

# Agilent Technologies: Combining Web-based Products with On-site Services to Optimize Ergonomics

Rick Miller, Agilent Technologies  
Chris Shulenberger, Bureau Veritas  
Brett Weiss, Remedy Interactive

# Agilent Technologies at a Glance

- The world's premier measurement company
- \$5.4 billion annual revenue (2007)
- 19,000 employees
- Customers in 110+ countries
- Company created with Hewlett-Packard split of businesses (2000)
- Occupational Health Policy enables people to work injury and illness free

# Situation

- Strategic expansion of business operations in biotech
- Major business and EHS reorganization in 2005
- Hewlett-Packard/Agilent legacy ergo programs disparate, outdated, resource intensive
- Homegrown data management systems - regional, limited global value
- Major gaps – varied approaches, limited data to support program goals and risk reduction

# Business Drivers

- Reduce costs associated with injuries
- Increase employee productivity
- Optimize both internal & external resources

# Program Goals

- Provide global multi-language solution
- Provide centralized program management system to track metrics, risk reduction
- Provide a resource effective and efficient system
- Reduce injuries and associated costs
- Provide productive work environment
- Optimize high-touch capabilities for individuals

# Program Implementation

## **Pre-Implementation (7/06 – 10/06):**

- Program customized to Agilent needs and team structure
- Training OES administrators
- System testing
- Pilot program
- Integration with ergonomics providers
- Develop Global Strategy; O&Ts; Metrics for FY07

## **Initial Implementation Cycle (11/06 – 10/07):**

- Varied strategies - regions/sites/businesses
- Management support and commitments
- Timed to site & real estate activities
- Follow up meetings with ergo providers – QA/QC
- EU Data Privacy/translation/content issues

**Next Phase: (see Future Plans)**

# Web-based Technology

# What Does Technology Do?

- *Optimize Efficiencies of Program Players*
- *Scale Efforts*

*Goal: Reduce the Cost of Injury*

# Manage Program Roles & Responsibilities

## *Program Roles*

## *Responsibilities Supported by the OES*

**OES Administrator:** Leverage, implement & manage OES:

- Answer *where, what, who* are my risks
- Objectively measure results over time
- Leverage staff efforts with software tools

---

**Employee Participant:** Self-responsibility supported through automation:

- Personalized feedback provided immediately
- 30, 60 day follow-up with re-evaluation link
- 10-15 minute profile update every six months

---

**Supervisors:** Cultural support, management of subordinate needs:

- Automated summary reports that include participation rates, subordinate risk level, custom needs

---

**Third Party Consultants:** Follow-up with targeted HIGH risk issues:

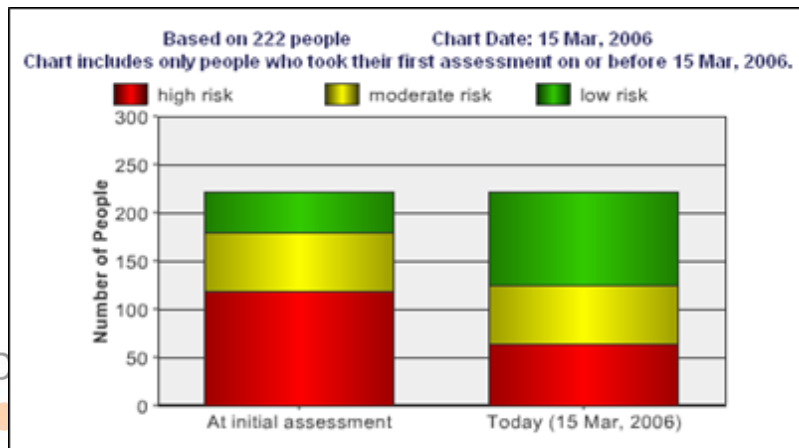
- Optimize time invested per employee
- Target high risk conditions

# Risk Data to Key Stakeholders: Examples

**EHS & Ergo Leads** receive automated summary of the risk breakdown, risk reduction by a variety of parameters

**Comparisons by Country**

COUNTRY	COMPARISON POPULATION <small>(size of active population)</small>	RISK DISTRIBUTION <small>(of people meeting criteria)</small>			PEOPLE MEETING CRITERIA <small>(in risk distribution)</small>	% PEOPLE MEETING CRITERIA <small>(% of comparison population)</small>
		RE-SORT % <small>[HIGH: 100% → 0%]</small>	SORT COUNTS			
TWN	282	48%	19%	33%	58	21%
SGP	827	48%	18%	35%	40	5%
KOR	245	46%	32%	22%	81	33%
CHN	1,723	42%	23%	35%	316	18%
AUS	211	23%	15%	62%	74	35%
MYS	4,211	20%	17%	64%	1,417	34%
CAN	252	12%	17%	71%	85	26%
USA	10,633	9%	11%	80%	2,948	28%



**Third Party Consultants & Supervisors** are informed of specific outstanding issues for individuals

## Miller, Rick H: Current Issues Impacting Risk



BEHAVIOR ISSUES	CURRENT ISSUE	IDENTIFIED	CREATOR
④ Breaks	Takes breaks once every 2 hours	[ modify ] 09-Oct-07	Rick H Miller
DISCOMFORT FREQUENCY ISSUES	CURRENT ISSUE	IDENTIFIED	CREATOR
④ Frequency of discomfort	Infrequent work-related discomfort	[ modify ] 28-Nov-07	Rick H Miller
ERGONOMIC ISSUES	CURRENT ISSUE	IDENTIFIED	CREATOR
④ Armrest position	Armrests too high	[ modify ] 14-Jan-08	Rick H Miller
④ Hand/wrist resting surface	Hands and wrists rest on hard surface	[ modify ] 27-Nov-07	Rick H Miller
④ Seat pan	Seat pan too small	[ modify ] 14-Jan-08	Rick H Miller
④ Use of a laptop without a docking station	Uses notebook w/o external monitor or keyboard input device 1-10 hrs/wk	[ modify ] 18-Oct-06	Rick H Miller

## Current Facts Impacting Risk

DISCOMFORT FACTS	CURRENT FACT	IDENTIFIED	CREATOR
Shoulder discomfort (severity)	Slight fatigue in shoulder	[ modify ] 28-Nov-07	Rick H Miller
Elbow and forearm discomfort (severity)	Slight fatigue in elbow and forearm	[ modify ] 28-Nov-07	Rick H Miller
Wrist and hand discomfort (severity)	Slight fatigue in wrist and hand	[ modify ] 28-Nov-07	Rick H Miller
ERGONOMIC FACTS	CURRENT FACT	IDENTIFIED	CREATOR
Multiple monitor usage	Doesn't use multiple monitors	[ modify ] 18-Oct-06	Rick H Miller
USER INFO FACTS	CURRENT FACT	IDENTIFIED	CREATOR
Stress	No Stress	[ modify ] 28-Nov-07	Rick H Miller
Touch typist	Touch typist	[ modify ] 27-Nov-07	Rick H Miller
Shared workstation	Uses non-shared ("Dedicated") workstation	[ modify ] 18-Oct-06	Rick H Miller
Hours on a computer	0-2 hours on a computer	[ modify ] 28-Nov-07	Rick H Miller

# Analyze Data to Direct Action

- Uncover the most common issues across the organization
- Predict which actions will yield the greatest risk reduction
- Use Software tools to leverage abatement efforts

Issue Frequency Report <small>Identify Issues and Issue Trends</small>			Criteria Summary			
<b>ERGONOMIC ISSUES &amp; FACTS:</b>			<b>The 282 people in this report</b>			
			are assigned to these Count		TWN	
			and are		active within the OES	
	* POTENTIAL RISK SHIFTS (PPL)					
	H→M,L	M→L				
DOESN'T USE MULTIPLE MONITORS	n/a	n/a	54	0	0	0%
COMMONLY VIEWS DOCUMENTS LYING FLAT ON DESK	n/a	n/a	25	0	13	34%
ARMRESTS TOO HIGH	n/a	n/a	18	6	12	33%
MONITOR TOO LOW	n/a	1	15	0	18	55%
SEAT PAN TOO BIG	n/a	n/a	15	0	5	25%
 USES NOTEBOOK W/O EXTERNAL MONITOR OR KEYBOARD/INPUT DEVICE >20 HRS/WK	7	1	14	8	5	19%
USES NOTEBOOK W/O EXTERNAL MONITOR OR KEYBOARD/INPUT DEVICE 1-10 HRS/WK	n/a	n/a	14	0	2	13%
CHAIR TOO HIGH	n/a	n/a	10	0	8	44%
BACKREST TOO HIGH	n/a	n/a	10	0	3	23%
BACKREST TOO LOW	n/a	n/a	10	0	0	0%
 KEYBOARD TOO HIGH	3	n/a	9	0	8	47%
USES NOTEBOOK W/O EXTERNAL MONITOR OR KEYBOARD/INPUT DEVICE 10-20 HRS/WK	n/a	4	9	2	1	8%
FEET DO NOT REST COMFORTABLY ON FLOOR OR FOOTREST	n/a	n/a	8	0	9	53%
NO BACKREST SUPPORT	n/a	n/a	8	0	8	50%

# Ergonomics Support Services

# Service Delivery Options

## Telephonic Support

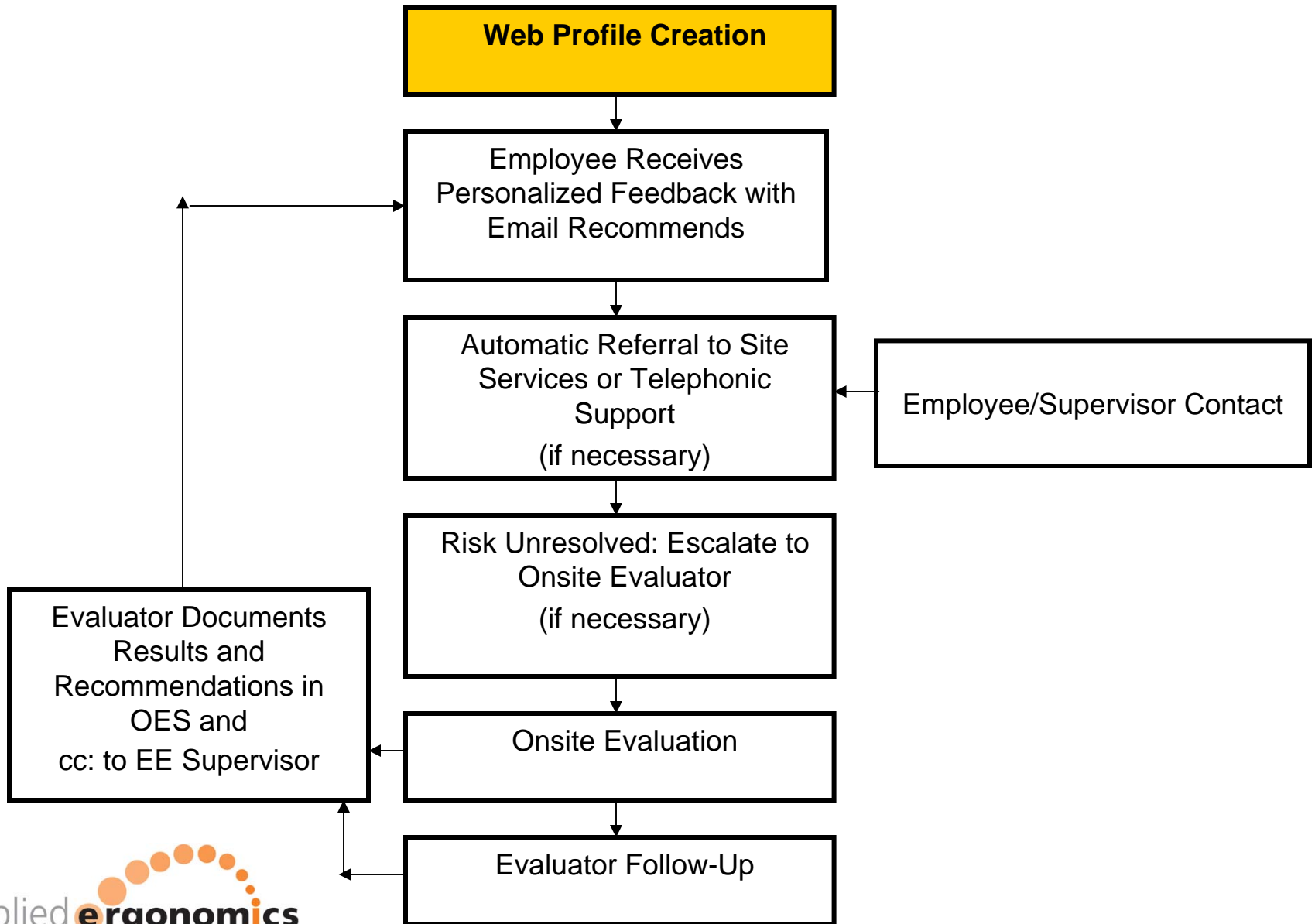
- Interactive process with employees
- Reviews OES findings and recommendations
- Identifies and clarifies issues
- Reports changes into OES

## Evaluation request

- Staff reports on-site
- One-to-one with employees
- Findings, recommendations into OES

## On-site staff

- Schedules evaluations
- Completes reports in OES
- Tracks follow-up to completion



# Integration with Corporate Services

## Human Resources

- New Employee Orientation
- Incumbent Training

## Health Services

- Early Intervention
- Return-to-Work Modifications

## Environmental Health & Safety

- Risk Assessments
- Remediation

## Procurement

- Product Review and Recommends
- Purchase Guidelines

## Risk Management

- WC and ADA Cases
- Compliance Audits

## Facilities

- Project Design
- Project Review

## Engineering

- Design Standards
- Ergonomics Training -- Engineers, Managers, Employees and Supervisors

# Impact of Integrated Web Technology and On-Site Services

- Expanded capabilities
- Faster delivery time
- Reduced staff resources
- Retention of high-touch with high-tech
- Increased employee satisfaction
- Reduced employee injury rates
- Reduced employee risk
- Consistent and scalable data management

# Program Results

- Since program inception in October 2006, Agilent has reduced the number of employees at high risk by 71%
- 56% participation globally in a non-mandatory program (extremely high)
- 90% of Agilent participants to date recommend the program to a colleague

# Future Plans

- Drive implementation to completion globally
- Examine risk reduction and percentages
- Examine contributions of technology vs. internal follow-up
- Look at risk reduction impact and cost savings overall
- Understand resource allocation company-wide
- Extend program to include “non-office” environments

# Best Practices: Considerations

- Integration of technology and services is essential to achieve the most cost effective results
- Technology and services integration provides a management system for scalable and sustainable programs
- Think holistically - size and scope of programs will depend on company culture, resource allocation and individual needs

# Questions?

- Rick Miller: [r\\_miller@agilent.com](mailto:r_miller@agilent.com)
- Chris Shulenberger:  
[chris.shulenberger@us.bureauveritas.com](mailto:chris.shulenberger@us.bureauveritas.com)
- Brett Weiss: [bweiss@remedyint.com](mailto:bweiss@remedyint.com)

Thank you for your time