

\$100,000 UR Waste-Reduction Campaign.

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Project Goal: Document quantitatively how the UR can save \$100,000 through innovative, no-cost, waste-cutting initiatives (with little or no out of pocket, up-front expenditures).

Project Objective: Make the financial case for cutting waste as a good-business strategy with the hopes that we will:

- a). implement some or all of the proposed waste-reduction measures,
- b). determine how with future strategic investments from such savings we can save additional significant moneys while simultaneously protecting the environment,
- c). reallocate x% of profits from waste-cutting into
 - o educational initiatives,
 - o additional waste-reduction initiatives,
 - o competitive grants program for UR staff, students and faculty to create innovations in design, construction and performance that would save additional moneys for the UR,
 - o and/or a staff-level position for a campus sustainability coordinator whose position it would be to advance the Campus Sustainability Initiative (CSI), and
- d). to anticipate increasingly stringent resource consumption and effluent production legislation and to become a model of responsible citizenry and technological innovation to our greater regional, state and national communities.

Project Deliverable: A comprehensive document quantifying means by which the UR can reduce waste deemed "needless" with a precise and accurate accounting of the fiscal benefits of such waste reduction. Our aim is to save the UR \$100,000 within a year of waste-reduction with little or no upfront expenditures.

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Project Rational: Good business practice is increasingly defined by, and associated with, improvements in efficiency, productivity and waste reduction through innovative operations and design. Many top companies have committed to such innovative efforts (e.g., 3M, Dupont, SunCal, BP, Interface Flooring and hundreds of others worldwide). Over 300 of the nation's most prestigious university campuses have demonstrated that they can individually save millions of dollars through innovations in design, construction and practice initiatives. Large institutions such as the University of British Columbia now support a staff of 7 full time sustainability coordinators and a staff of 10 students from savings generated exclusively through waste reduction. This now well funded staff has been able to isolate and save an additional estimated \$15 million in savings since its inception in 1999. Harvard University's Green Campus Loan Fund that supports "green initiatives" on campus generated \$2,320,000 in profits during FY '06 from an initial investment of several hundred thousand dollars generated from FY '05's sustainability profits. Hundreds of such examples exist on other campuses.

Initiatives such as those made by our most innovative businesses and universities make good business sense. Additionally, such initiatives challenge Universities to pool their creative energies and expertise towards a more sustainable operation generating much collaborative research and educational activity thereby emulating the best higher education has to offer. For others, such as myself, the value is immeasurable despite the fact that we can quantify it: for some of us we are motivated by living more simply (and efficiently) thereby improving our quality of life and experience while reducing our impact upon this singular planet and the other peoples and living things that depend on it as much as we do.

The success of future businesses will be driven by the imperative of "Doing well by doing good". We will either arrive at this mission because it makes good business sense in a civic society or we will arrive at this mission off-balance as we scramble to keep up with changing legislation. It is a corollary of the 'spherical earth hypothesis' that non-renewable resources such as fossil fuels are limited in supply. Our future imperative is clear. Today we understand. Tomorrow we are negligent.

General Campaign:

We would focus our general waste-reduction efforts within three general categories.

1) Offices, Teaching Facilities and Research Labs

- Campus-wide instructions on how to set computers to go to sleep after x number hours of non-use; or staff do settings on each campus computer. Approximate annual savings: \$10k+
- Departmental over purchases are listed on a UR website. Other departments in need of an item can look for excess items on this website and purchase between departments rather than buying new.
- Make sure that all science department fume hoods are turned off when not in use (huge savings).

2) Student Services (e.g., Housing, Bon Appetite)

- Composting food wastes from Bon Appetit (savings on reduced trash removal and savings on need to purchase compost); \$15,000/year reduced waste removal; \$2000 compost purchasing alone; estimate of 200+ tons of waste (3/5 of total based on January, 2007 data) reduced per year.)
- Students provided with parking pass for their dorm but must purchase campus-wide pass for 200\$ per year.

3) Other University Services (e.g., Transportation, Energy, Landscaping)

- Planting deciduous trees on the south-side of buildings for thermoregulation purposes within building.
- Grounds crew lowering their mower blades by 1/4 inch and mowing less frequently (Approximate annual savings: about \$15 - 20k; saving \$2000 for each mowing avoided).
- Sun-Edison provides campus with solar energy at a KWH cost of \$0.14 (higher than current normal price, but SE price remains constant over 20+ year contract).
- Strategic Energy Innovations along with funding from Southern California Edison and the EPA can partner with the UR at no cost to
 - o Replace (at no charge) up to 1000 incandescent light bulbs with compact florescent lamps,
 - o Perform a free energy audit of buildings done by ten of our own students paid up to \$500 per student for their work resulting in a full data analysis of ways of further energy reduction, and
 - o Create, (free of charge) a green demonstration apartment (or series of apartments) complete with energy star appliances (including complete kitchens), toxin-free carpeting and paint, skylights and energy-efficient electronics etc.

Prospecting for Waste-Reduction Initiatives:

Goal: Identify those areas with potential to provide the highest cost-savings per unit effort/investment/change.

Several means exist by which we might gather ideas and innovations:

- Access campus ingenuities through
 - o UR notes request for general ideas
 - o Focus-groups with purchasing, HR, facilities management, services (e.g., Bon Appetit, Sedhexo cleaning, Kinkos), faculty and students (discipline and/or building specific)
- Third-party free consultations and audits (e.g., Sun Edison, Strategic Energy Innovations; Lucid Design Group)

Thanks again for taking the lead on this. You have a lot of good ideas here. My suggestion would be, however, to suggest to Phil a grand scheme of how we should go about this. Then, at the beginning (as examples) and the end (as further leads) produce a list of things that we think may work for the university. All we have at this point are leads that may provide us potential cost savings, so I would be very careful with the wording. Phil, after all, is a business manager, and he knows more about the coordination efforts needed than us.

My suggestion would be to call for a general waste reduction campaign to save costs for the university, and in turn invest half the (proven) money saved into environmentally friendly technology and leave half the money to the university as a whole (including e.g. for environmental scholar ships for students with the best environmental ideas for the university).

Then, let's suggest a systematic scouting process, which will help identify the biggest potential cost-savings. I have several ideas on this but would like to discuss them with you guys.

Finally, let's present three examples and how we think it can be done. If Phil sees that we have a plan for implementation and an idea of the size of the cost-savings, this makes it the easier for him to agree.

The guiding principle should be to find the highest cost-savings - effort / investment / discomfort ratios. Examples could be: switch off heaters and air-conditioners in offices from 10:30 PM till 5:00 AM, the lawn-mower example etc.