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PATH CONCEPT HOUSE

Vision for future: A house that changes as quickly as we do

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Our lives are forever changing; our homes, alas, can't always keep up.

Just about every household at one time or another experiences the sort of change that calls for a rapid response: the birth of a child, perhaps, or the arrival of an older family member who needs round-the-clock, in-home care -- two scenarios that call for new bedrooms.

Maybe the change is a professional one, necessitating the conversion of a den into a home office. Or sometimes an aging house simply gives out on us, forcing us to make major structural changes at great expense. In any case, houses don't always seem sympathetic to their owners' plight.

A recent partnership between the private and public sectors hopes to tip the scales to the advantage of homeowners, however. The fruit of this collaboration is a house designed to anticipate and accommodate the sudden and urgent need for a new bedroom or study, an updated electrical system or a home elevator.

Welcome to the PATH Concept Home, a "house of the future" designed -- and soon to be constructed -- under the aegis of the Department of Housing and Urban Development. The program has been conceived by the department to catalyze change in the housing industry, which has historically been slower than other industries in adopting innovations.

"In every other industry, improvements in productivity and technology have led to better products and better services," says David Engel, director of affordable housing research and technology in HUD's Office of Policy Development and Research. "Housing should be subject to the same forces. But because of various structural and business barriers, that hasn't been happening. We wanted to accelerate that. The PATH Concept Home goes a long way toward that goal."

The PATH program (the name stands for Partnership for Advancing Technology in Housing) was conceived as a way to unite builders, engineers, architects and policy-makers to encourage innovation in housing design.

The plans for two Concept Homes -- one a traditional house that evokes an Arts and Crafts style bungalow, and the other a contemporary urban townhouse -- incorporate such innovations as flexible floor plans, movable walls, "utility cores" that make it possible to relocate kitchens or bathrooms, and easy-to-access mechanical systems and wireless networks that control lighting and other household functions.

Construction on the first home, a bungalow in Omaha, should be completed a year from now. Engel hopes that the house will prove to home builders (and home buyers) that such innovations are not only attractive but affordable, and will become standard features of houses in years to come.

Of the Concept Home features, perhaps the most captivating is the flexible floor plan. According to James Lyons, a mechanical and environmental engineer at Newport Partners, a Maryland-based technology consulting firm working on the project.

Thus a large single bedroom can be turned into a pair of smaller bedrooms by adding a wall that has already been built and can simply be slid into place -- perfect for the arrival of a new family member, for example, or for siblings who have outgrown a shared space. Should the homeowners wish to return the room to its original dimensions, the wall slides back out again.

Other innovations in the Concept Homes will include wiring that is easily accessed through removable baseboards, so that the act of servicing the electrical system -- or installing an entirely new one -- will require no demolition. The "utility core" will consolidate the plumbing system, among other systems, in a central space ("like a big tree trunk in the middle of the house," says Engel) so that pipes can radiate from it in any direction, making the moving of one's kitchen, or the addition of a new bathroom, much less daunting.

Liza Bowles, Newport Partners' general manager, imagines a near future in which it will become standard practice for new houses to incorporate such innovations.

The PATH Concept Homes, Bowles hopes, will spark a colloquy among consumers, who want maximum flexibility and adaptability; builders, who are concerned with practical and economic matters; and architects and engineers, whose great ideas don't always find a receptive marketplace.

"We're hoping that we'll get feedback from all of these groups and that the cycle of innovation and implementation will continue," Bowles says. "But right now, we just want to get everybody on the same page."

View floor plans

Plans for the PATH Concept Home can be seen at www.newportpartnersllc.com. Click on "PATH Info."

General information about HUD's PATH program can be found at www.pathnet.org.

HUD also maintains a Web site geared toward consumers at www.huduser.org, where you can find more than 800 documents on housing-related topics.