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Brainstorming the Greenest of Buildings

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Eugénie Frerichs/Oregon Sustainability Center Team members scribbled ideas for a new sustainability center at a meeting in Portland last week.

Some of Portland's most celebrated thinkers in green design gathered last week with city and state officials at the Gerding Edlen Development Company offices to dream up features for the city's proposed Sustainability Center of Excellence — a state-of-the-art high-rise that would function both as an emblem of hyper-green design, and as a locus for green-building research and education in the region.

The center would unite the sustainability programs of the states' universities under one roof, as well as start the city's first fully-integrated sustainable neighborhood.

"Our hope would be that the building would not only anchor a new eco-district," said Portland Mayor Sam Adams, "but create a new process for coming together and being innovative."

At last week's freewheeling, frenetic brainstorming meeting, design team members scribbled concepts onto paper in timed contests to find the most compelling concepts – feasible or not.

One popular idea was the "aware chair," which would recognize the distinct print of each users' backside and automatically adjust the lighting, temperature and other features of an office environment to a collection pre-set preferences. Also discussed: electricity-generating revolving doors attached to a "macho-meter" that instantly displays the entrants' push power (and presumably, his or her contribution to the building's zero-energy profile.)

Rob Bennett, the director of the Portland + Oregon Sustainability Institute, which will be housed in the new center, said he thought the most exciting and innovative idea addressed the composition of the building frame itself. Hollow box-beams made of cast-in-place concrete would provide structural support to the building, as well as hold all the functional systems from electrical and data pathways to radiant heating and cooling.

This, Mr. Bennett said, would eliminate much of the material typically used to finish the interior space.

Lisa Petterson of SERA Architects in Portland, which, along with GBD Architects, is conducting a feasibility study of the project, echoed Mr. Bennett's appraisal. "We don't need a floor or a ceiling," she said.

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