



Enterprise-wide Computer Power Management

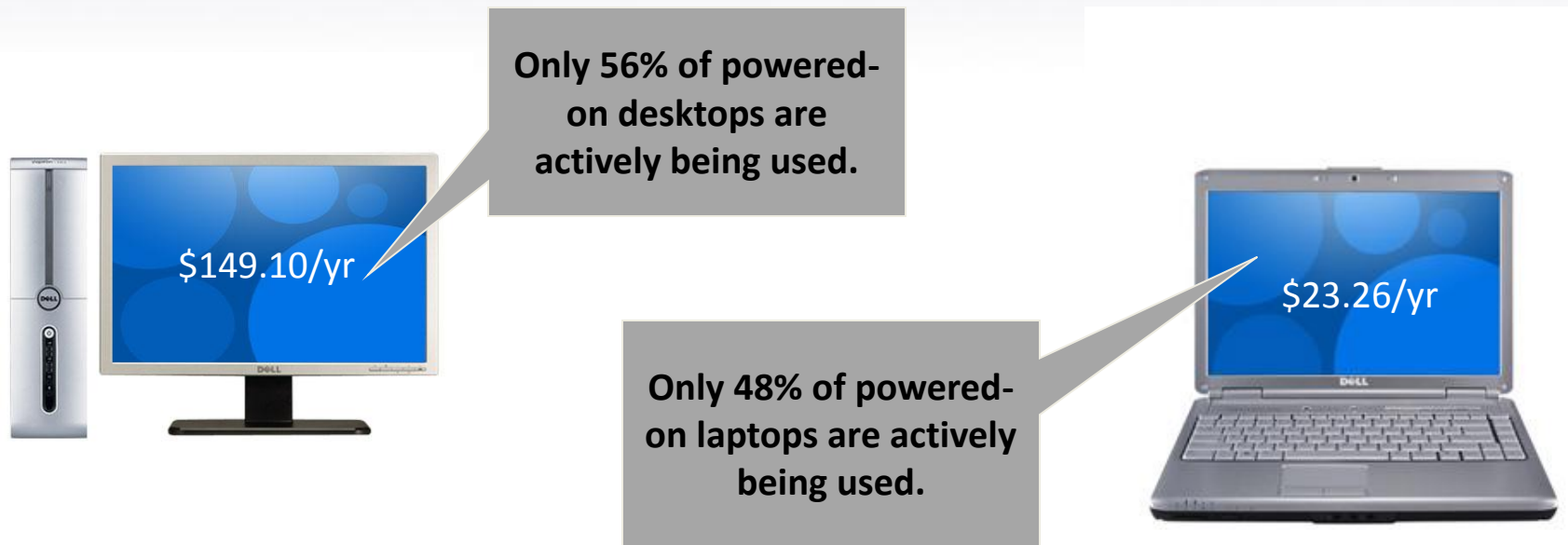
Naveed Makhani, Sales Engineer
BigFix, Inc.

PC Power Management



The Concept is Simple...

Automatically turn off computers and monitors that aren't in use



The Benefits are Clear... Save Money, Save the Environment

Challenges to Adoption

- Fear, Uncertainty and Doubt
 - “I will lose my work if my PC suddenly shuts down or hibernates.” –Helen in Finance
 - “We can’t patch machines that are powered down.” –Mike in IT Operations
 - “There are times when I need to connect to my PC remotely – and that’s why it needs to stay on 24x7.” –George the CEO



Balancing Flexibility and Control



Goals of a Successful PC Power Mgmt Program:

- Increased user adoption = flexible scheduling options with centralized control
- Ensure no impact to productivity
- Integrated with IT operations
- Detailed statistics to share with execs and the utility companies



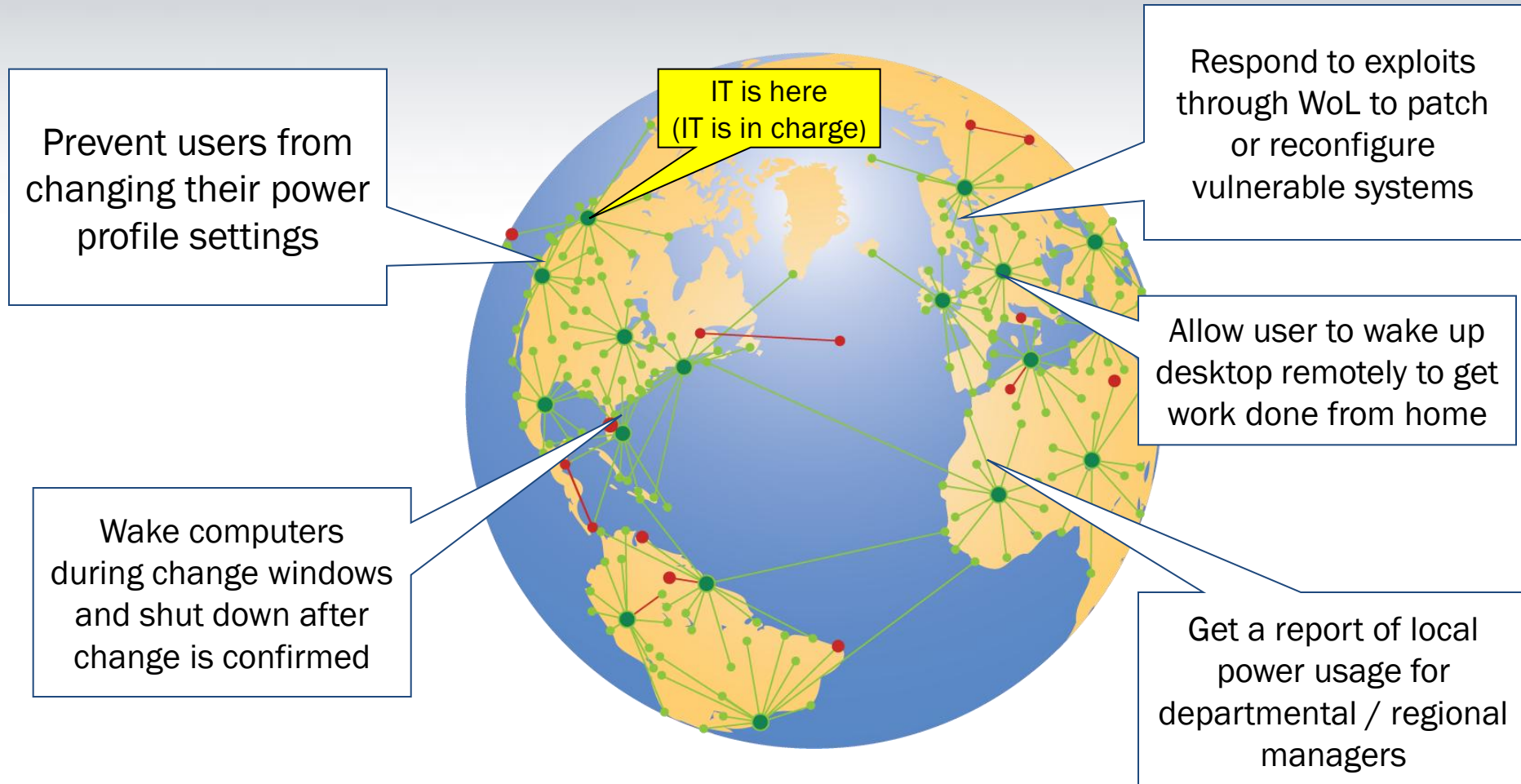
Over 80% of users disable their PCs power conservation settings within 90 days

Source: Lawrence Berkeley National Laboratory

Requirements for Successful PC Power Mgmt



Balancing Flexibility with Control





6 Steps for a Successful PC Power Mgmt Program

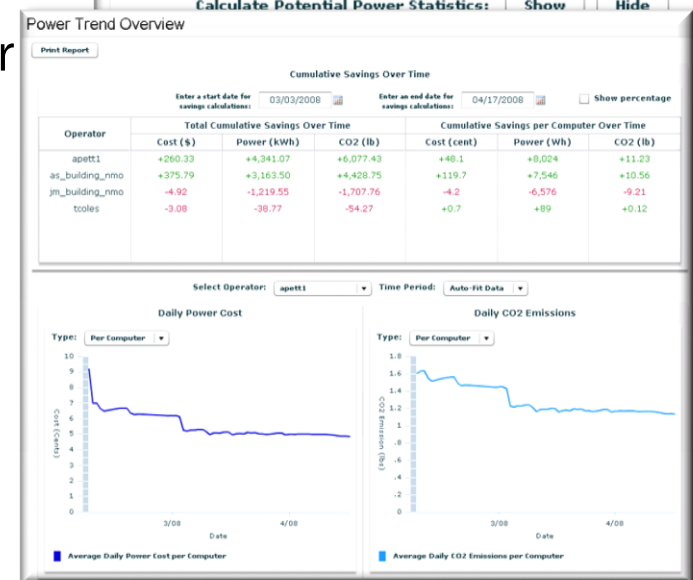
1. Know what the current usage patterns are.
 - Turn tracking feature on all computers
2. Identify per-user or per-LOB usage requirements.
 - Plan for types of policies, consider “opt-in” programs
3. Model “what-if” scenarios for each power profile
4. Start with conservative estimates and policies, then gradually increase
5. Consider “opt-in” programs to drive user adoption
6. Give management access to reports to share cost savings and project progress

Potential Power Usage

This section allows you to select Power management goals and see its potential effect on your power usage.

Monitor Power Management	Current: 10 of 13 - 76.9 %
	Goal: <input type="text" value="13"/> of <input type="text" value="13"/> - <input type="text" value="100"/> %
Standby Power Management	Current: 6 of 13 - 46.2 %
	Goal: <input type="text" value="13"/> of <input type="text" value="13"/> - <input type="text" value="100"/> %
Daily On-Time	Current: 14 : 04 - 58.6 %
	Goal: <input type="text" value="10"/> : <input type="text" value="48"/> - <input type="text" value="45"/> %

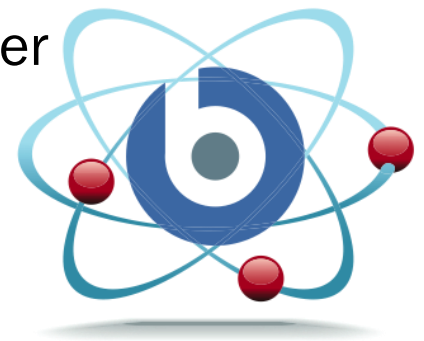
Calculate Potential Power Statistics:



BigFix Power Management



- **Multiplatform**
 - Covers both Windows and Mac
- **Facilitates High Rates of User Adoption**
 - Allow end-users to opt-in to power policies
 - Client-side dashboards to increase buy-in and end-user engagement
 - Save work in applications prior to shut down or restart
- **Granular Control Over Power Profiles and States**
 - Targets: Individuals, groups, buildings, divisions, and more
- **Scales to today's network environment**
 - Manages up to 250,000 devices on one server
 - Excels in highly distributed environments
 - Rapid installation and time-to-value



Overcoming PM Complexities in Practice



- **Cures PC Insomnia**
 - By intelligently measuring user idle time, overcomes issue where computers don't enter low-power modes when they should
- **Enables IT Maintenance**
 - Scheduled Wake from Standby, Distributed Wake-on-LAN, and Last Man Standing
- **Accounts for Hardware Differences**
 - Override power and CO2 assumptions by hardware profile, location, and monitor type for more accurate reporting
- **Adjust Min Sleep States**
 - Maximizes power savings by adjusting min sleep state

Power Assumptions Override Wizard

This Wizard will enable you to override for targeted computers the power assumptions used in the Power Tracking Information Dashboard.

Override assumptions for targeted computers:

Set Cost:
 Use dashboard default Cost per kWh to: \$.08

Set CO2 Emissions:
 Use dashboard default Set CO2 per kWh to 1.0 Lbs.

Set Computer's Active Power Draw:
 Use dashboard default Set power draw to 100 Watts

Set Computer's Power-Managed Power Draw:
 Use dashboard default Set power draw to 10 Watts

Set Monitor's Active Power Draw:
 Use dashboard default Set power draw to 80 Watts

Set Monitor's Power-Managed Power Draw:
 Use dashboard default Set power draw to 5 Watts

Set Hard drive Sleep Power Savings:
 Use dashboard default Set power draw to 8 Watts

Finish **Cancel**

BigFix Power Management Reports



- **Customizable Views**

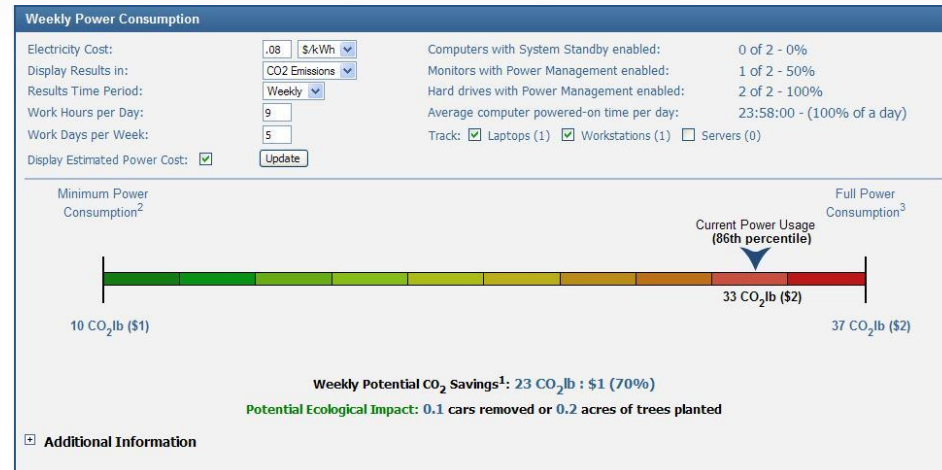
- Filter workstations, laptops, and/or servers
- Display carbon emissions equivalents: acres of trees planted / cars off the road

- **Store and view historical data**

- Web-accessible reports for stakeholders throughout the organization (Marketing, PR, Facilities)

- **Model “what-if” scenarios**

- Quantify and visualize cost savings
- Reduction in power consumption / CO₂ emissions from changes to configuration settings





Customer Profile: Top 5 Public School District

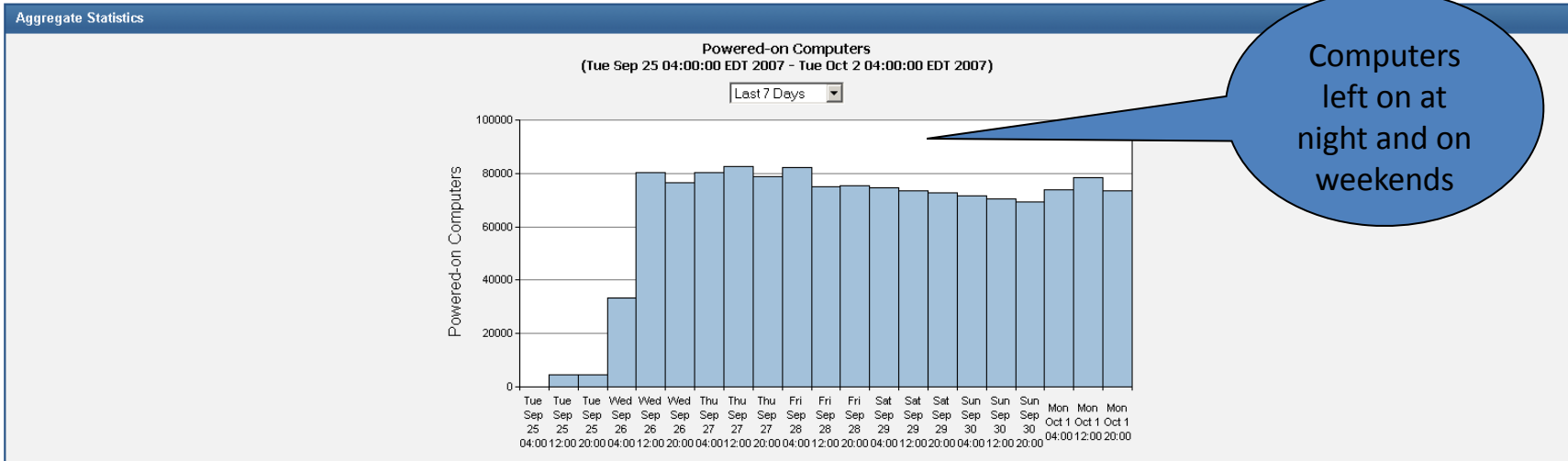
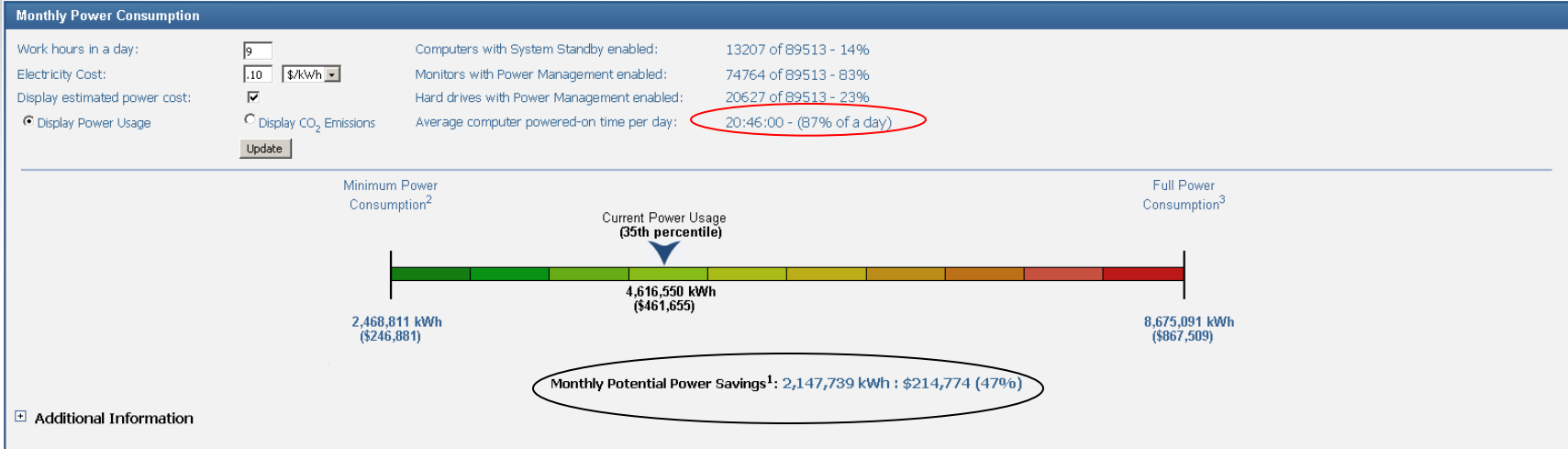
- 90,000 PCs
- 370 distributed locations – schools and administrative sites
- Original savings estimates:
 - \$2.6M
- Actual savings in Year 1:
 - \$4.2M



“BigFix Power Management has been easy to install, easy to operate, and very flexible. It’s currently working exactly as we expected from the proof-of-concept.”

– Director of Network Systems

Power Usage - Before



Power Usage - After



Monthly Power Consumption

Work hours in a day: Computers with System Standby enabled: 13794 of 90497 - 15%

Electricity Cost: \$/kWh Monitors with Power Management enabled: 75833 of 90497 - 83%

Display estimated power cost: Hard drives with Power Management enabled: 21475 of 90497 - 23%

Display Power Usage Display CO₂ Emissions Average computer powered-on time per day: 09:04:00 - (38% of a day)

Minimum Power Consumption²
Current Power Usage (0th percentile)

Realizing Savings of 26 million kWh per year

Full Power Consumption³

2,451,119 kWh (\$245,112)
2,438,714 kWh (\$243,871)

8,812,968 kWh (\$881,297)

Monthly Potential Power Savings¹: 12,405 kWh : \$1,241 (1%)

Additional Information

Aggregate Statistics

Powered-on Computers
(Mon Oct 8 20:00:00 EDT 2007 - Wed Nov 7 19:00:00 EST 2007)

Last 30 Days

Computers powered-off at night and on weekends

Customer Profile: Major US University



- Offers BigFix Power Mgmt to users via an *opt-in approach*
- Users choose specific power profiles with varying degrees of energy saving levels
- Increases user adoption
- Power Mgmt is ONE component of how they use BigFix (patching, security configuration, etc).

“With BigFix, I know exactly what’s on our computers, and I can report to management with certainty and be ready to answer any sort of question they ask.”

--University System Administrator

Rebate & Power Savings Are Substantial



Several energy companies are offering rebates of up to \$15 for every computer managed via BigFix Power Management on top of the potential \$30 per computer electricity cost savings:

# of Computers	Rebate Amount	Power Cost Savings	Total Savings
1,000	\$15,000	\$30,000	\$45,000
5,000	\$75,000	\$150,000	\$225,000
20,000	\$300,000	\$600,000	\$900,000
100,000	\$1,500,000	\$3,000,000	\$4,500,000

Who is BigFix?

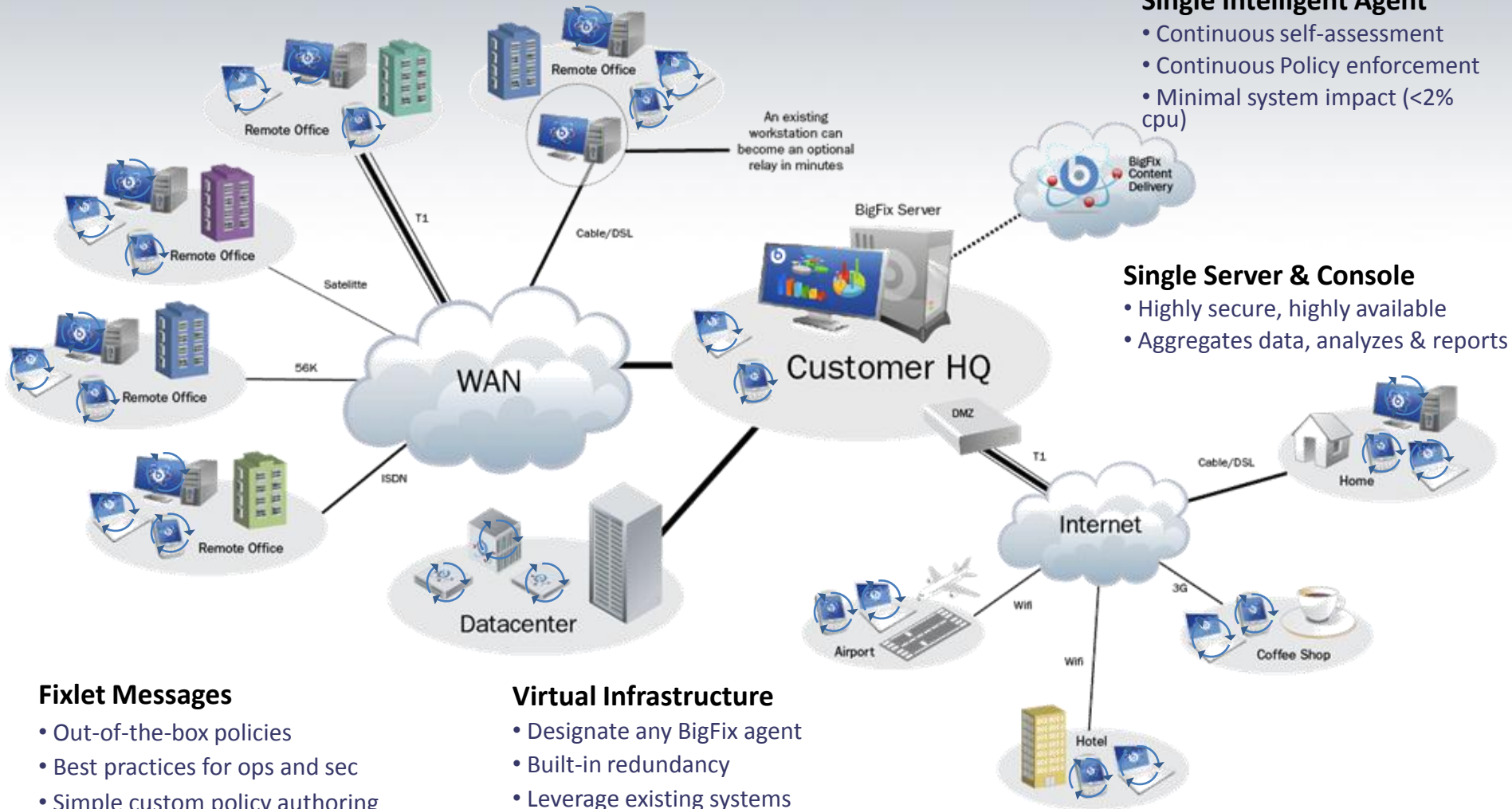


BigFix is a leading global provider of **high-performance security and systems management** software for enterprise companies

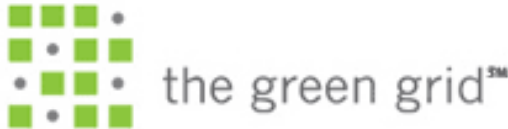
- 40%+ year-over-year growth
- 9,000,000 PC, servers and mobile devices under management
 - 800+ customers in Europe, Asia and Americas
 - Very large deployments > 100,000 computers
- Innovative BigFix technology platform
 - “Visionary” in both Endpoint Protection and PC Lifecycle Management Gartner Magic Quadrants
 - 15 patents worldwide
 - 41 patents pending worldwide



BigFix: How it Works



BigFix Green Alliances Include:



Participating Utilities Include:



Seattle City Light



... 26 and counting



THANK YOU!!!

<http://www.bigfix.com>



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