W. Edwards Deming, 1900-1993
modern quality management
father of the Japanese post-war industrial revival
Perception: Japan produced cheap, shoddy imitations of innovative quality products

learning is not compulsory...
neither is survival
2.009 Product engineering processes
today

Product teardowns learn from the work of others

Friday
- financial officer RFP training at 3 PM
- user feedback 5 PM
- Solidworks bootstrap 5 PM

Monday
- information officer session, 7 PM
- SI communication workshop, 7 PM

online notebook pages, 10 PM last night
Product teardown
dpart of a benchmarking process

teardown exercise

practice the process: relevant to sketch models
learn about products related to your idea area
observe design details
practice secondary research
organize information so others can understand it
practice organizing team to work quickly
Product teardown
deliverable from each team at end of class

a white pegboard display that allows one to...

easily understand the product
easily see what parts are in the product
obtain specified information about the parts/product
Product teardown
example: scanner
Product teardown
resources for each team

resources

a product to teardown (on team table)
safety glasses (yours for the term and to keep)
white peg board mounted to team table
zip ties
baggies for small parts
guidelines for identifying plastics (also on website)
magnets and lighters for materials identification
scales for weighing parts
guidelines for estimating costs (also on website)
your smart phone cameras (email to 2009printer@mit.edu, pickup 4”x6” photo in 2009 area)
product and part information stickers
Product teardown

Product information sticker (2, one needed)

Product name:

Target customer:

Retail cost:

Estimated production volume:

Location of manufacture:

Estimated labor cost:

Cost of the most expensive part:

You will want pictures of the assembled product (and in use as appropriate) images at key disassembly states packaging and the unpacking experience are part of the product
Product teardown
part information sticker (100, as needed)

part material:

method of manufacture:
estimated manufacture cost:

number of times used in product:

for every answer indicate your confidence

guess
hunch
educated estimate
know/verified
Teardown exercise

**getting started**

i) go to your team area in the lab
   your product and materials are on team table
ii) put on your safety glasses
iii) develop a work strategy to utilize the team
iv) complete the deliverable
v) tool officers have your tool kit combination
vi) team picture at the end

_and remember…_

**these products are giving their lives for education…**

so enjoy and learn from the displays!