

Materials Management through Sustainable Consumption Webinar Series

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Reuse Weighs In

The role of the reuse, repair, and rental sector in Minnesota's economy

Madalyn Cioci
June 25, 2013



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Overview

1. Background

What is reuse?

Why does government care about reuse?

Why did we do this analysis?

2. Analysis: Method and Findings

What does the data tell us?

3. So what?

Implications and opportunities.

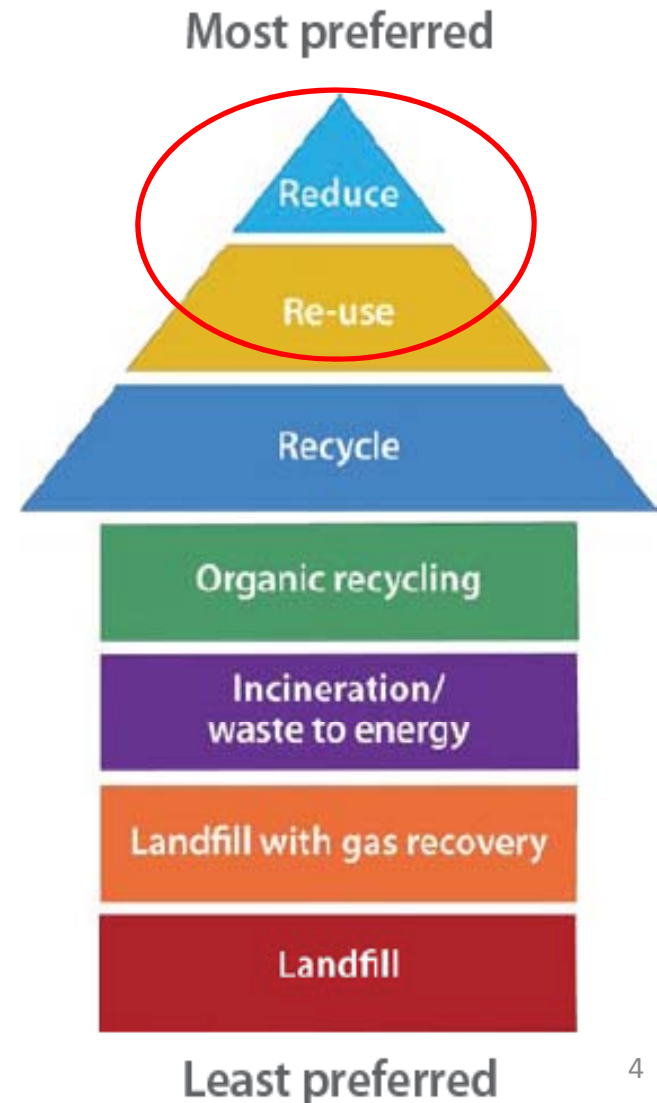


Reuse ...

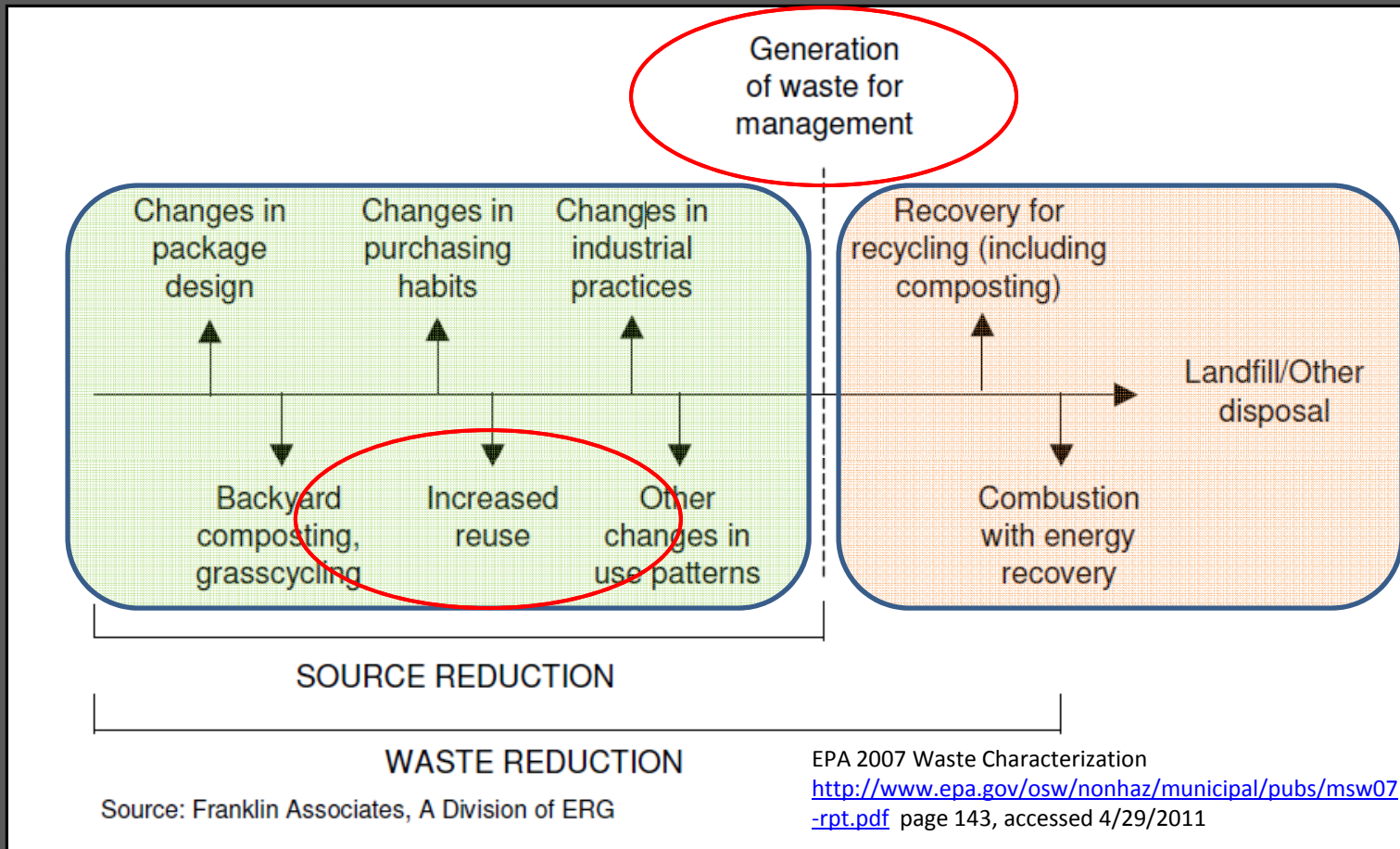
1. Is distinct from recycling
2. Means using an item again, in its original form; extending the useful life of an item.
3. Happens before discarding for disposal.



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Reuse is...







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Industrial, B2B reuse

Original: Vinyl
billboards

Repurposed →



Original:
Conveyor belts

Repurposed →



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These examples courtesy of
Repurposed Materials,
Henderson CO



Adaptive Reuse (Reuse of Buildings)



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Why Government Cares: Waste



“Source Reduction” means an activity that prevents generation of waste or the inclusion of toxic materials in waste, including

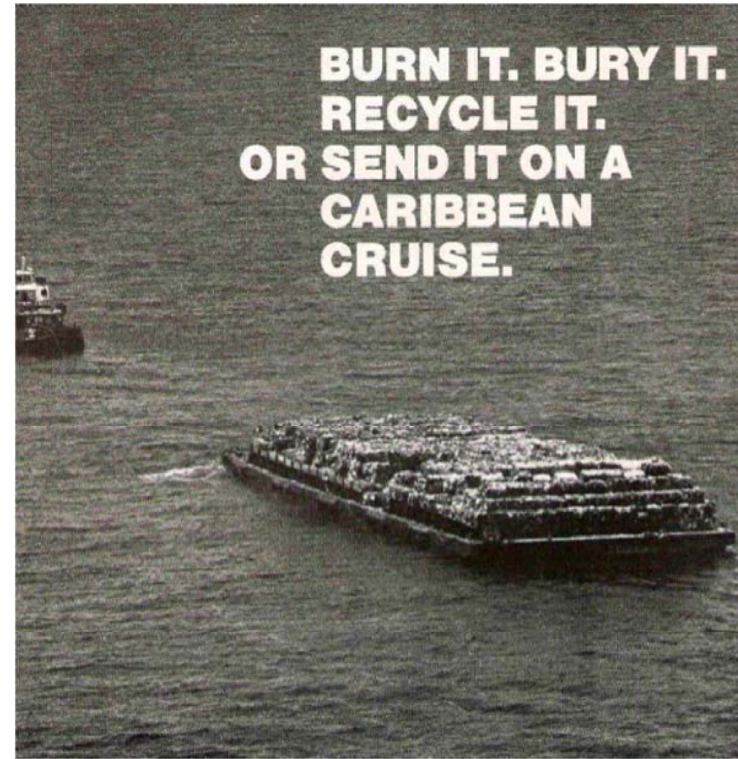
- 1) Reusing a product in its original form
- 2) Increasing the life span of a product
- 3) Reducing material or the toxicity of material used in production or packaging; or
- 4) Changing procurement, consumption, or waste generation habits to result in smaller quantities or lower toxicity of waste generated.

Why Government Cares: Waste

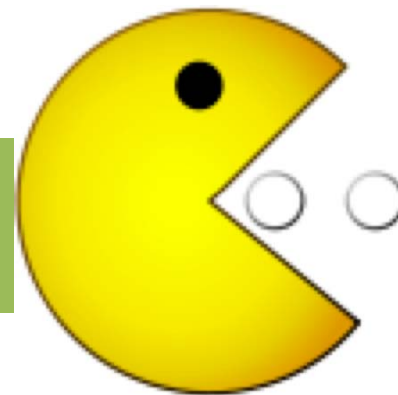


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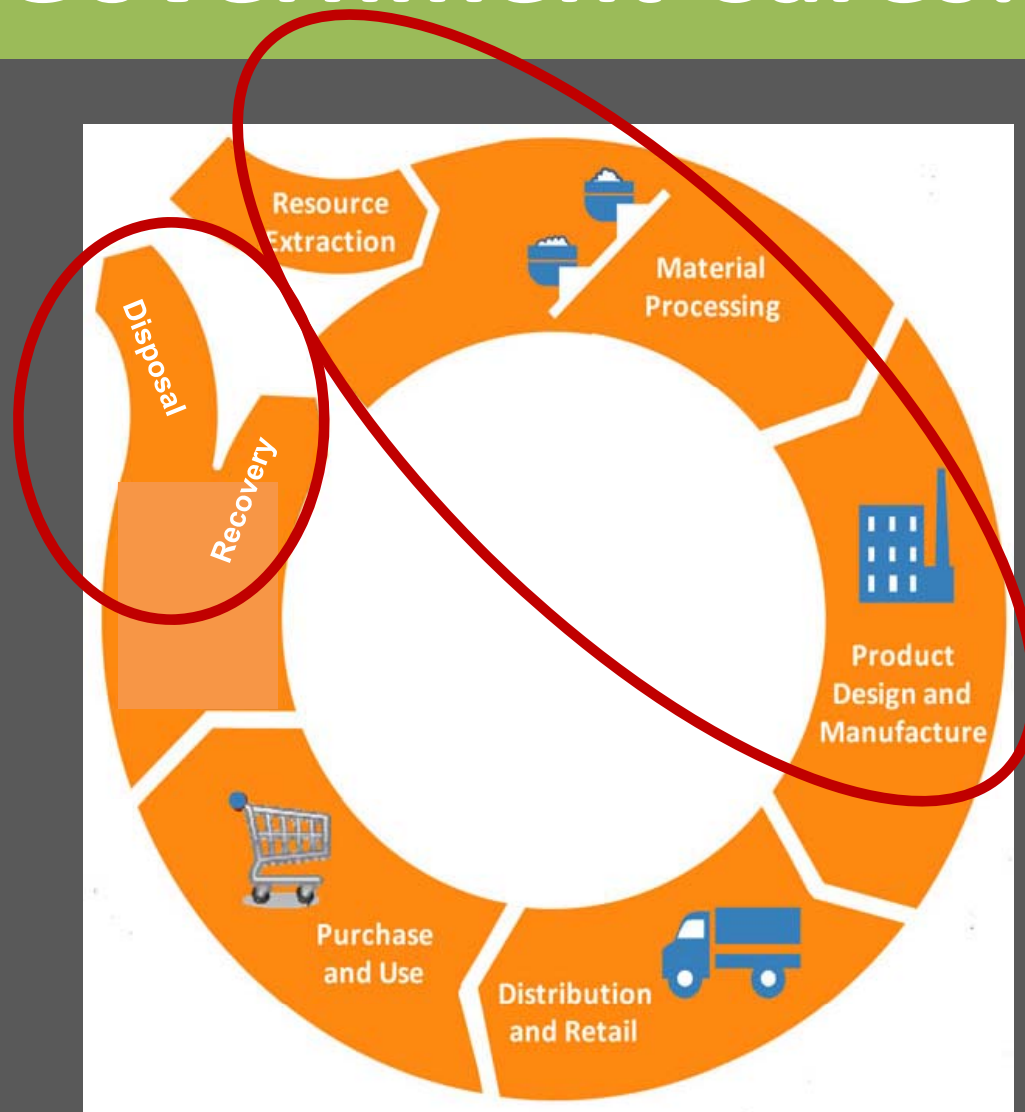
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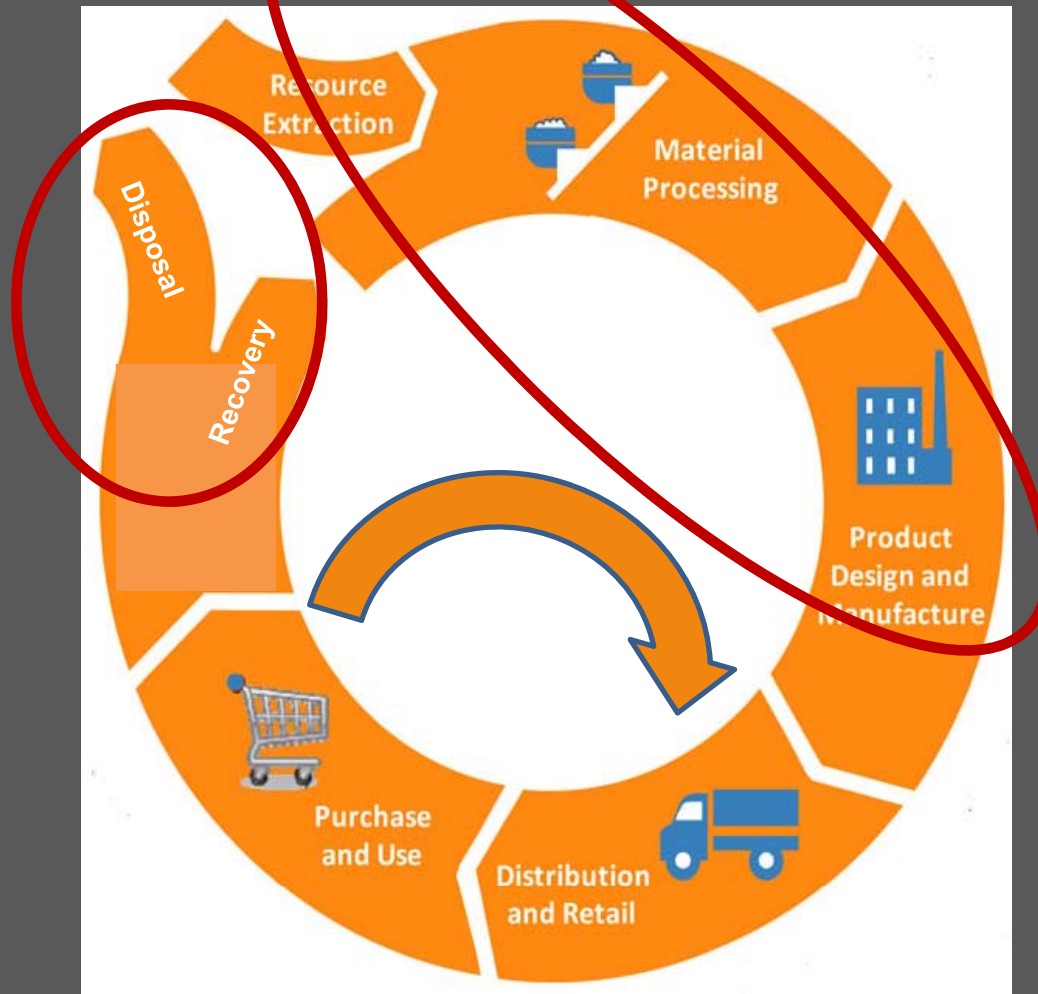
Your world in 1980's



Why Government Cares: Upstream



Why Government Cares: Upstream



*“Economic Activity
Associated with
Minnesota’s Reuse,
Repair and Rental
Sector”*



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Method

- Focus: Economic activity (not environmental)
 - number of jobs, wages, sales from direct jobs
 - number of indirect and induced jobs
 - Understand whether reuse spending results in more or less overall local spending
- Data set: Dun and Bradstreet
 - subset of economy
 - selected business NAICS codes
(North American Industry Classification System)
 - 9 reuse, 9 rental and 11 repair codes
- Interviews
 - businesses
 - economists



What's in? What's out?

In

- Resale of previously owned goods by business or charity.
- Salvage and refurbishment.
- Repair (extending item life).
- Rental

Out

- Recycling.
- On-line sales and trades.
- Person-to-person sales, trades, rentals and repairs.



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Categories

Used sales ⁴	Rental	Repair
<ul style="list-style-type: none"> • Boats • Cars & trucks • General merchandise (any non-vehicle item) • Motor vehicle parts & tires • Motorcycles • Pawned items • Recreational vehicles • Snowmobiles, all terrain vehicles, jet skis & other off-road vehicles • Utility trailers 	<ul style="list-style-type: none"> • Commercial machinery & equipment • Consumer electronics, appliances & other goods • Formal wear & costumes • General rental centers • Home health equipment • Office machinery & equipment • Recreational goods • Recreational vehicles • Video tapes & discs 	<ul style="list-style-type: none"> • Appliances • Automotive vehicles • Commercial machinery & equipment • Communication equipment • Computer/office machines • Consumer electronics • Footwear & leather goods • Furniture • Home/garden equipment • Electronic & precision equipment • Personal & household goods

Select portions of these categories were included.



Data Gaps

Not included in analysis:

- Part-time employees (jobs and wages)
- Wages of sole proprietors
- Volunteers
- Sales from privately-owned franchises of chain stores.



Findings: Jobs

Reuse
(Metro Only)

23,270
direct jobs

Reuse
(Minnesota)

45,840
direct jobs



Findings: Jobs

Reuse
(Metro Only)

23,270
direct jobs

Reuse
(Minnesota)

45,840
direct jobs

58,814
direct +
indirect

Recycling
(Minnesota)

37,000
direct +
indirect



Findings: Wages

Reuse
(Minnesota)

\$1.1 billion
wages
(58,900 jobs)

Recycling
(Minnesota)

\$1.96 billion
wages
(37,000 jobs)



Findings: Sales

Reuse
(Minnesota)

\$4 billion
direct sales

Utilities
(Minnesota)

\$4.2 billion
GDP

Tourism
(Minnesota)

\$11 billion
direct sales



Findings: Sector Detail

- About 70% of sector businesses have 1 or 2 employees.
- Automotive drives sector sales (75%) and jobs (60%).
- Wide range of wages
 - Avg reuse wage is \$675/week (state avg \$899)
 - \$346 (used merch) to \$1,093 (electronics repair).
- Repair has most businesses and highest average salaries
- Volunteer hours estimated to be worth \$1.1 – \$1.5 million



Other Findings

- Reuse, repair and rental are 1.8 % of state employment and estimated equivalent of 1.6% of GDP.
 - mining is .1%,
 - top 4 sectors are 10-13% each, most are 1-6%
- While reused goods are taxed, the value of the used goods that are sold is not included in GDP. Only the value of services associated with selling a used item are included in GDP.



Reuse Spending

Reuse is like any other economic sector:

- “The economy doesn’t care how you spend your money.”
- “The consumer who buys used will buy something else or save it, both of which help the economy.”



Reuse Spending

Reuse has no sector-specific effect on macro-economy;
helps the individual:

- “Impacts are probably the same, whether new or used.
For the individual, he is better off, the money he saves is
the same as he gets in his paycheck.”



Reuse Spending

Reuse is a service, and more of a “service” dollar stays local than a “new good” dollar:

- “ Services tend to have more local connection. More will stay local if there is a local connection.
- “A locally-owned repair business could retain at least 50% of the repair dollar in the state. In contrast, new car dealerships” would keep only 13% of each dollar for locally paid expenses.



Reuse Spending

Our conclusion...

The macro-economy doesn't care how money is spent.

But the environment cares.

So does the individual, and so does the local economy.



Impact and Opportunity

- Answered the questions.
- Increased credibility and quieted skeptics.
- Increased attention paid to promoting the sector.
- Highlighted repair jobs are well-paying green jobs.
- Opens door to additional possible levers for reuse: Sales tax exemption? Subsidies? Job training in repair? Codes and ordinances?



Ordinances

Minneapolis May Be on Verge of Secondhand Store Boom

Ordinance change opens the door to secondhand store clusters.

A 23-year old ordinance required at least 1,000 feet between secondhand stores in Minneapolis.

The ordinance was enacted when the shops were perceived as less than desirable. Attitudes have changed in regard to secondhand stores, especially in Minneapolis. The stores have become wildly popular. Seventy secondhand store dealers are now licensed in the city.

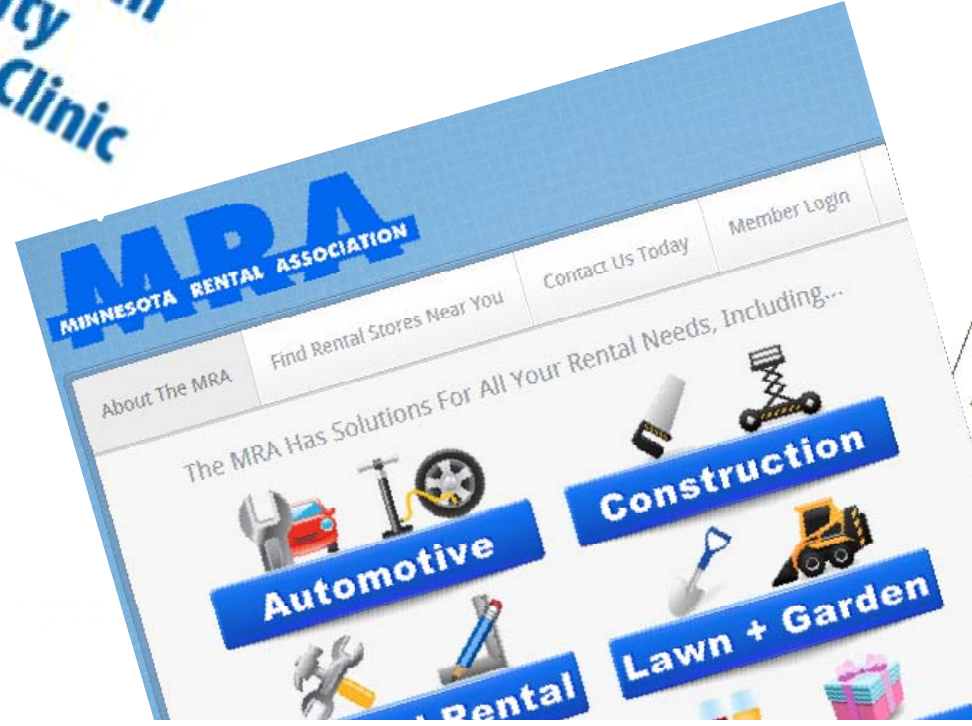
So the city council recently eliminated the space requirement for secondhand stores. It means these shops can open up right next to one another.

Advocates are now optimistic vintage store clusters will be created. Secondhand shoppers often enjoy visiting several nearby resale stores during one shopping trip. The ordinance change enables clustering to occur.



KSTP.com 8/17/12

Consumption vs. Donation




Choose to Reuse

Shopping reuse gets you great deals on goods from local businesses and protects the environment. It saves \$14.1 billion and employs nearly 170,000 jobs (EPA). Here are some ways you can Choose to Reuse:

- [Choose to Reuse Today annual campaign](#)
- [Choose to Reuse online directory](#)
- ["Don't Forget the Bags" window clings](#)
- [Donation opportunities](#)

Plus, learn more about [reducing](#) and [reusing](#)!



Choose to Reuse Today

Don't know where to start with reuse? Hennepin County partners with local retailers to offer Choose to Reuse coupon books through November 30. In 2012, over 31,000 coupon books were distributed to local organizations that rent. Here is a list of 2012 [retail](#) partners.





Thank You

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Find the study at
www.pca.state.mn.us
Search "Reuse, Repair, Rental"



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Addenda: Reuse Definition

For this analysis, we included businesses in NAICS codes that fit this definition:

Any business activity that extends the useful life of an item in its current state and helps keep it from being thrown out, or that provides the opportunity for a consumer to acquire or use an item second-hand that otherwise might have likely been bought new.



Addenda: Reuse Definition - detail

This definition includes resale by business or charity of previously-owned goods, salvage and refurbishment, repair that extends useful life (but not routine maintenance) and rental of things that are routinely purchased new.

Examples of intent: So for instance, we wanted to include clothing repair, but not laundry services. In automotive, we wanted to keep major repair like transmission, but not oil changes. In rental, we counted things like dishes and glasses, but not construction cranes, which are primarily rented, rarely bought new.



Addenda: Car use vs. production phase

Webinar viewers asked about how to judge when a car or appliances inefficiency warranted acquisition of more efficient product. I don't have authoritative information to answer that question definitively, it would depend on many variables.

However, a simple way to make a judgment is to know that it takes somewhere in the vicinity of 3-10 tons of co₂e to produce a car, and then calculate use emissions for your car for the number of years it is on the road. 1 gallon of gas burned causes 20 pounds of co₂e. 100 gallons of gas = 1 ton co₂e

The "Travel" section of this calculator can be helpful:

<http://coolclimate.berkeley.edu/carboncalculator>



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Addenda: Cars Use vs. Production Phases

1. “For conventional Internal Combustion Engine Vehicles (ICEVs), although the use phase accounts for the majority of global warming potential (GWP) impact, vehicle production is not insignificant, contributing on the order of 10% to the life cycle GWP”

Hawkins, T. R., Singh, B., Majeau-Bettez, G. and Strømman, A. H. (2013), **Comparative Environmental Life Cycle Assessment of Conventional and Electric Vehicles**. *Journal of Industrial Ecology*, 17: 53–64. doi: 10.1111/j.1530-9290.2012.00532.x
<http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2012.00532.x/full#jiec532-bib-0013>



Addenda: Cars use vs. production phase

2. US Department of Energy's Fuel Economy Guide is a great tool to help you compare the impacts of different cars from different years:

<http://www.fueleconomy.gov/feg/Find.do?action=sbsSelect>



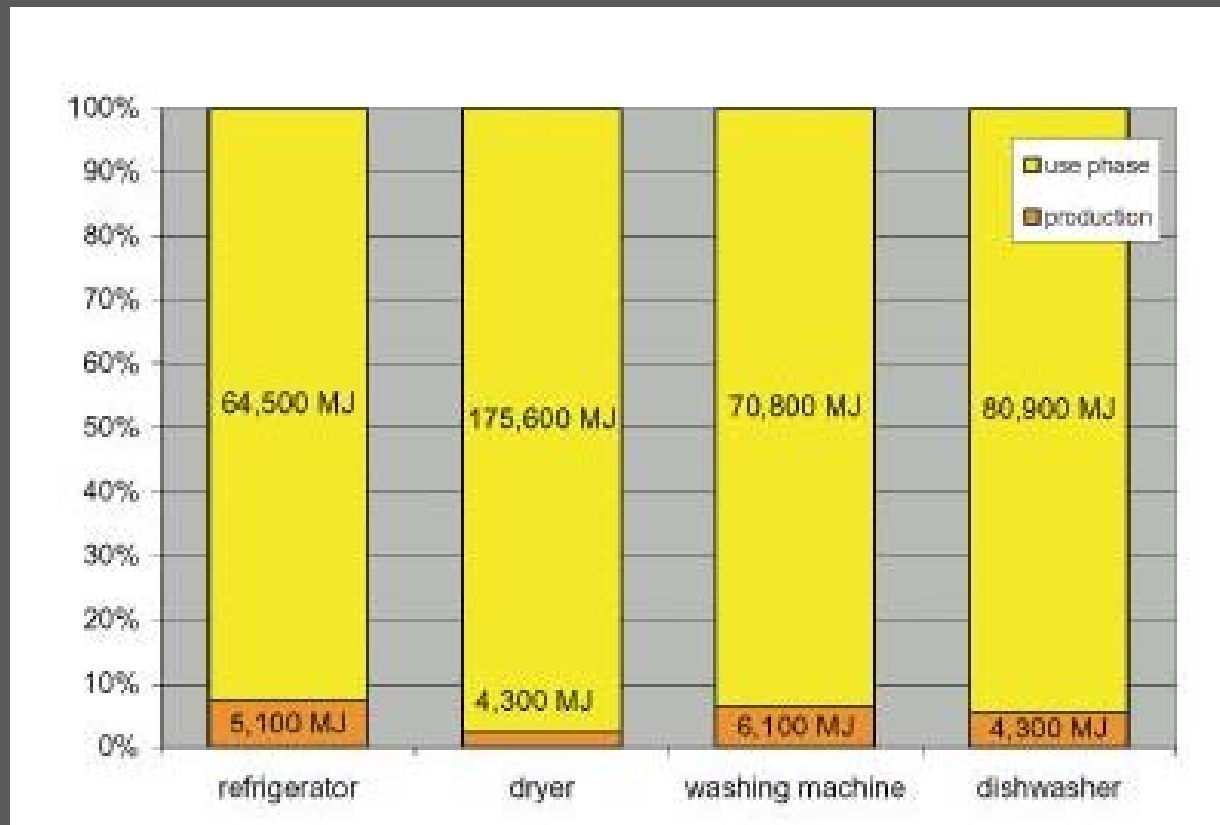
Addenda: Appliances use vs. production phases

This consumer article from Appliance Magazine reports that refrigerators made in 2005 use on average 78% less electricity than refrigerators made in 1990. For dishwashers and washing machines, there has been a 30% improvement. Chart on next slide shows that over 90% of appliance impact is in the use phase.

<http://www.appliancemagazine.com/ae/editorial.php?article=1393>



Addenda: Appliance use vs. production phase



From: April 2006 APPLIANCE Magazine *Engineering - Energy Consumption*
Assessment of the Environmental Impact of Household Appliances
<http://www.appliancemagazine.com/ae/editorial.php?article=1393>



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