

T. Rowe Price Uses Ergonomics to Help Achieve LEED® Certification

Kelli Costa, CFM, LEED® AP, MBA, AVP & Facilities/Services Manager, T. Rowe Price
Tony Silva, CPE, Director of Ergonomics Services, Atlas Ergonomics

Friday, December 6, 2013

12:45 – 1:45 p.m.

T Rowe Price Background

- Founded in 1937 by Thomas Rowe Price Jr.
- Managing \$614.0 billion in assets (as of June 30, 2013)
- Serving individuals, financial intermediaries and institutions
- Offering a full range of investment strategies
- Headquartered in Baltimore, Maryland, with offices in 12 countries around the world
- Employing over 5,700 associates

T Rowe Price Ergonomics Program - 2007

- PowerPoint presentation sent to employees
- “Please keep this document handy for future reference. It will serve as a reminder on posture, chair adjustments and exercises. Keep in mind these are recommendations and they may vary by individual. **If at any time you experience pain, please contact your doctor immediately.**”
- Excerpt from 2006 documentation: Ron has brought it to his supervisor’s attention that he has injured his wrist and needs special accommodations and an ergonomic evaluation. Because this request is medically related, medical confidentiality needs to be exercised. **I informed Ron that because of the regulations that protect his medical confidentiality I cannot proceed with an evaluation or provide suggestions. I will proceed with the accommodation process as soon as his Physician has specified his requirements.**

No clear ownership – HR, Facilities – and no bias for action!

Defining our requirements

- Assistance developing a comprehensive ergonomics program
- On-site ergonomic support at all of our U.S. locations
- Expertise and guidance in navigating potential legal issues and ensuring regulatory compliance
- Education and training for our employees
- Education and training for our facilities team
- Proactive program targeted at prevention
- Ability to assess employee ergonomic needs, potentially on a mass scale and then house the data in a database that could be used by both provider and T Rowe Price (risk assessment)
- Provide means for easy electronic follow-up
- Tracking mechanism to identify trends and common issues
- Evaluate ergonomic products

RFP & Evaluation

Ergonomic RFP Evaluation Matrix Summary

Grading Participants: Kelli Costa, Anne Oswald, Procurement					
Performance Indicators	Possible Score	Definition	Company A	Company B	Company C
Functional Fit (22%)					
Business Understanding	3	Section D			
	Score:	Score of 1-5 on this line	3.0	3.0	3.0
Program Development	6	Section E (less 2,3,4)			
	Score:		5.8	4.0	1.5
Service	4	Section J			
	Score:		2.5	4.0	1.8
National coverage to all locations	9	Section A-5, Section H-2			
	Score:		6.0	3.5	8.0
Maximum Functional Score		22	17.3	14.5	14.3
Technical Fit (38%)					
Tracking & Software	16	Section I, Section E-3,4, Section G-2, Section H-1 possibly			
	Score:		12.5	13.8	11.5
Assessments	13	Section H			
	Score:		12.3	11.0	10.5
Implementation	4	Section K, Section E-2			
	Score:		2.5	4.0	4.0
Differentiating Features	5				
	Score:		3.0	1.0	2.5
Max Technical Score		38	30.3	29.8	28.5

RFP & Evaluation

<u>Training Services (22%)</u>					
Associate Training (Education & Awareness)	9	Section F			
	Score:		7.5	8.8	7.8
Facilities Personnel Training	9	Section G			
	Score:		8.5	9.0	4.5
Differentiating Features	4				
	Score:		2.0	3.5	3.0
Max Training Services Score		22	18.0	21.3	15.3
<u>Business Factors (8%)</u>					
Company Overall	4	Evaluation of company(s) based on size, differentiators, financial services experience, etc. - Section A			
	Score:		3.3	3.5	2.2
Market Share	2	Size and quality of customer base and references - Section A and C			
	Score:		1.7	1.6	1.3
Financial	2	Vendor's financial stability - Section B			
	Score:		1.8	1.5	1.6
Max Business Score		8	6.8	6.6	5.1
Total Score	100%	90	72.3	72.1	63.1
Total Combined Percentage:			80.4%	80.1%	70.1%
<u>Pricing (10%)</u>					
Pricing	10	Cost of solution			
	Score:	10	10.0	5.0	2.0
Total Score w/Pricing	100%	100	82.3	77.1	65.1

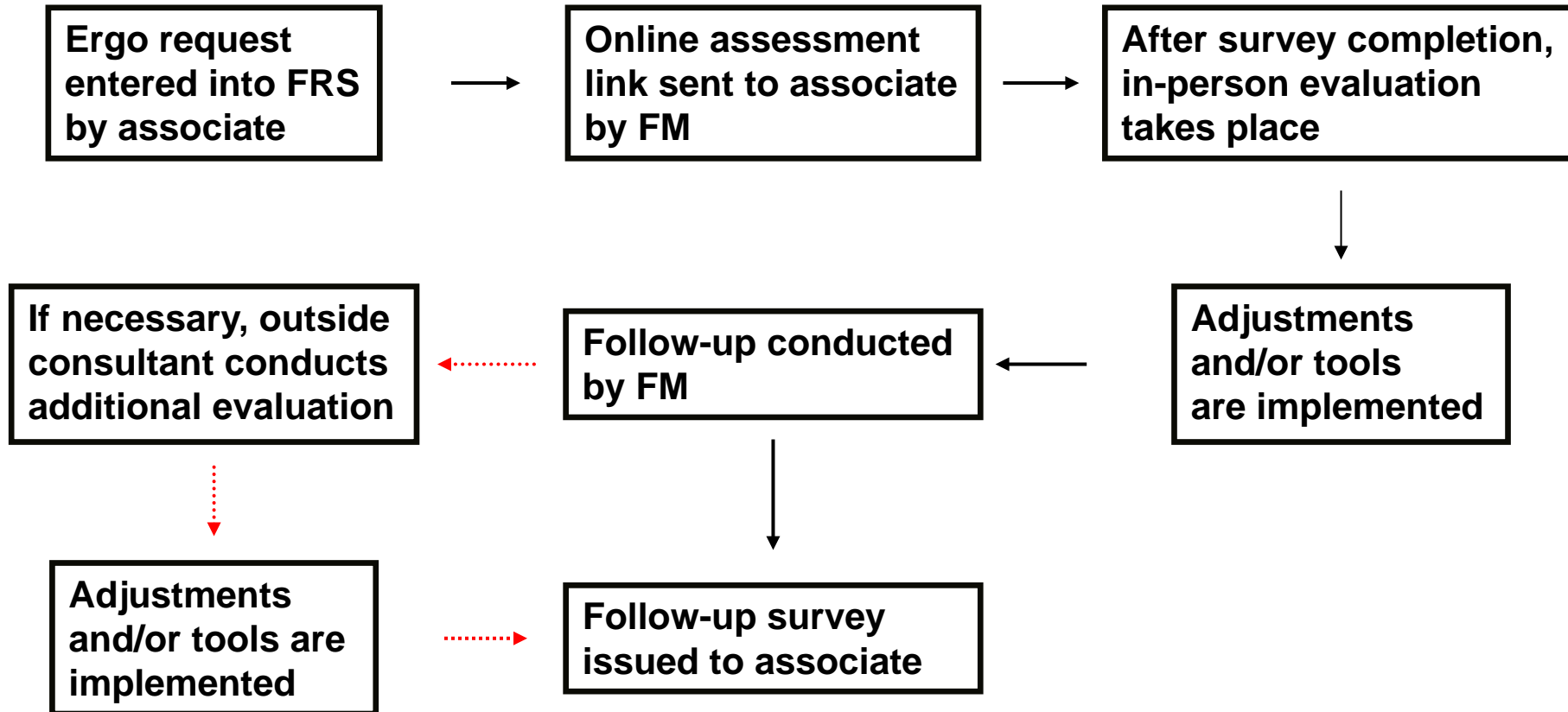
Ergonomics Program

- Intent – Proactive, Customer driven, Effective
- Atlas Ergonomics (www.atlasergo.com)
 - Assist with program development
 - Provide program technology
 - Provide certified professionals for in-person assessments
 - Develop & deliver training
 - Provide regulatory and legal guidance
- 4 Main Program Components:
 - Education & Training
 - On-line Assessment Tool
 - In-person Assessments
 - Metrics

Implementation Tools

- Defined process
- Partnership with HR
- Developed intranet site with education components
- Annual wellness fair participation
- Chair adjustments during new mass purchases
- Training – facilities team
- Online ergonomic assessment tool

Ergonomics Process



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Ergo Tip of the Month

If you have a desktop keyboard, you can use a wrist rest as a forearm support. The wrist rest should be approximately the same thickness as the bottom of your keyboard. Place the wrist rest midway between your wrists and elbow – but make sure that you are not compressing the area!

Facilities Management Groups

Ergonomics



Ergonomics News



Take Care of Your Eyes!

Whenever you use a computer for extended periods of a couple of hours or longer, you run the risk of experiencing eye strain, blurred vision, or dry and irritated eyes. These symptoms tend to go away as soon as you stop working on the computer, so remember to take frequent vision breaks. [Read More.](#)

[News Archive](#)

Instruction Manuals

- [Aeron Chair Adjustment Manual](#)
- [Aeron Adjustment Video](#)
- [Mirra Chair Adjustment Manual](#)
- [Mirra Adjustment Video](#)
- [Very Chair Adjustment Manual](#)
- [Very Adjustment Video](#)
- [Sit On It Chair Adjustment Manual](#)
- [Keyboard Tray Adjustment Manual](#)
- [Monitor Arm Adjustment Manual](#)

What is Ergonomics?

Ergonomics is the science of fitting the work environment to the employee to reduce repetitive motion injuries in the work place.

It is the policy of T. Rowe Price to provide all associates with a safe and healthy workplace. This program is a collaborative effort that includes managers, supervisors, and associates.

Ergonomics at T. Rowe Price

- [Office Ergonomics](#)
- [Injury Prevention](#)
- [Stretching Guides](#)
- [Training Videos](#)
- [FAQ's](#)

Quick Links

- [Submit an Ergonomic Evaluation Request](#)
- [Office Fitting Guide](#)
- [Stretching Guide](#)
- [Who to Contact by Site](#)
- [FAQ's](#)

Feedback

Do you have a suggestion, idea, or tip you'd like to share on office ergonomics? Let us know, and we'll share your tip on this site.

[Click here to submit your idea.](#)

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Instruction Manuals

- [Aeron Chair Adjustment Manual](#)
- [Aeron Adjustment Video](#)
- [Mirra Chair Adjustment Manual](#)
- [Mirra Adjustment Video](#)
- [Very Chair Adjustment Manual](#)
- [Very Adjustment Video](#)
- [Sit On It Chair Adjustment Manual](#)
- [Keyboard Tray Adjustment Manual](#)
- [Monitor Arm Adjustment Manual](#)

Facilities Management Groups

Ergonomics**Maryland Furniture Adjustment Guides**

Herman Miller Aeron Chair
(Office Chair)

[Read Manual](#)
[Watch Video](#)



Haworth Very Chair
(Workstation Chair)

[Read Manual](#)
[Watch Video](#)



Humanscale
Monitor Arm
[Read Manual](#)



Humanscale
Keyboard Tray
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(video links under photos open to external webpage; manuals open to PDF documents)

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On-line Assessment



ATLAS
ERGONOMICS

Supporting your investment in people

Office and Call Center Ergonomics

Welcome to Atlas Ergonomics

When thinking about how the real costs of work-related injuries can affect your company's bottom line, you'll appreciate how easy it is to work with Atlas.

Having an effective program in place can pay off. Atlas harmonizes both ergonomics and wellness together – with a simple and economic approach.

Our customized programs deliver key information to you in a revolutionary manner that's uniquely measurable and individually tailored to your company's needs – increasing your ability to efficiently provide targeted ergonomics and wellness in your workplace.

Through technology, expertise and careful planning, our combined services go beyond the scope of traditional ergonomics' solutions: monitoring your organization, and providing measurable results.

RESEARCH AND WHITE PAPERS

Facts vs. Opinions Paper #1
A comparison of opinions on risk and discomfort in the office environment against data from over 2400 employees... [more](#)

Obesity in Call Centers
A review of the current trends in obesity for the general population shows the need for a concerted

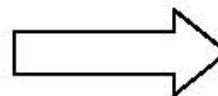
ATLAS NEWS

Nov. 25, 2008
[Atlas To Share Assessment Optimization Methods At National Ergonomics Conference](#)

Nov. 3, 2008
[Ergonomic Misconceptions Widespread, Even Among Professionals](#)

Oct. 3, 2008
[Bus Drivers Report 50% Drop in Pain, Discomfort This Year](#)

CUSTOMER LOG-IN



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CUSTOMER LOG-IN

On-line Assessment

[Edit Login](#)
[Logout](#)

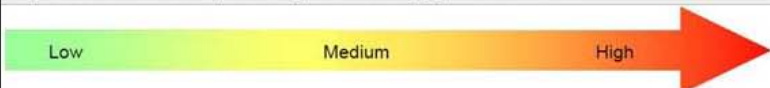
Supporting your investment in people

Atlas Ergonomics helps individuals reduce or avoid discomfort that may occur within an office environment. We do so by:




- Better understanding your individual situation.
- If appropriate, recommending and helping to implement changes.
- Providing simple and readily accessible educational materials.
- Monitoring your discomfort over time (optional).

To help us help you, please proceed through the following steps.

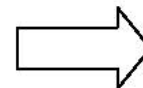
Step One - Complete the following survey
[Click here to complete the survey](#)

Step Two - Understand the importance of your need to change your work methods


Step Three - Review the following educational materials now and as needed

Name	Note	Download	Viewer
Atlas Office Fitting Guide	The Atlas Office Fitting Guide is a simple reference, providing a quick guide on how to use your office products correctly. You may use the guide immediately upon completion of the Employee Survey to begin your education process, or at any other time that is convenient for you.	Atlas Fitting Guide rev 1.02.pdf (0.28 MB)	
Atlas Office Stretching Guide	The Atlas Office Stretching Guide is a simple reference, providing stretches that may be used for specific types of discomfort. You may use the guide immediately upon completion of the Employee Survey, or at any other time that is convenient for you.	Atlas Office Stretching Guide.pdf (0.24 MB)	
Atlas Office Training Video	The Atlas Office Training video is approximately 10 minutes long. The video provides an overview of ergonomic risks that may lead to discomfort, and potential solutions. You may review the video immediately following the completion of the Employee Survey to begin your education process, or at any other time that is convenient for you.	Atlas Office Training.sfl	

Please note that to view the video, you may need to download the required software.




Step One - Complete the following survey

[Click here to complete the survey](#)

On-line Assessment

Location of Work Related Discomfort

Please mark all that apply to you...



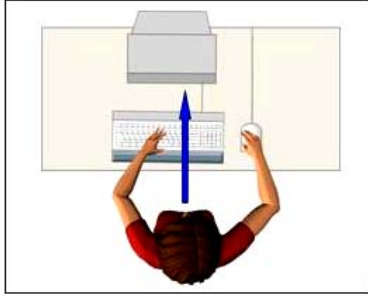
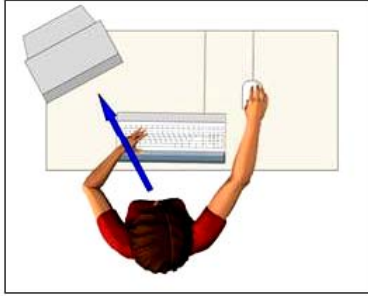
- ☒ Eyestrain
- ☒ Head & Neck
- ☐ Shoulders
- ☐ Elbows
- ☒ Wrists/Hands
- ☒ Upper Back
- ☒ Lower Back
- ☐ Hips/Thighs
- ☐ Knees
- ☐ Ankles/Feet

Previous

Next

The first risk measure that is assessed is discomfort. The associate is asked to indicate any body parts that may be experiencing discomfort and then rate the frequency and severity of the discomfort for all body parts of concern.

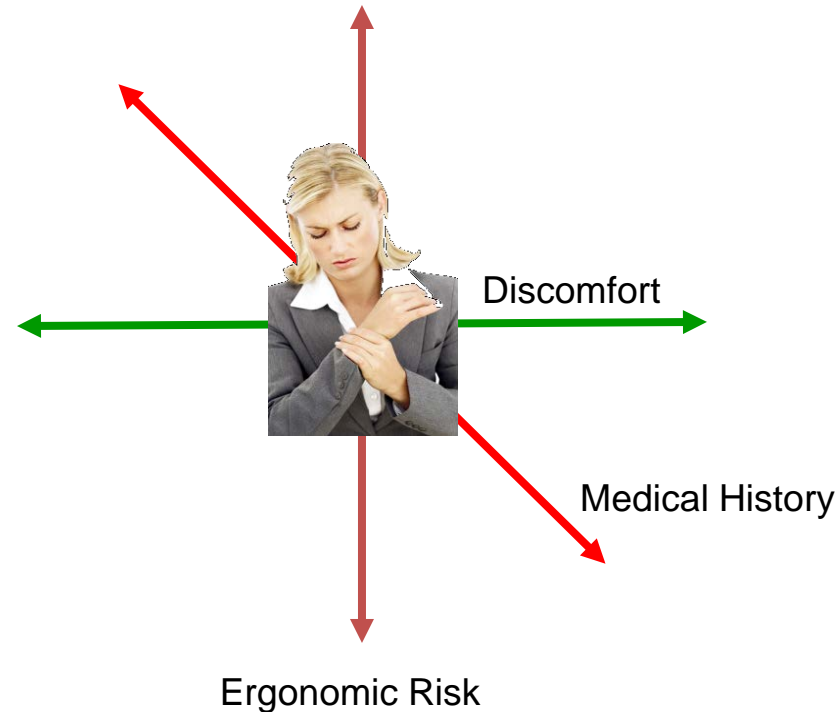
On-line Assessment

Posture Assessment	
My monitor is position directly in front of me (no twisting or rotation to view my monitor).	
	
<input checked="" type="radio"/> Yes	<input type="radio"/> No
<div>Previous</div> <div>Next</div>	

Once the symptoms are assessed, the next stage of the self-assessment is for the associate to review the set-up of their workstation and audit the equipment they have available at their workstation. This information will allow the analyst to understand the conditions the employee is exposed to, and be able to prepare for the assessment.

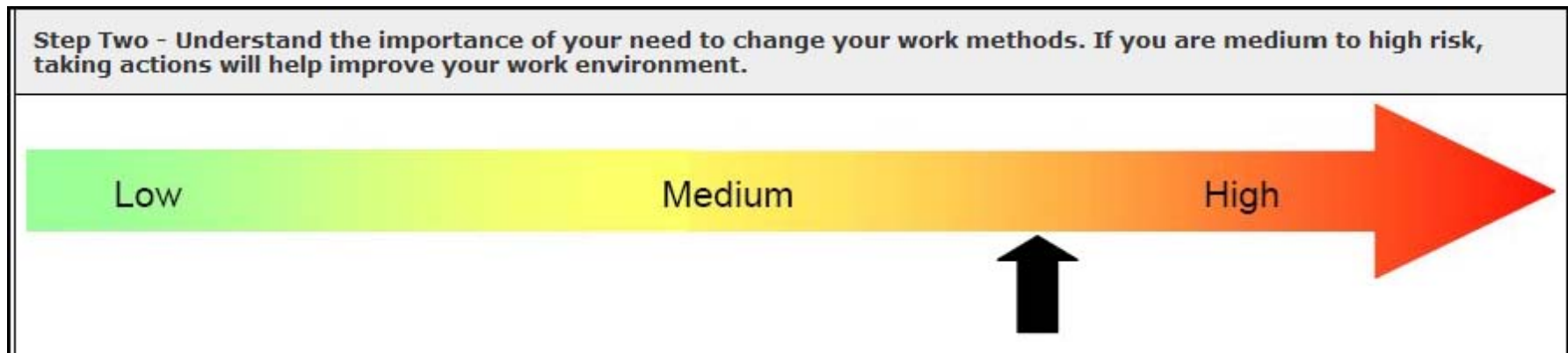
Assess Risk

- Risk Considerations
 - Discomfort: Current Problems
 - Ergonomic: Future Problems
 - Other concerns: Overarching All
- Holistic Approach






On-line Assessment

When an associate returns to the training materials, Step 2 of the process provides a visual indicator for the associate that emphasizes the level of need to review the training materials and work towards improving their work environment. An arrow indicates a level from Low to High; this level is determined by the answers provided by the employee related to discomfort and office set-up.



On-line Assessment

Step Three - Review the following educational materials now and as needed			
Name	Note	Download	Viewer
Atlas Office Fitting Guide	<p>The Atlas Office Fitting Guide is a simple reference, providing a quick guide on how to use your office products correctly. You may use the guide immediately upon completion of the Employee Survey to begin your education process, or at any other time that is convenient for you.</p> <p>The guide is provided as an Adobe file. To open the guide, it may be necessary to download the required software.</p>	Atlas Fitting Guide rev 1 02.pdf (0.20 MB)	
Atlas Office Stretching Guide	<p>The Atlas Office Stretching Guide is a simple reference, providing stretches that may be used for specific types of discomfort. You may use the guide immediately upon completion of the Employee Survey, or at any other time that is convenient for you.</p> <p>The guide is provided as an Adobe file. To open the guide, it may be necessary to download the required software.</p>	Atlas Office Stretching Guide.pdf (0.24 MB)	
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Step Four - Review your personal fitting recommendations (if applicable)			
Click here for your personal fit recommendations			
Step Five - Review your personal product recommendations (if applicable)			
Click here for your personal product recommendations			

Steps 3-5 in the process provide opportunities for the associate to review various training materials; step three is standard training; step 4 is a personal recommendation report that we opted for; step 5 is a personal product report that we did not opt for.

Reporting

Engagement					
Client Organization			ABC Inc.		
Description			Demo: Generic Password		
Begin Date			12/1/2006		

Work Team - All -	Min. Initial Ergonomic Risk - All -	Min. Initial Discomfort Risk - All -	Initial Other Concerns - All -	Min. Follow Up Discomfort Risk - All -	Follow Up Other Concerns - All -
Last Follow Up Survey - All -	Training Materials - All -	Telephonic Complete - All -	On-Site Complete - All -	Product Ordered - All -	Recommendations Closed - All -

Individual Assessments													
Name	Team	Initial Survey	Initial Ergonomic Risk	Initial Discomfort Risk	Initial Other Concerns	Last Follow Up Survey	Follow Up Discomfort Risk	Follow Up Other Concerns	Training Materials Viewed	Telephonic Complete	On-Site Complete	Product Ordered	Recommendations Closed
500_test	IT	02/13/2008	Moderate	Moderate	Required	04/15/2008	Moderate		0/0	11/18/2008	02/13/2008	11/18/2008	11/18/2008
5000_test	Mgt	11/26/2008	High	Extreme					0/5			11/26/2008	11/26/2008
501_Test	Admin	02/14/2008	Low	Low	Required				0/0		08/27/2008		
Aldridge	CustServ	01/08/2007	Low	Low					0/0		02/02/2008		

The analyst has the ability to **sort information to easily find employees by location, ergonomics risk, discomfort risk, other concerns** (i.e. medical, external factors), **survey status** (initial or follow-up), **or status of the project** (e.g. training materials viewed, telephonic complete, on-site complete, product ordered, and recommendations closed).

Reporting

Assessment Information			Standard Recommendations			Other Recommendations	Purchase Suggested	Completion
Trunk is perpendicular to the floor:	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Adjust chair <input type="checkbox"/>	Provide new chair <input type="checkbox"/>	Adjust monitor depth <input type="checkbox"/>		Act <input type="checkbox"/> Buy <input type="checkbox"/>	<input type="text"/>
Shoulders and upper arms are relaxed:	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Lower armrests <input type="checkbox"/>	Lower work surface <input type="checkbox"/>	Raise chair (footrest?) <input checked="" type="checkbox"/>		Act <input checked="" type="checkbox"/> Buy <input type="checkbox"/>	Completed <input type="text"/>
No reaching for keying/mousing:	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Re-position mouse <input checked="" type="checkbox"/>	Adjust keyboard tray <input checked="" type="checkbox"/>			Act <input checked="" type="checkbox"/> Buy <input type="checkbox"/>	Completed <input type="text"/>
Wrists and hands are reasonably straight:	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Create gentle downward slope from armrest to keyboard <input checked="" type="checkbox"/>				Act <input checked="" type="checkbox"/> Buy <input type="checkbox"/>	Completed <input type="text"/>
Thighs and lower legs positioned	Yes <input type="radio"/>	No <input type="radio"/>	Raise chair <input type="checkbox"/>	Lower chair <input type="checkbox"/>	Provide footrest <input type="checkbox"/>		Act <input type="checkbox"/> Buy <input type="checkbox"/>	<input type="text"/>

The analyst can record all analysis information and make any recommendations in the appropriate sections. To further increase efficiency, if the analyst completes the Action during the onsite visit, they mark it as Complete under the last column.

Reporting

Raise monitor <input type="checkbox"/>	Lower monitor <input type="checkbox"/>	Monitor lift <input checked="" type="checkbox"/>		Act <input type="checkbox"/>	Buy <input checked="" type="checkbox"/>	
Increase distance <input type="checkbox"/>	Decrease distance <input type="checkbox"/>			Act <input type="checkbox"/>	Buy <input type="checkbox"/>	<div>Completed Declined Ordered Installed</div>

Once the report has been electronically submitted, the person(s) responsible for implementing recommendations within the company can use the form to track their progress. We (the client) either complete, decline, indicate the product has been ordered, or indicate that the product has been installed. Once one of these options is selected, a date will be assigned indicating the status of the project.

Follow up and closure...

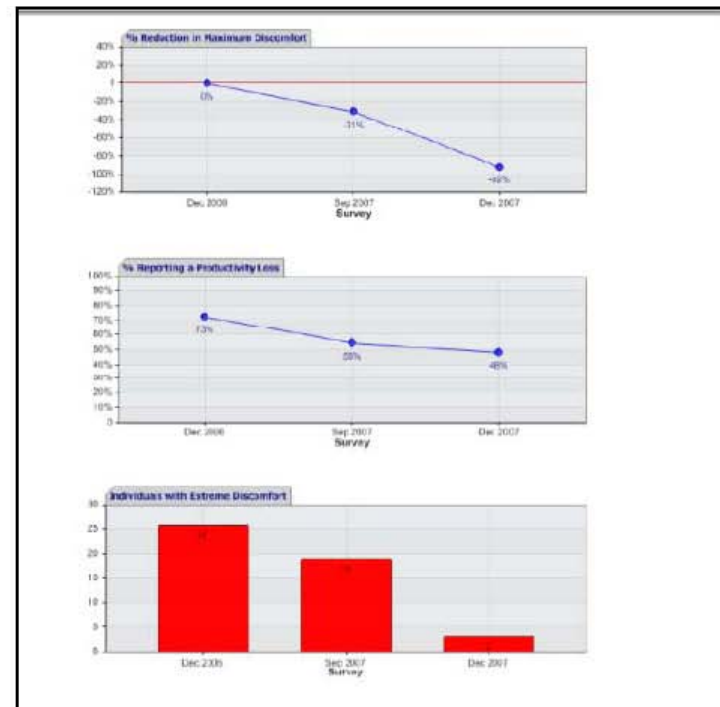
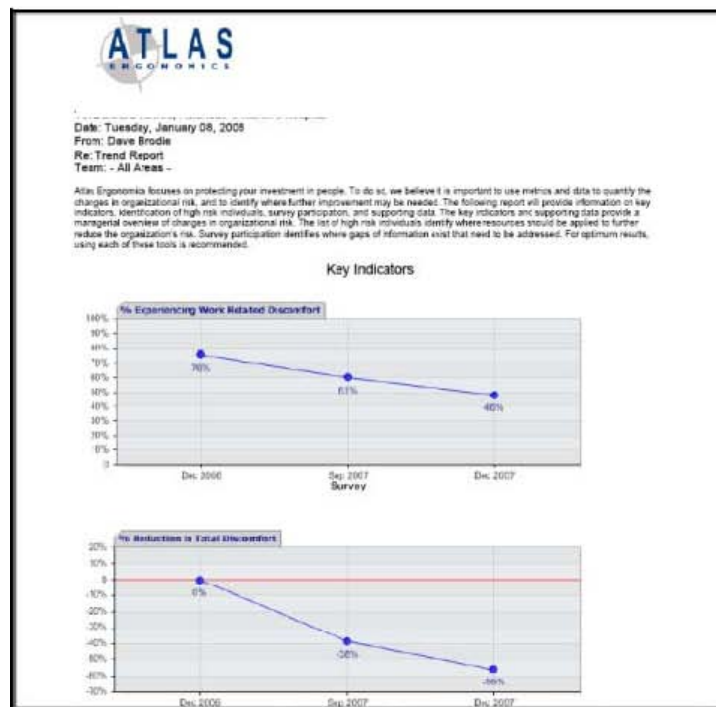
Individual Ergonomic Assessment and Recommendations										
Client Organization:	JPMorgan Chase			Employee Work Site Address:	303 E Republic Rd					
Engagement:	MO			Employee Work Site City:	Springfield					
Work Team:	General Office			Employee Work Site State:	MO					
Employee Name:	James Kissee			Evaluator:	Rick Pankiewicz					
Employee Number/ID:	r078440	Ergonomic Risk:	High	Evaluator Phone:	417-869-6191					
Employee Work Phone:	4172256153	Discomfort Risk:	Extreme	Evaluator Email:	richard.pankiewicz@mercy.net					
Employee Work Email:	jarrod.s.underdown@chase.com	Other Concerns:	No	Evaluation date:	10/3/2008					
Contact Log										
<p>James Kissee 8-12-08 Met with EE to discuss problems with desk chair. EE is too large for his chair. Referred to Atlas Ergo Website to complete a survey. S. Cyrus, R.N.</p> <p>8-19-08 Call from EE's manager/trainer Matt Griswold - EE's chair broke. EE is already sitting in a "3 dot" chair. Manager knows of a chair that was specially ordered for a past EE. He will see if that chair is available. S. Cyrus, R.N.</p> <p>8-22-08 Email from M. Griswold. Found chair mentioned above. EE says it will work until on-site evaluation can be scheduled. S. Cyrus, R.N.</p>										
<div>View PDF and Print</div> <div>Save and Continue</div> <div>Save and Close</div> <div>Telephonic Complete</div> <div>Onsite Complete</div>										
<div>Close Without Saving</div> <div>Download Adobe PDF Viewer</div>										
Status of All Actions and Purchases										
Are all suggested actions and purchases closed? (Either the action is complete or a decision has been made not to complete it.) <div>Yes</div>										
Discomfort Data										
Assessment Information				Standard Recommendations			Other Recommendations	Action / Purchase Suggested	Completion	Date Products Ordered
Area	Frequency	Severity	Health Index F x S							
Eyestrain:				Screen contrast	Minimize glare			Act	Buy	
				<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
								Act	Buy	

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Aldridae.	CustServ	01/08/2007	Low	Low					0/0		02/02/2008		

Once an employee completes a follow-up survey, the date of their **last follow-up survey** and their risk ratings for **discomfort** and **other concerns** will show up on the employee database screen. This information provides an indication of the level of change in risk for an individual employee.

Reporting

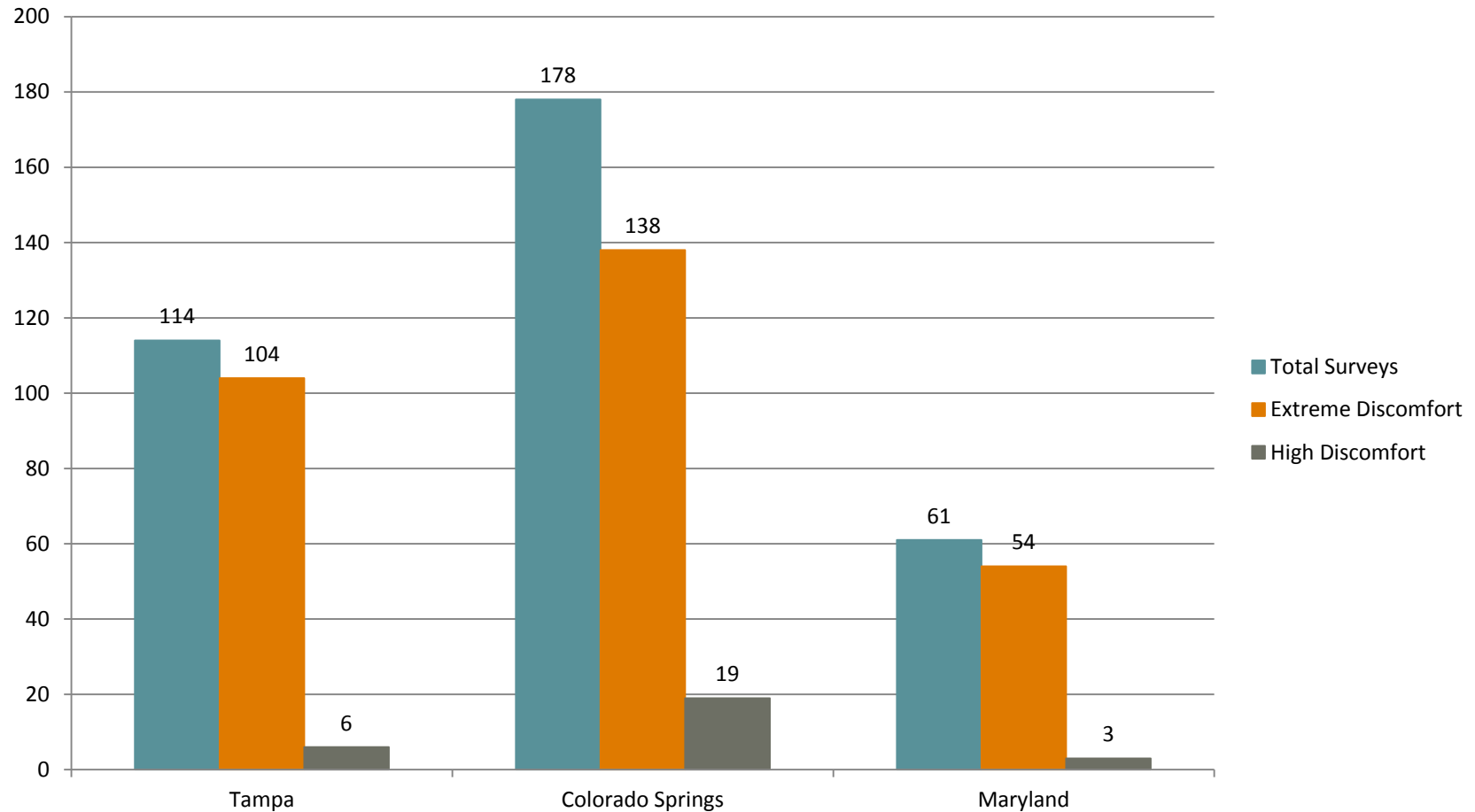


To obtain details on the level of improvement for the entire population that has completed follow-up surveys, the Atlas system provides access to a pre-formatted **Trend Report**.

Metrics

- % of associates experiencing discomfort
- % reduction in total discomfort (all body parts)
- % of associates reporting a productivity loss due to discomfort
- Productivity decrease/increase
- Number of associates with high or extreme levels of discomfort
- Understand relationship to W/C claims
- Prioritize employees with higher risk
- Track completion of on-site services
- Track closure of recommendations
- Monitor ongoing risk
- Access data on groups or individuals
- Identify how many w/c claims possibly avoided

Total Ergonomic Requests 2008 - 2013



How Does Ergonomics Tie Into LEED?

LEED CI

- LEED – Leadership in Energy and Environmental Design
- T Rowe Price Project – LEED CI (Commercial Interiors) v. 2.0
- 2009 Edition – LEED Reference Guide for Green Interior Design and Construction



LEED CI

PROJECT SUMMARY

- 2 Floors
- 60,000 SF
- 428 people moved, 5 phases
- March 2008 – November 2008
- 1st TRP LEED Project
- Awarded LEED Silver January 2010

PROJECT GOALS

- Correct adjacency issues
- Reconfigure into more efficient layout
- Change perception of old vs. new
- LEED Certification



LEED CI Strategies



LEED for Commercial Interiors

T. Rowe Price B1 (10229325)

Colorado Springs, CO, US

Certification Level: Silver

Certification Date: 2010.01.07

27 Points Achieved				Possible Points: 57*	
Certified 21 to 26 points Silver 27 to 31 points Gold 32 to 41 points Platinum 42 or more points					
4 Sustainable Sites				Possible Points:	7
1	Credit 1a	Site Selection: LEED Certified building or two requirements	1		
	Credit 1b	Site Selection: LEED Certified building or two additional requirements	1		
	Credit 1c	Site Selection: LEED Certified building or two additional requirements	1		
	Credit 2	Development Density and Community Connectivity	1		
1	Credit 3.1	Alternative Transportation, Public Transportation Access	1		
1	Credit 3.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1		
1	Credit 3.3	Alternative Transportation, Parking Availability	1		
0 Water Efficiency				Possible Points:	2
	Credit 1.1	Water Use Reduction, 20% Reduction	1		
	Credit 1.2	Water Use Reduction, 30% Reduction	1		
2 Energy & Atmosphere				Possible Points:	12*
Y	Prereq 1	Fundamental Commissioning			
Y	Prereq 2	Minimum Energy Performance			
Y	Prereq 3	CFC Reduction in HVAC&R Equipment			
	Credit 1.1a	Optimize Energy Performance, Lighting Power Option A: 15% Below Standard	1		
9 Indoor Environmental Quality				Possible Points:	17
Y	Prereq 1	Minimum IAQ Performance			
Y	Prereq 2	Environmental Tobacco Smoke (ETS) Control			
1	Credit 1	Outdoor Air Delivery Monitoring	1		
	Credit 2	Increased Ventilation	1		
1	Credit 3.1	Construction IAQ Management Plan, During Construction	1		
1	Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1		
1	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1		
1	Credit 4.2	Low-Emitting Materials, Paints and Coatings	1		
1	Credit 4.3	Low-Emitting Materials, Carpet Systems	1		
1	Credit 4.4	Low-Emitting Materials, Composite Wood and Laminate Adhesives	1		
	Credit 4.5	Low-Emitting Materials, Systems Furniture and Seating	1		
	Credit 5	Indoor Chemical & Pollutant Source Control	1		
	Credit 6.1	Controllability of Systems, Lighting	1		
	Credit 6.2	Controllability of Systems, Temperature and Ventilation	1		
1	Credit 7.1	Thermal Comfort, Compliance	1		
1	Credit 7.2	Thermal Comfort, Monitoring	1		
	Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1		
	Credit 8.2	Daylight & Views, Daylight 90% of Spaces	1		
	Credit 8.3	Daylight & Views, Views for 90% of Seated Spaces	1		

LEED CI Strategies

	Credit 1.1c	Optimize Energy Performance, Lighting Power Option C-35% Below Standard	1
1	Credit 1.2	Optimize Energy Performance, Lighting Controls	1
	Credit 1.3A*	Optimize Energy Performance, HVAC Option A: Equipment Efficiency	1
	Credit 1.3A*	Optimize Energy Performance, HVAC Option A: Appropriate Zoning Controls	1
	Credit 1.3B*	Optimize Energy Performance, HVAC Option B: 15% Improvement	1
	Credit 1.3B*	Optimize Energy Performance, HVAC Option B: 30% Improvement	1
1	Credit 1.4a	Optimize Energy Performance, Equipment & Appliances: 70% Energy Star	1
	Credit 1.4b	Optimize Energy Performance, Equipment & Appliances: 90% Energy Star	1
	Credit 2	Enhanced Commissioning	1
	Credit 3a	Energy Use, Measurement & Payment Accountability - Case A (sub-metering or payment) OR Case B (continuous metering)	1
	Credit 3b	Energy Use, Measurement & Payment Accountability - Case A (sub-metering or payment) OR Case B (continuous metering)	1
	Credit 4	Green Power	1

7	Materials & Resources	Possible Points:	14
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Y	Prereq 1	Storage & Collection of Recyclables	
1	Credit 1.1	Tenant Space, Long Term Commitment	1
1	Credit 1.2	Building Reuse, Maintain 40% of Interior Non-Structural Components	1
	Credit 1.3	Building Reuse, Maintain 60% of Interior Non-Structural Components	1
1	Credit 2.1	Construction Waste Management, Divert 50% From Landfill	1
	Credit 2.2	Construction Waste Management, Divert 75% From Landfill	1
1	Credit 3.1	Resource Reuse, 5%	1
	Credit 3.2	Resource Reuse, 10%	1
1	Credit 3.3	Resource Reuse, 30% Furniture and Furnishings	1
1	Credit 4.1	Recycled Content, 10% (Post-consumer + 1/2 pre-consumer)	1
1	Credit 4.2	Recycled Content, 20% (Post-consumer + 1/2 pre-consumer)	1
	Credit 5.1	Regional Materials, 20% Manufactured Regionally	1
	Credit 5.2	Regional Materials, 10% Extracted and Manufactured Regionally	1
	Credit 6	Rapidly Renewable Materials	1
	Credit 7	Certified Wood	1

5	Innovation & Design Process	Possible Points:	5
1	Credit 1.1	Innovation in Design	1
1	Credit 1.2	Innovation in Design	1
1	Credit 1.3	Innovation in Design	1
1	Credit 1.4	Innovation in Design	1
1	Credit 2	LEED® Accredited Professional	1

* A maximum of 2 points are achievable for EAc1.3

LEED CI Strategies

LEED POINTS SUMMARY

- Recycling
- Bicycle storage
- Carpool priority parking
- Daylight responsive controls
- 68% construction waste diverted from landfill
- 77% of furniture and furnishings - salvaged, refurbished or reused
- Carbon dioxide sensors
- Indoor air quality testing
- Interior paints, coatings, adhesives and sealants in compliance with USGBC
- Carpet - CRI Green Label Plus
- Carpet adhesive
- Thermal comfort
- Green housekeeping
- **Ergonomics**

LEED CI Requirement

- Ergonomics
 - The development and implementation of “a **comprehensive** ergonomics strategy that will have a positive impact on human health and comfort when performing daily activity for at least 75% of Full Time Equivalent building users.”

- 1. “Identify activities and building functions for which ergonomic enhancement (i.e., ergonomic strategies which exceed standard industry practice) is both possible and desirable through education and equipment, and wherever possible building users should be consulted on their preferences.”

LEED CI Requirement

2. “Define a set of performance goals and expectations for the ergonomics strategy that address productivity, comfort, and health. Develop a plan and design process to meet them. Provide procedures to track and report the results of the ergonomics strategy, ensure that the performance goals have been met, and identify areas of potential improvement.”
3. “Provide machines, equipment, tools, work-aids (METWAs), furnishings, and accessories that reduce the risk of work-related musculoskeletal disorders and are acceptable to a wide range of building users.”
4. “Provide ergonomics education to building users. Provide at least two opportunities for building users to understand and take advantage of ergonomic features in their environment. At least one of these opportunities must be interactive, and at least one must include an explanation of the provided METWAs (Machines, Equipment, Tools and Work Aids) and furnishings, preferably by the manufacturer.

Ergonomic Submittal Requirements

Ergonomic Program Narrative

- Project Background – why are you developing your program?
- Project Objectives – what do you hope to achieve?
 - A documented program that details our processes and protocols
 - The ability to track and discover trends as well as show financial savings – call processing quantity and quality
 - Increased comfort and improved health – measured via survey and absenteeism rates
 - Education
 - Ability to assess ergonomic risk on a mass scale
 - Ability to assess any employee quickly, in any location
 - An easy electronic means of follow up
 - Help in assessing furniture and accessories
 - Help in assessing regulatory issues
- Implementation Plan
 - How will we achieve the objectives?
- What METWA's and furnishings will we be using?
 - Include all spec sheets

LEED CI Benefits

1. Reduce Operating Costs
 - Day Lighting
 - Occupancy Sensors
 - Building Commissioning
2. Enhance *Building* Marketability
3. Enhance *Business* Marketability
4. Increase Worker Productivity
 - Improve air quality = healthier employees
 - **Ergonomics**
 - Access to daylight
5. Reduce Potential Liability from Indoor Air Quality Problems
6. Reduce Negative Environmental Impacts
 - Less construction waste
 - Recycling – during project and after project completion
 - Reduce energy consumption
 - Reduce water usage

LEED Take-Aways

- ✓ IAQ Test – need at least 3 weeks between testing and occupancy to rectify possible test failures. All construction (including punchlist items) and furniture installation must be complete.
- ✓ LEED credits are based on % of total project not % of total building.
- ✓ **Get I & D credits completed early so you can test them out with the design submittal.**
- ✓ **You can use your ergonomics program for multiple LEED projects.**
- ✓ The enhanced commissioning process must be started during design development.
- ✓ Understand the timing of requirements prior to construction start.
- ✓ **START EARLY!**

Other Lessons Learned

- Keyboard trays: no employee education = they won't use them
- Chairs – a little education goes a long way; huge increase in comfort
- Younger generation very interested in self-education
- When you see it in the media, expect it in your workplace
 - Fitness balls
 - “Sitting is the New Smoking”
- Provide a standardized list of products for ergonomist to implement/recommend.
- 10% outside of the norm – be prepared to accommodate!