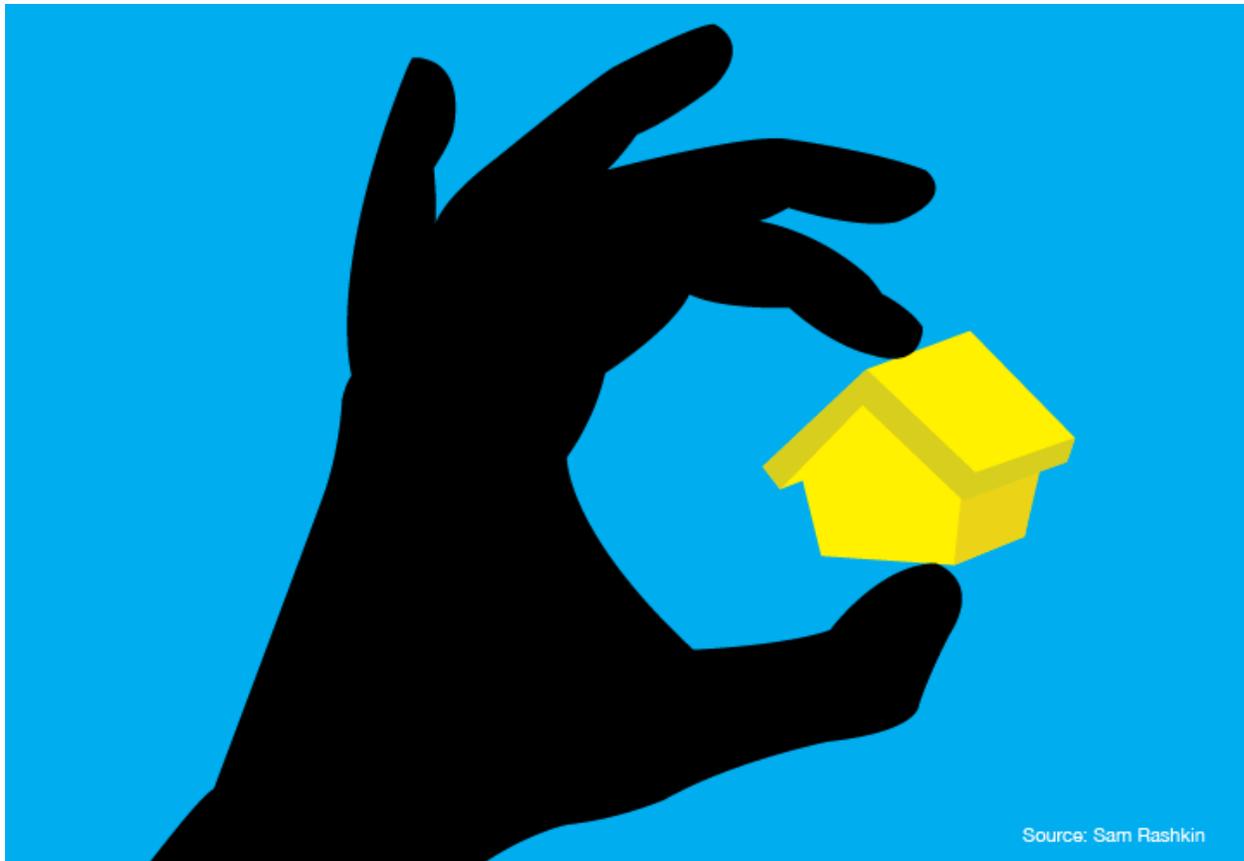


BUILDER Online – August 31, 2015

## **A Bigger Idea Than Tiny?**

**The right time for the ‘right-size’ floor plan...and this is how to do it**

Sam Rashkin – Founder, Retooling the U.S. Housing Industry



Occasionally a new idea comes along that makes you want to shout, “Please stop the madness.” Take the Micro-Home movement for example. You know, those small 400 to 700 square foot homes that are admittedly ingenious cramming an amazing amount of features into a small size, except one...space. For a great parody on living small, do check out the Micro-Home skit from the cable television series Portlandia (a shout out to my daughter Monica for finding this funny bit).

---

Yes, there is a minimum amount of space people need to live, and I'll boldly declare the sweet spot for a right-size typical home is about 1,500 square feet. How did I arrive at this size? It's the result of decades observing and designing floor plans that leverage all available assets including five critical factors:

- **Fit to Site** – getting the most out of each individual lot and location while ensuring a social connection
- **Natural Comfort** – using free solar resources for better heating, cooling, and lighting
- **Right-Size the Right Way** – minimizing wasted space while maximizing the living experience
- **Architectural Integrity** – creating enduring designs while minimizing maintenance and cost
- **Integrated Systems** - ten individual systems working together seamlessly

Admittedly I'm a very harsh critic of most home designs. So I'll let you all be the judge with one of my old designs shown below to demonstrate how a floor plan less than 1,500 square feet can live larger than most typical 2,000 square foot floor plans. More about what I would do with 500-plus square feet of hard cost savings later.

Right-Size Floor Plan: 1,480 Square Feet



What's so special about this floor plan? Let's start by describing how it lives. There's an oversized island kitchen with extensive cabinets and counter space. There's a very comfortable great room with plenty of daylighting fully optimized for eating, entertainment, storage, and work. The master bedroom is luxurious including more storage and built-ins than homes twice its size and an over-sized master bath with generous tub, shower, double-vanity, and enclosed toilet area. Both the great room and master bedroom are visually linked to a great outdoor living space that optimizes the usefulness of the small lot. The hall bathroom is oversized with two compartments that allow multiple persons to use it at one time. The two extra bedrooms squeeze a substantial amount of storage, workspace, and sleeping area in very efficient-sized, well-daylighted rooms. There is a full laundry room convenient to all of the bedrooms. And lastly a front porch provides an important social connection to the neighborhood. All of this impressive functionality in so little square footage.

Now consider how key systems were fully integrated into the design. The furniture system (yes 'furniture' is a system) optimizes how each room is used and is effectively integrated with the lighting, electric, structural, and storage systems. A structural insulated panel (SIP) roof was chosen to get the comfort system (a.k.a. the HVAC system) completely inside the conditioned attic space (that's a big deal if you truly want to optimize comfort, efficiency and durability) and to also provide a substantial amount of useful storage space. This attic storage negates the need for a conventional basement in cold climates and allows the use of a much lower cost, shallow frost-protected foundation system with less moisture management challenges. The SIP roof system cost-effectively accommodates high sloped ceilings which also contribute to making the small footprint live much larger. In this design, sloped ceilings would be provided in the great room, all of the bedrooms, and the entry while a flat ceiling would be used in the center of the floor plan to provide ample space for the aforementioned comfort system and storage. The lighting system not shown on the plan is fully integrated with the furniture system and architectural details. The plumbing system is compact for cost savings and employs a demand pumping system to save thousands of gallons of hot water going down the drain waiting for hot water. The thermal enclosure system is optimized for energy efficiency allowing for smaller and lower cost HVAC equipment and compact duct system.

I'll stop now because you should be starting to get the idea that there's much more than meets the eye designed into a right-size floor plan. But I do need to make two more points. I mentioned earlier that I would discuss what should be done with the hard costs for savings. If this 1,500 square foot home truly lives larger than a 2,000 square foot home as I suggest, that represents over 500 square feet of hard cost savings. If we assume \$75 per square foot hard costs, that results in approximately \$35,000 of cost savings. I believe the worst thing to do from a business perspective is to just bank those savings. Instead, they should be invested in higher-grade cabinets, trim, fixtures, lighting, and finishes. These better details will have a profound effect on making the small home live even larger and lead to more referrals from more satisfied homebuyers. ***This is the big idea.*** Build smaller right-size homes with the hard cost savings invested into a superior customer experience. What a concept.

Final point. This floor plan is based on a home I designed in 1984 for a project I was doing with the California Energy Commission and local production builders. Thirty years later, and I'm still trying to sell the housing industry on right-size homes that are dramatically better for business. You have to admit I'm persistent.

*This article is part of a series on housing innovation based on the author's book, 'Retooling the U.S. Housing Industry: How It Got Here, Why It's Broken, and How to Fix It.' This book examines opportunities to transform the homebuyer experience relative to five key components: 1) Sustainable Development, 2) Good Design, 3) High-Performance, 4) Quality Construction, and 5) Effective Sales. Each article features one innovation or business principle covered in workshops with builder executives. Find out more at [www.SamRashkin.com](http://www.SamRashkin.com).*