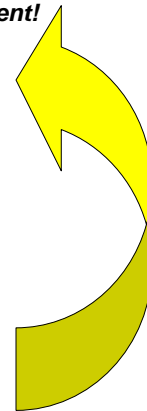
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APM Benchmarks

- **APM**
 - APM has many Metrics
- **Best practices for APM**
 - Improving APM requires better organization processes
 - We here define four APM process Best Practices
- **Benchmarking the best practices**
 - We evaluate how well enterprises perform the best practices using Benchmarks (1-10, 1 worst, 10 best)
- **Result**
 - Better best practices lead to better IT performance – the Metrics get Better

Performance Improvement!



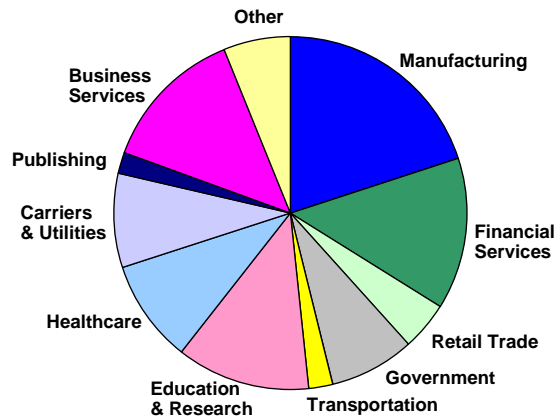
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NetForecast APM Best Practices Survey

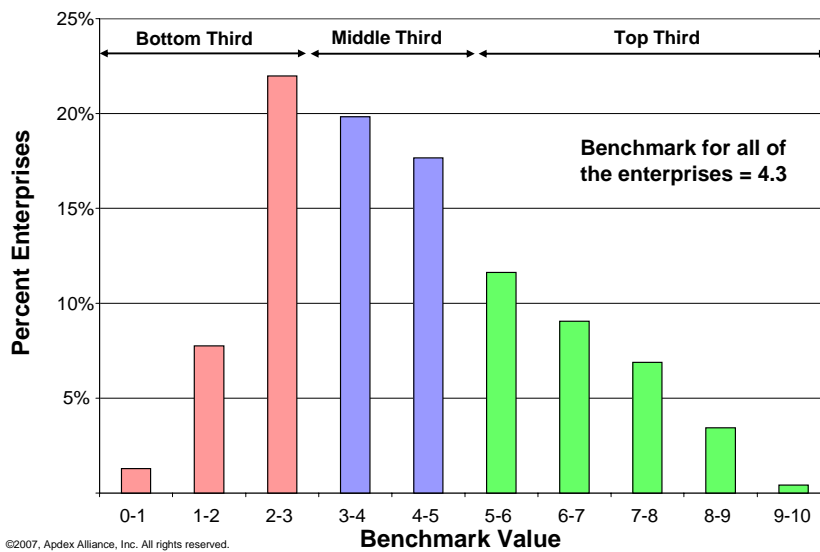
- **2007 Web-based survey**
 - 330 responses
- **Number of employees**
 - 1/3 less than 500
 - 1/3 500 to 10,000
 - 1/3 more than 10,000
- **Focus on business critical applications**
 - Internal and external facing



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Distribution of Benchmark Scores

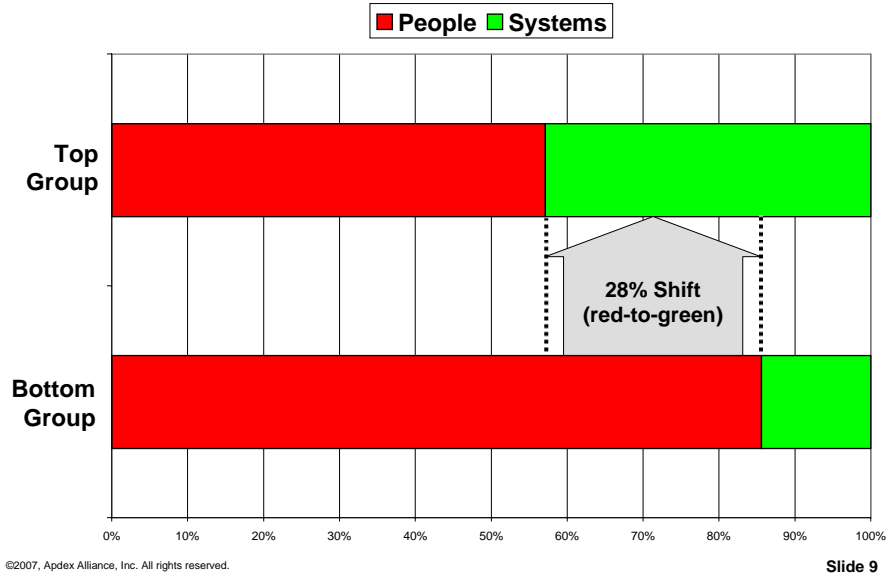


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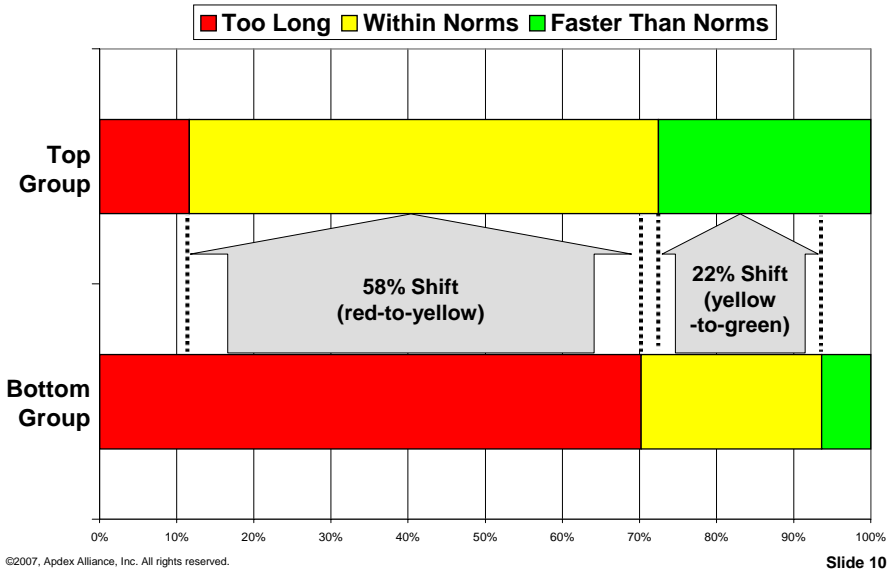
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Problem Discovery

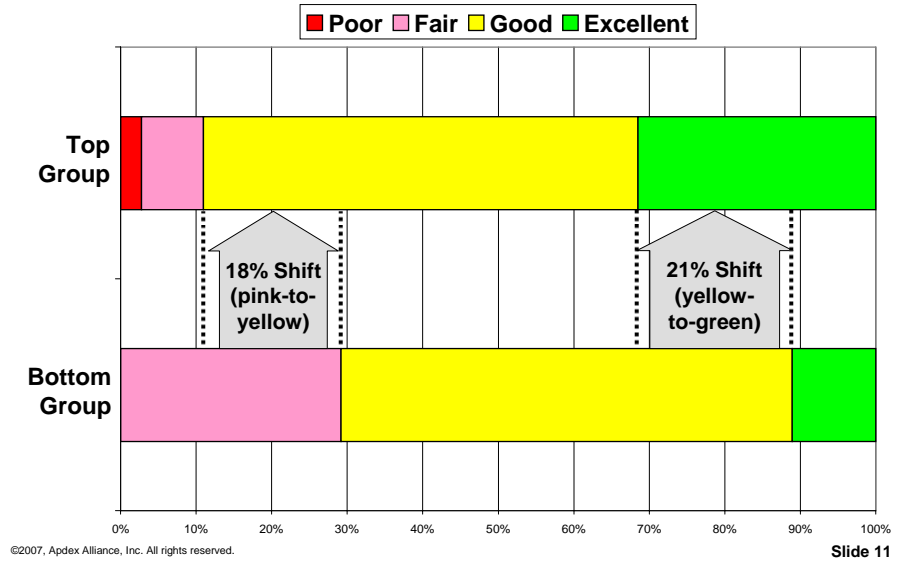


Time to Correct Problems

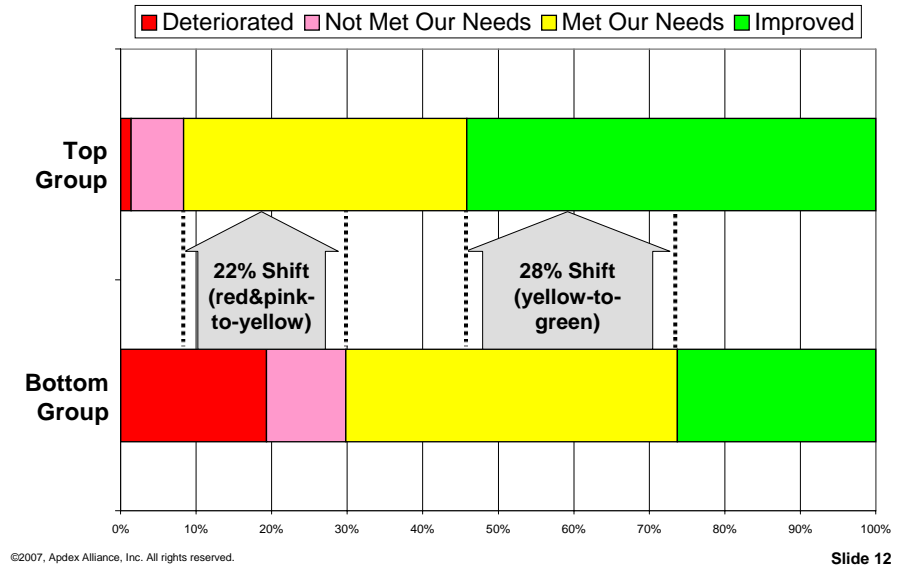


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Response Time

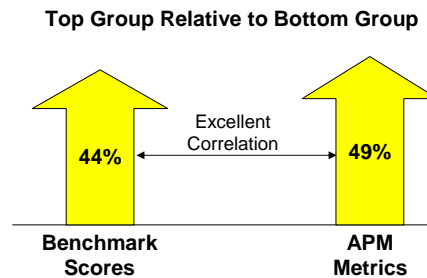


Performance Meeting Business Needs



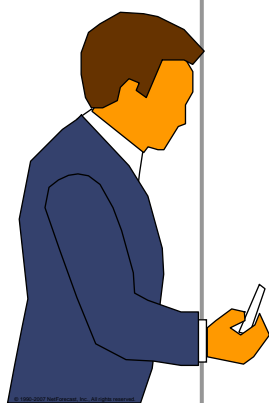
Summary

- **Improving your benchmark score has high value**
 - The conclusion is that these are APM best practices and that benchmarking your organization is important



- **There is much room for improvement**
 - Even the top group has far to go to reach the highest score of 10

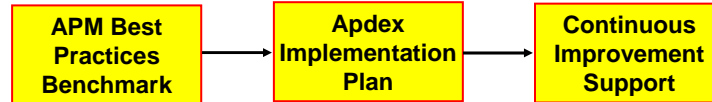
Outline



- **APM Best Practices**
- **APM Process**
- **Measuring Performance**

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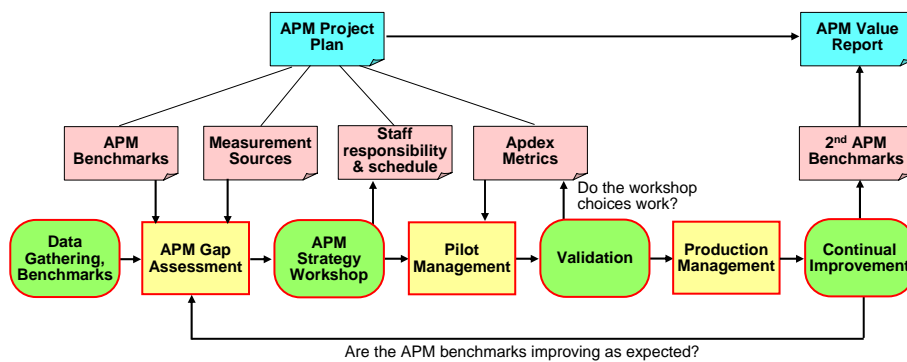
Simple APM Implementation Process



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Detailed APM Implementation Process



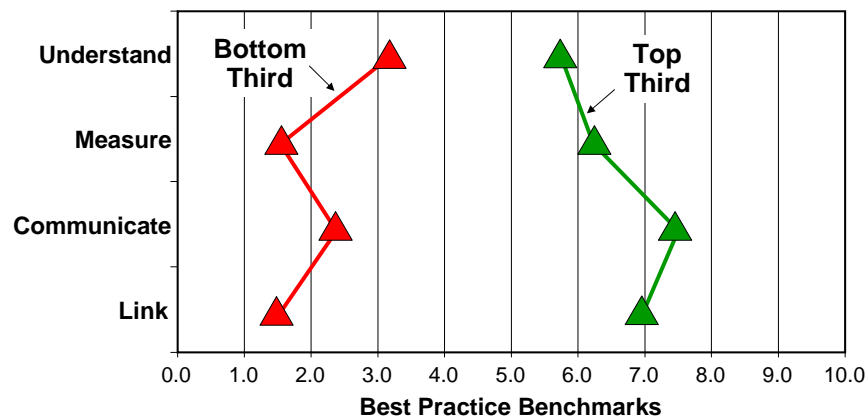
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Benchmark Your Organization

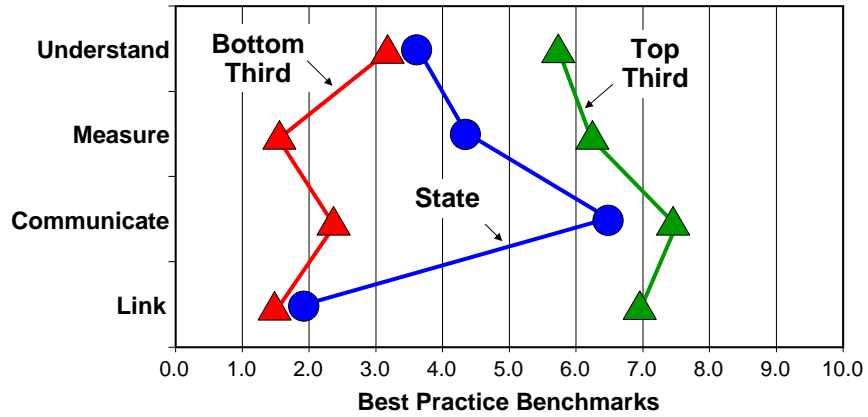
- Understand how well you are delivering on the APM best practices
 - You need a “you are here” assessment
 - Develop a detailed questionnaire
 - Poll key members of your organization
 - Integrate the results
- The benchmark results allow you to see
 - Where your current practices are strong, and
 - Where they need attention

Current State of the Industry



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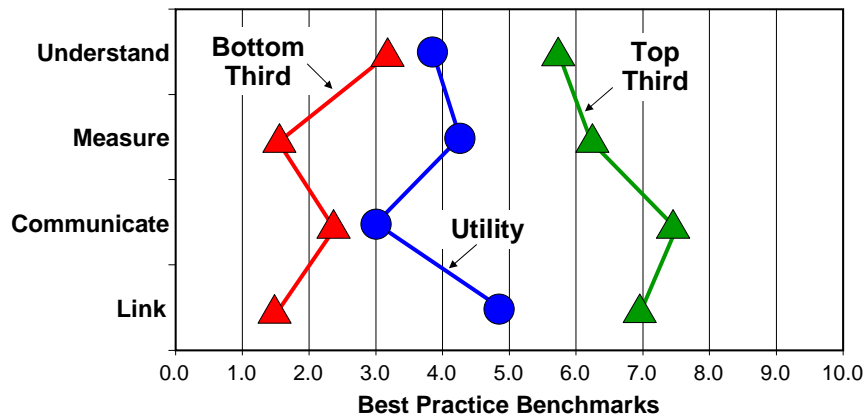
A State Government



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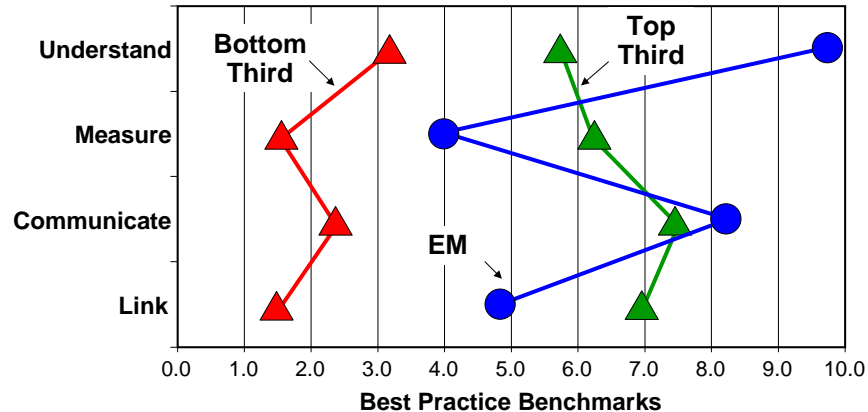
A Utility Company



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An Enterprise Management Vendor



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Gather Data

- In addition to the organization benchmark
- Define a project
 - Sponsor
 - Leader
 - Team
- Perform research to identify
 - APM reporting gaps
 - Assess user satisfaction with application performance
 - Poll the users in a structured method
 - Current measurement capability
 - Business drivers
 - Needs of key stakeholders
 - Scope of applications to consider
- Review the data with the project sponsor

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Run a Planning Workshop

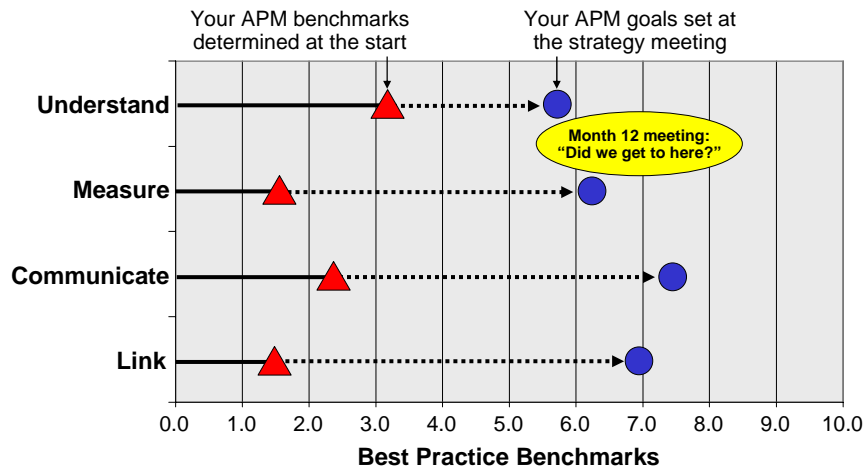
- **Focused to get your organization over the Apdex start-up hurdle**
 - A structured process that will get your organization started
 - Intensive 2-day on-site strategy meeting
 - Good preparation ahead of the meeting is essential
- **You must have key parts to the workshop**
 - Education – teach attendees about APM and Apdex
 - Critical facts – show the data you have gathered
 - Attendee input – provide ways for people to talk
 - Decision process – provide ways for people to vote
 - Outcome – decisions on major issues so you can go forward
- **Results**
 - APM deficiencies addressed
 - Necessary tools identified
 - Apdex reporting initiated
 - Action items and staffing responsibilities identified
 - Apdex implementation plan documented

Continual APM Improvement

- **Workshop result is a document that describes a 1 year plan**
- **The year should have 2 goals**
 - Get Apdex reporting going
 - Perform continuous improvement to both the APM process and APM results
 - Show that performance actually got better
- **Identify an interim assessment meeting**
 - Assess the quality of the Apdex reports
 - Assess implementation progress
 - Discuss additional applications to be added
 - Make recommendations for the remaining part of the year
- **At the end of the project plan period (one-year mark)**
 - Perform a follow-up APM best practices benchmark analysis
 - Did the APM scores improve?
 - Evaluate the Apdex report quality
 - Progress against the implementation plan
 - Define how to develop a long-term APM and Apdex strategy

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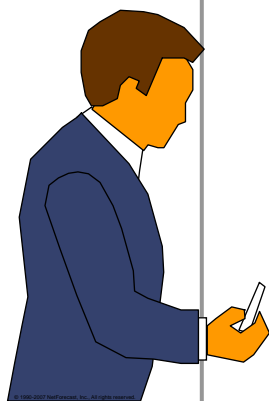
Did the Apdex Methodology Achieve the Goals Set at the Strategy Meeting?



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Outline



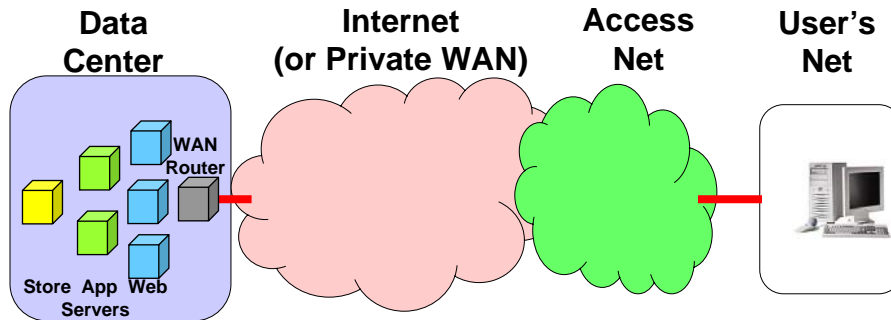
- APM Best Practices
- APM Process
- Measuring Performance

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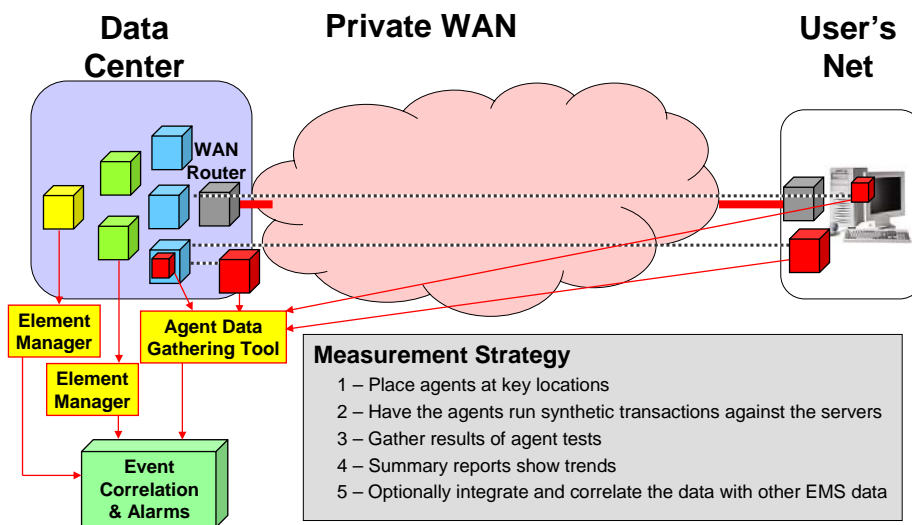
The User-Application Connection



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Private Synthetic Agent Measurement



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Private Synthetic Agent Measurement

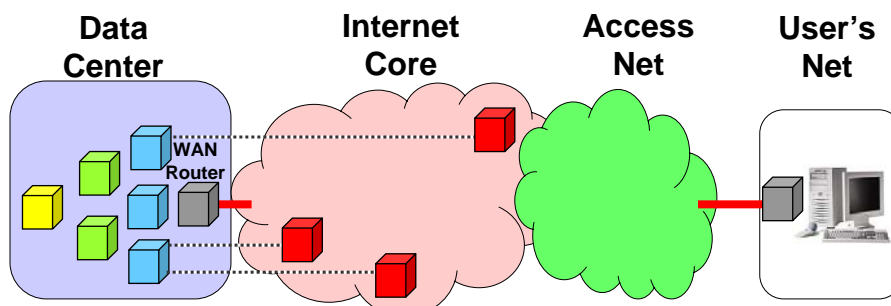
■ Pros

- Each measurement is accurate from its location and time of day
- Good for stress testing, controlled experiments, pre-deployment
- Agents can be placed “everywhere” the enterprise has access
- Has properties of being “end-to-end”

■ Cons

- Adding agents to production servers and desktops is risky
 - Can effect the service
 - Can be incompatible with the production software
- The data is only as good as the ability to have synthetic agents match real user behavior
 - Often users do things for which agents were never programmed
- Generates additional traffic
 - Each synthetic test is another “user” of the system
 - The agents must also report their test results to the data gathering device

Public Synthetic Agent Measurement Service



Measurement Strategy

- 1 – Select a geography where the service has agents
- 2 – Identify key Web pages to be polled
- 3 – Identify polling rate
- 4 – Review on-line reports
- 5 – Compare performance against public benchmarks

Public Synthetic Agent Measurement Service

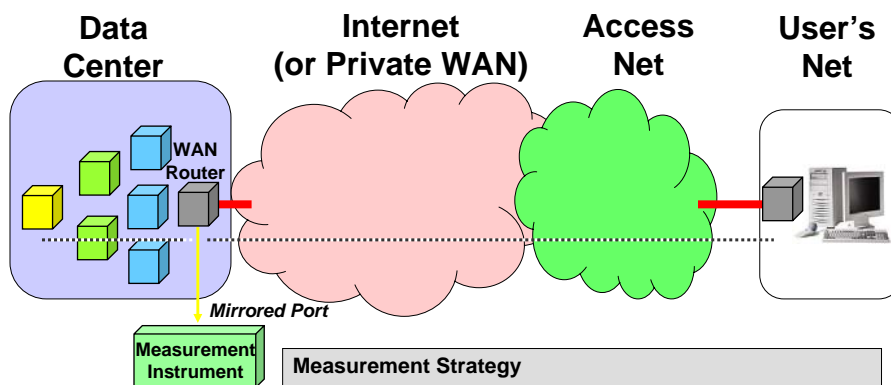
Pros

- Each measurement is accurate from its location and time of day
- Good for stress testing, controlled experiments, pre-deployment
 - Service has agents where you do not have a business location
- Permit comparing performance against an industry group or competitor
- Agents are “rented” from an Internet measurement service
- Data gathering, reduction and analysis runs on service servers

Cons

- Comparative tests show that the match between synthetic and real user data is often poor
- Synthetic response time is consistently either higher or lower than actual users
- Sudden changes in user response time can be missed by agents entirely
- Public synthetic agents services don't see most of the system that actually effect the real user experience
- Generates additional traffic
 - Each synthetic test is another “user” of the system

Passive Real User Measurement - Hardware



Measurement Strategy

- 1 – Watch packets arrive from the user to identify each user session
- 2 – Watch packets arriving from the server back to the user
- 3 – Identify session-level transaction markers
- 4 – Time-stamp everything: low level protocol through transaction
- 5 – Summary reports show detailed performance data

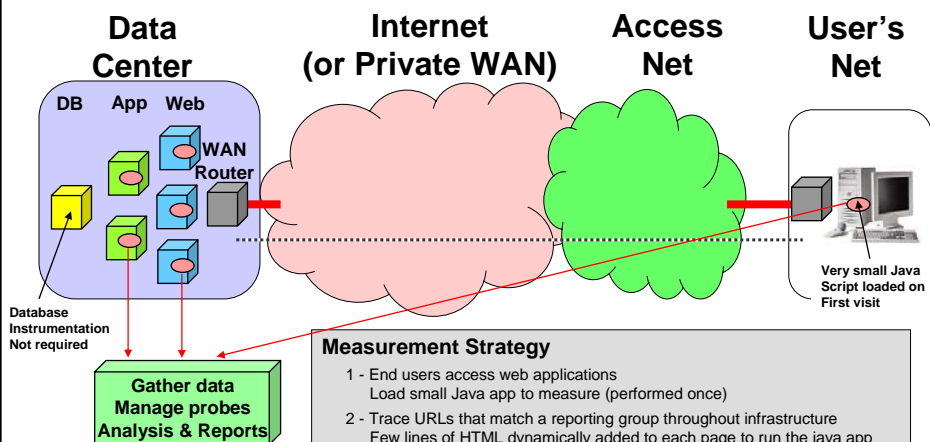
Passive Real User Measurement - Hardware

- **Pros**
 - Complete accuracy and user coverage
 - Built in adaptability (follows the users)
 - The real end-to-end user-level experience measurement
 - Simple appliance with no agents and no server software
 - Measurements can be gathered by many groupings
 - Geography, important user, application process point, important page
- **Cons**
 - Requires buying a box and getting trained on how to use it
 - Need multiple boxes for multiple data centers
 - Some tools measure Turns rather than Tasks
- **Why it works**
 - Application standards permit decoding application behavior
 - HTML, HTTP, XML are standards
 - Major client-server applications are now mature
 - Fast packet processing can reconstruct flows at 1 Gbps

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Passive Real User Measurement – Desktop SW



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Passive Real User Measurement – Desktop SW

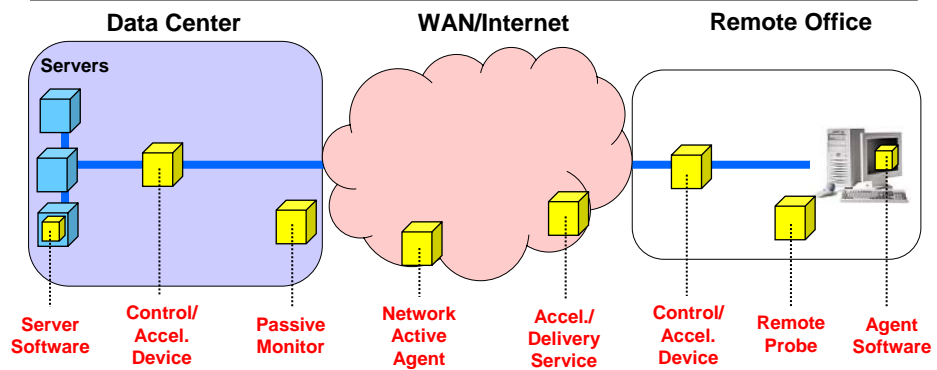
■ Pros

- Complete accuracy and user coverage
- Built in adaptability (follows the users)
- The real end-to-end user-level experience measurement
- Low overhead software in servers and desktops
- Measurements can be gathered by many groupings
 - Geography, important user, application process point, business group

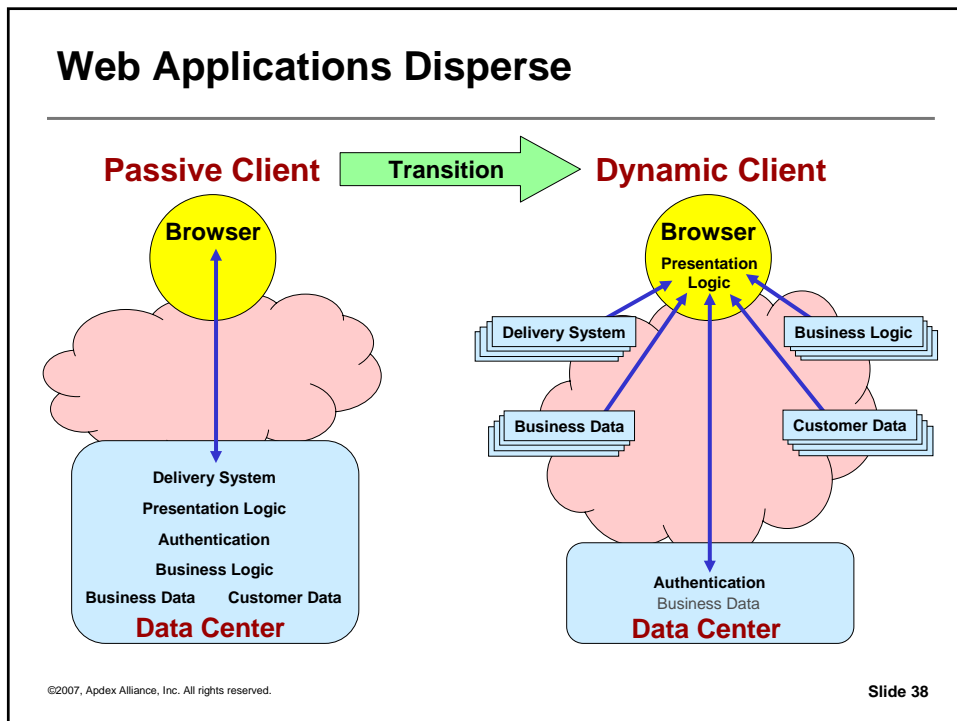
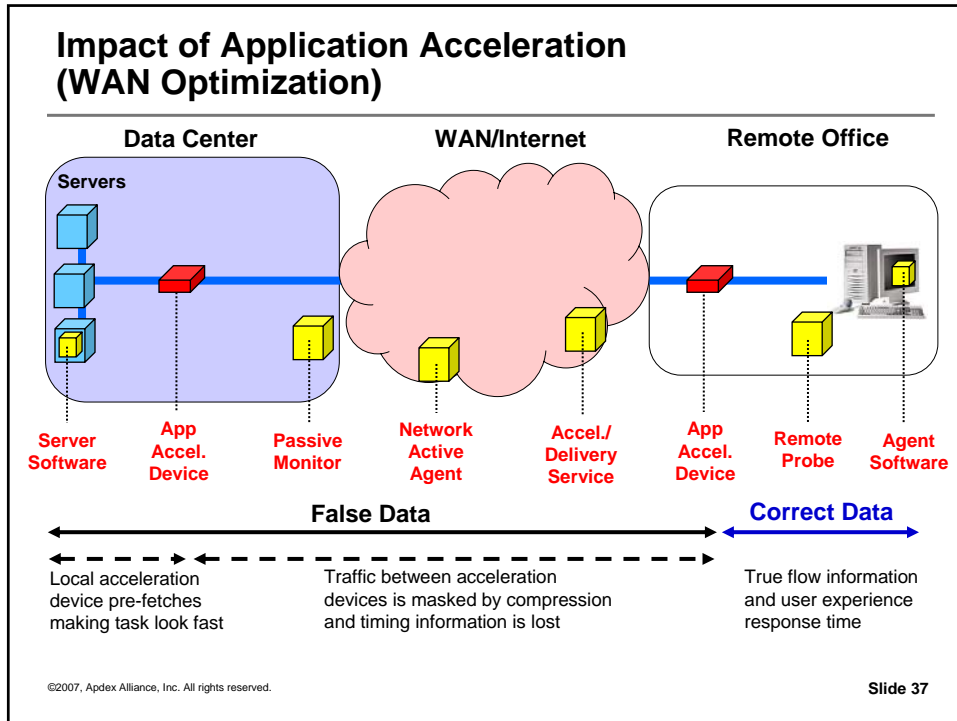
■ Cons

- Requires installing software
- Only works for standardized applications
 - HTML, XML, etc.

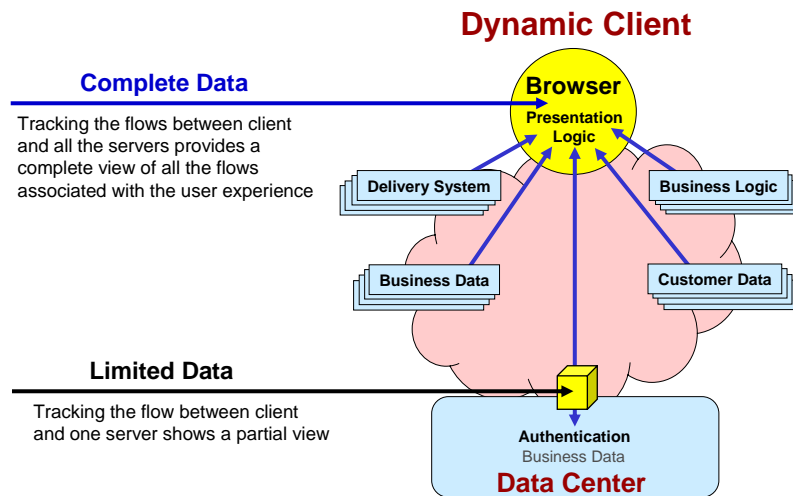
Flow Instrumentation Points



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Impact on Measurements



Trends Affecting Measurements

- **Some trends may impact the accuracy of your measurements**
 - Adding WAN acceleration
 - Moving to dynamic client applications
- **Long-term good ways to measure**
 - **WAN acceleration locations (some accelerators can measure)**
 - **Remote probes**
 - Passive (watch all traffic)
 - Active (synthetic script robots)
 - **Desktop agents**
 - Passive (watch all traffic)
 - Passive Web-based (Java script)
 - Active (synthetic script robots)
 - **Internet and WAN services**
 - CDN/ADN
 - Synthetic agent test services

Apdex Measurement Products Directory

- The Apdex Alliance just compiled a directory of vendors providing an Apdex report foundation
- We defined two product/service classes:
 - Apdex Report – generates Apdex reports within tool
 - Apdex Data – exports data to customer developed Apdex reports
- The directory contains 17 vendor entries
- The directory is available from
 - Apdex web site
 - Apdex Exchange

Who is in the Directory

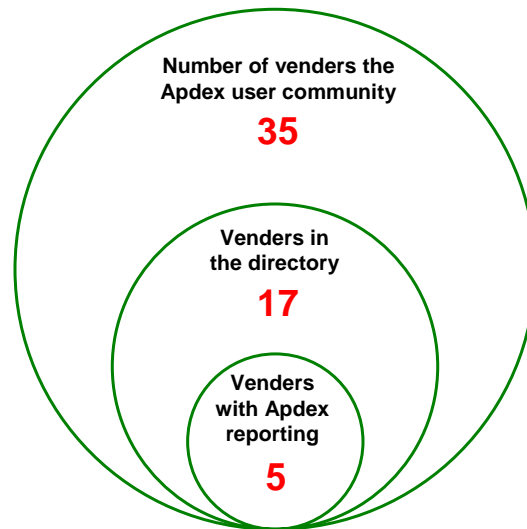
Apdex Report

Auditec
Compuware
Gomez
WildPackets
Xa Systems

Apdex Data

Akamai Technologies
AlertSite
Coradiant
Dot-Com Monitor
Ipanema Technologies
Keynote Systems
NetQoS
NetScout
Network General (NetScout)
Packeteer
SeaNet Technologies
Symphoniq

More Vendors Need to Get Involved



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How Apdex Users Are Generating Reports Today

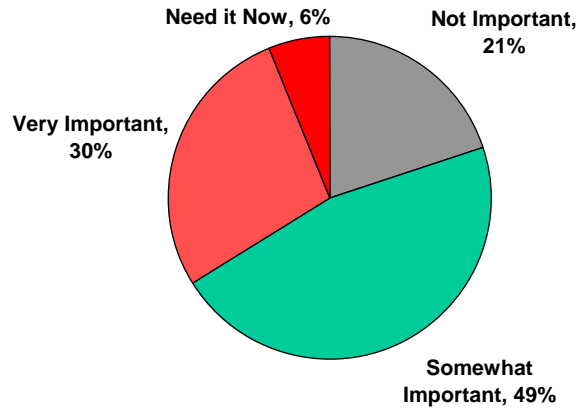
- **Report generation is evenly distributed among**
 - Report generated manually
 - Data exported to Excel
 - Data exported to custom application
 - Tool Generates report
- **There is strong demand for Apdex reporting capability**
- **There is vendor momentum to deliver Apdex reporting capability to anticipate and meet user demand**

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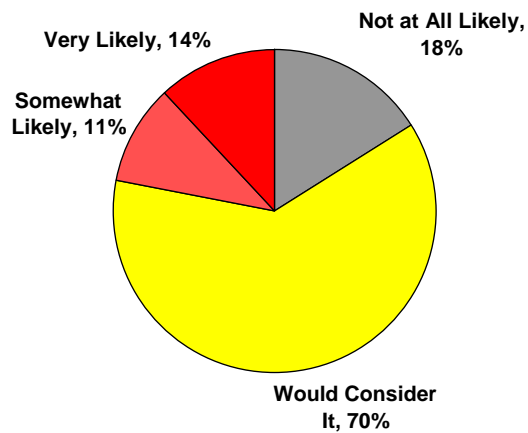
How Important Is It To Have Your Current Vendor Add Apdex Reporting?



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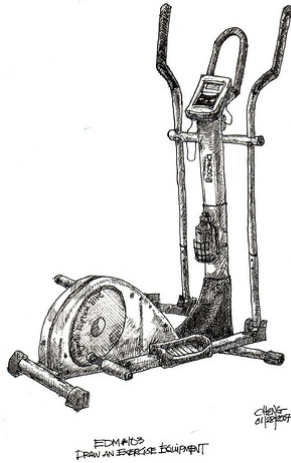
Would You Buy a Measurement Product From a New Vendor if They Had Apdex Reporting?



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I Am Going to Get Healthier



A tool is not enough

You also need good process!

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Thank You



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