





Good afternoon. My name is Jeff Kendall. I'm the district manager for Goodwill Computer Works. Today I'll talk to you about Goodwill's Computer Recycling Program.


How and why does Goodwill relate to this?

- **Non-Profit**
- **Mission Driven**

Goodwill places someone in the US in a job every 57 seconds of every business day.

\$1.9 billion in salaries and wages earned by people served and placed in competitive employment by Goodwill in 2005.



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OF CENTRAL TEXAS

WE PUT PEOPLE TO WORK.

The mission of Goodwill is to enhanced the quality and dignity of life for individuals, families, and our community by providing job related services for people with barriers to employment. We put people to work. We are generally better known, however, for our donation sites and retail stores. So what does all of this have to do with recycling computers?

Our focus is mission is above all else... but we have multiple bottom lines. Mission, profitability, and environmental responsibility.

Our retail stores and computer recycling program generate revenue that supports our mission.

In 2007, the Austin Goodwill

- assisted 9,699 individuals in Central Texas and provided 23,225 job-related services -- placing two people in competitive employment every day.
- Generated \$15.8 million in new earnings and taxes for the community by placing our clients in competitive employment outside of Goodwill.
- As the 29th largest employer in Central Texas, we returned more than \$25.3 million in wages and taxes to the community via our employees.
- Finally, we recycled 3,000 tons of computer electronics in 2007 as well as clothing, shoes, books, etc. that would otherwise have been added to our waste stream.

This leads us into my story.



Well, once upon a time....

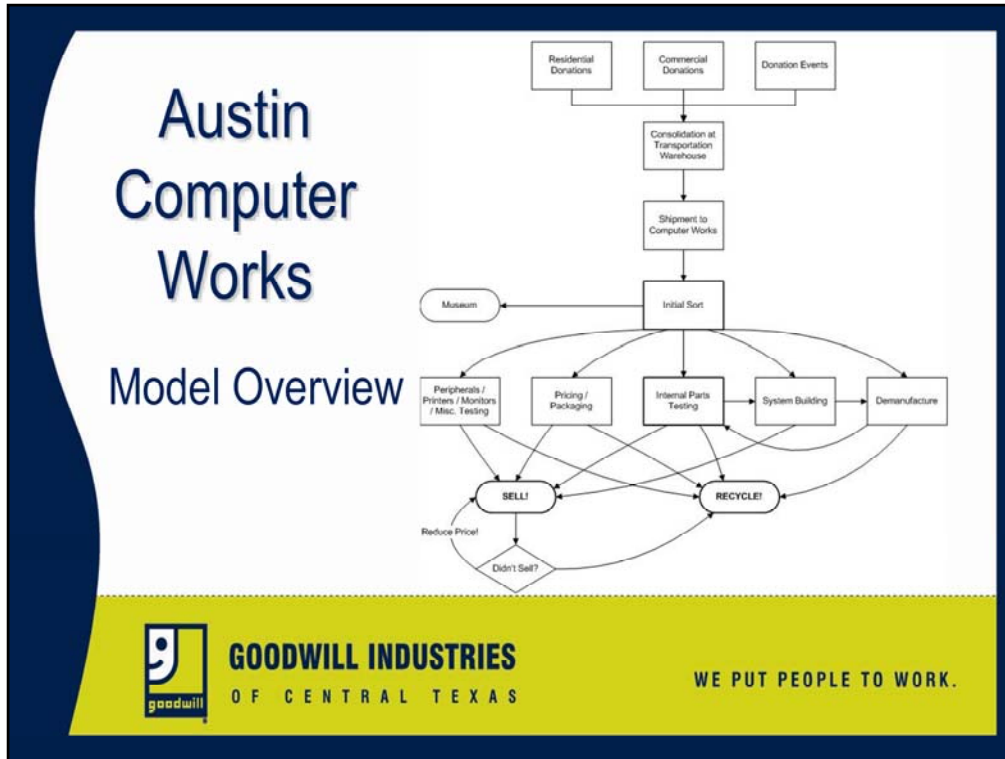
Computers started coming in through our donation stream. We had one employee, who actually retired just earlier this year after 20 years of service, that knew a little about computers and asked if he could start a new program. Bob started a program rebuilding these computers, 286s and 386s at the time, and started a program donating computers to needy families. That was not successful, however, so the program transitioned into computer training. The program continued to evolve until, in 1997, we formalized the operation at Goodwill Computer Works. Has anyone ever heard of this operation? Anyone ever shopped in one of my stores?

- Solid Waste Reduction equal to solid waste generated by 765 US households in a year.

The first Computer Works retail store opened in 1997 on North Lamar. They continued to grow and a few years later they moved to 183 & Burnet. In 2005, it was all grown up with an extensive recycling program and new home -- Goodwill Community Center.

Within the Goodwill network, over 180 autonomous Goodwill's, Austin had one of the first computer recycling operations in the United States. Due to having a solid team of dedicated people, we continue to have the most profitable. In fact, in the last few years alone we've trained over 20 Goodwills on how to replicate our program. We've expanded outside of the Austin region and opened stores in San Antonio (2005), Waco (2007), and Houston (2008).

Let's get into the internal processes.



Here's the overview. Got it? Alright, let's move on. Just kidding. One reason we've been successful is that we map out, measure, and manage every process by the numbers. I [focus on manufacturing efficiency and innovation to keep growing.](#)



- Donations Accepted
- Process begins

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The process begins with a donation at either a store or an attended donation site. We have over 20 of each in the Hays, Williamson and Travis county area. We take anything that is related to a computer (except big monster copy machines) and we operate almost exclusively on residential donations at this point. Refurbishing computers when each and every one is unique and different, complete and incomplete, working and non, is a fun challenge. We do love to get corporate and large donations, they are generally very easy to process.

Donations are consolidated at one of two transportation warehouses are sent to Computer Works by tractor trailer loads daily. And we get a lot!



Our computer donations are collected in gaylords. Is everyone familiar with what a gaylord is? It's a pallet-sized box 4'x4'.

Each gaylord we receive generally has

5.53 monitors per Gaylord

1.1 laptops

4.0 CPU systems

4.8 printers

27.4 other units (scanners, cables, mice, keyboards, software, etc.)

In 2006, we collected 8,318 gaylords of computer material. That equals 4,990,800 lbs. 2,495 tons.

In 2007, that increased to roughly 250 tons a month. It seems that the more we pull from the community, the more there is. We estimate that our donor penetration – one of our key measurements – is over 30%. This is extremely high among Goodwills.

So I have a team of 3 workers and a supervisor that manually sort over 12 tons daily. It's an amazing feat. More amazingly – we do it safely. Knock on wood, we haven't had a safety incident in over 3 years.

We have FIVE R's

- ❖ Reduce
- ❖ Reuse
- ❖ Refurbish
- ❖ Recycle
- ❖ Rework

We generate revenue from computers and systems that are sold in our stores. We also have a parts and accessories store that goes back for the mission of putting people to work.



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We process donations with a focus on the 5-R's.

- REDUCE: We reduce the amount of computers going into landfills
- REUSE: Whenever possible, reuse of any equipment is always the best option. We resell working components in the Computer Works store
- REFURBISH: We test and rebuild full computer systems for resale
- RECYCLE: We are a '0' Waste operation

And

- REWORK: We generate revenue to support our mission and put people to work

Behind the scenes



With all of the computers recycled by Goodwill there was Greenhouse Gas Reduction equal to removing 1662 passenger cars from the road per year.



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So we collect, assess, test, rebuild, resell, disassemble, and recycle. These pictures illustrate some of the processes. Raw donations are sorted and routed through a visual intake process.



Here you see the demanufacture process. About 80% of all the computers we collect are taken apart for their internal parts and recycling. We break computers down to their basic components that get us maximum recycling value and it takes many hands to do this. We use community service volunteers, workforce development clients, youth program clients, and have created a program called Greenworks.

Greenworks promotes volunteerism to corporations, companies, church groups, girl scout troops,... anyone that wants to participate. We tour volunteers through Goodwill, teach them about our mission, and then they deman computers for a couple hours before ending in our Computer Museum for refreshments. It's great fun, they call it a team-building opportunity, and I call it free labor.



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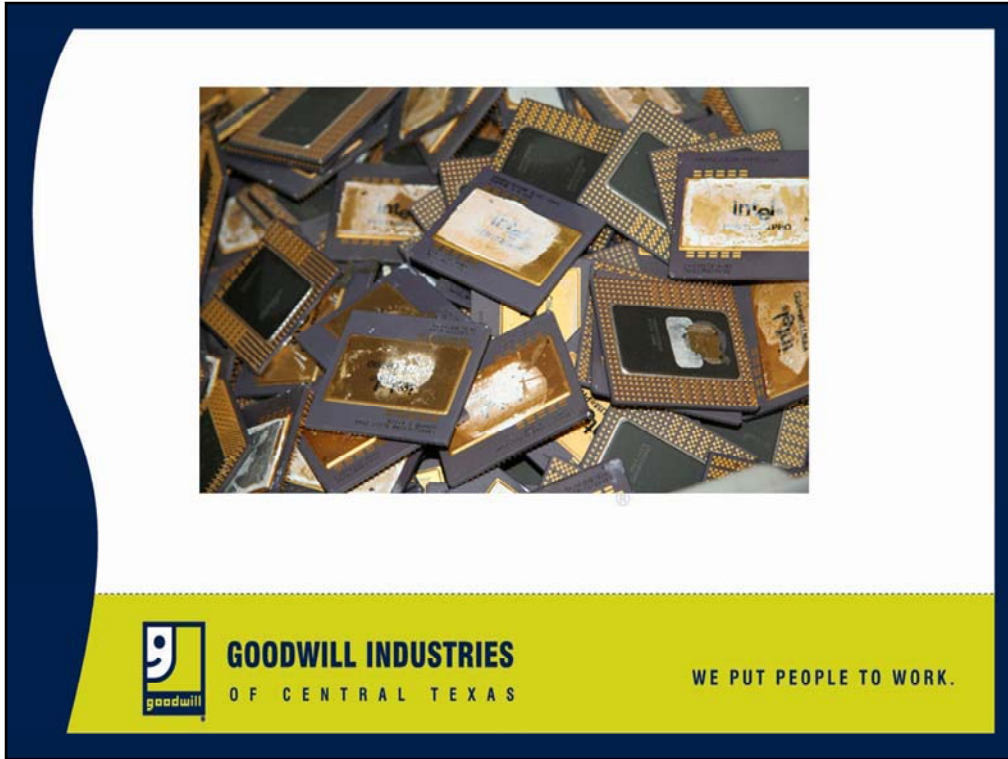
So, through the demand process, this becomes...



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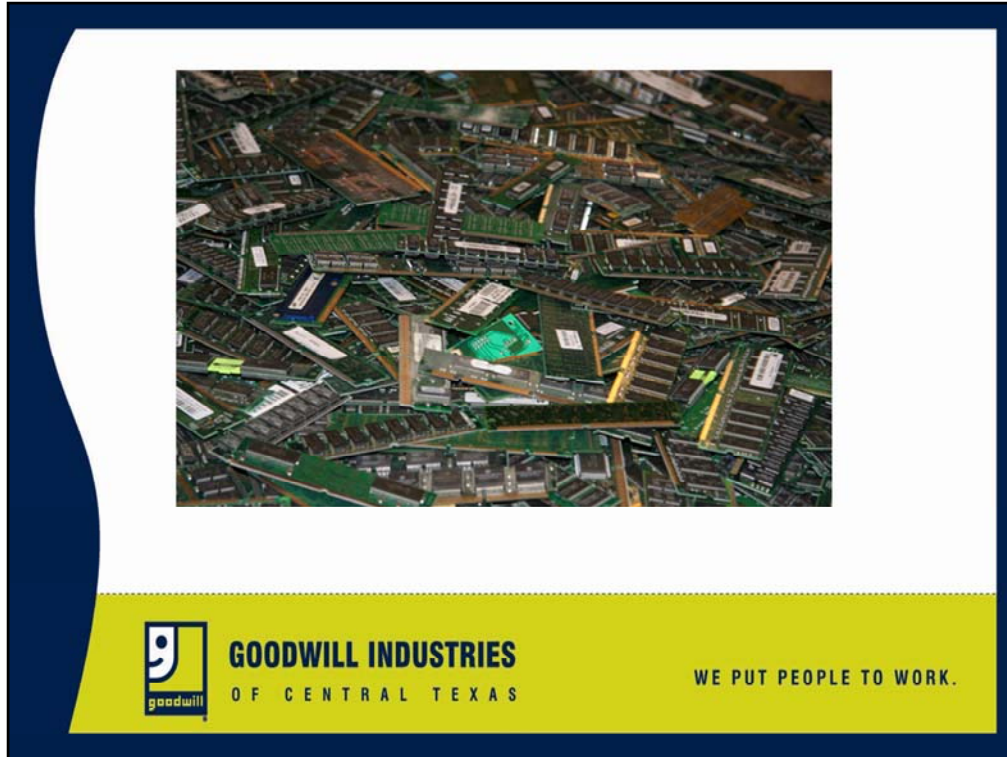
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Cables – great for copper



Processors

In bulk, processors can be refined for their gold content and other commodities



Memory

In total, we sort into over 40 recycling categories. Mining e-waste is a lucrative business that can yield 10 times the volume of valuable commodities compared with mining raw ore.

Sustainable Programs

One time events are great ways to jump start a program or act as stop gap measure but long term collection processes are needed for best results.



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We've had large collection events in Austin, Bastrop, Burnet, Cedar Park, Llano, and many surrounding counties. Some of these events had very little media coverage and others have had a lot of exposure. All have produced donations. On most events, we collect 1-5 tons. Collection events are exhausting, take many hours of preparation and a lot of resources. Sustainable programs need long-term collection processes.

Collection Events



November of 2007 Goodwill collected 54 tons of electronic waste 6 hours at Highland Mall.



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Having said that one example where the event worked really well is Fayette county. Many tons were collected and now the recycling center there collects the electronics, puts them on pallets and when they have a truck load we collect them and bring them back. We are happy to do so.

Now the opposite side of that is in the note up here about the November collection event at Highland Mall. Highland Mall, the city of Austin, and Dell computers with the support of Kirk Watson's office held an event and it was incredibly successful. Although Goodwill has been officially collecting computer donations for over 11 years, the most common comment we heard was that people did not know they could give computer donations to Goodwill. We collected from 53 tons from 735 donors in 6 hours. You can't argue with that kind of poundage and media. It is important to connect with public perception and media coverage when you can get it. If it doesn't kill you.

Now a few other notes as I wind down.

Computer Museum



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We have a computer museum! One of 3 known in the country. We have over 500 culturally significant pieces in rotation with 75 on display. Some things are just too cool or unique to recycle. Of particular interest is a Wang calculator that cost \$7000 in 1971 or an autographed PC Limited computer – a computer that Michael Dell built in his college dorm room before Dell was Dell. This year we have even hired a museum curator to pursue grants and advance the mission focus.

Wiping the Hard Drive



Data on computers reside in several different places due to operating systems creating 'swap files' that store data on the computer hard drive in hidden places.

Even if you do delete documents, emails, browser cache etc, a considerable amount of data is recoverable if someone uses data recovery software or other techniques.



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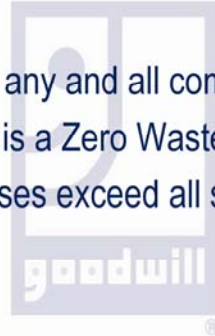
Officially, our stance is that customers are responsible for removing their data from hard drives and other storage media before collection. But we have a dedicated focus on data destruction. All donated computers have information on the hard drive. Even deleted files and formatted hard drives can be recovered easily. Every hard drive we collect is either cleaned with a 3-pass wipe to exceed Department of Defense specifications or physically destroyed by a hydraulic press. This destruction is verified by an independent auditor that checks random hard drives in our operation monthly through an agreement we have with Dell called the Reconnect Program.



RECONNECT is a cooperative program between Dell and Goodwill to market and promote responsible recycling and electronics recovery. Dell ensures environmental responsibility by auditing our downstream vendors to ensure compliance to strict standards. The project's goal is to raise awareness of the importance of responsibly recycling used electronics.

H.B. No. 2714

- Goodwill accepts any and all computer donations
- Computer Works is a Zero Waste operation
- Recycling processes exceed all standards



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Computer Works



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I encourage all of you to stop by Computer Works. Through all the people and organizations we've trained, they all left saying "I had no idea until I saw it for myself".

Questions?

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