Space Design Concepts and Ideas

Four Key Characteristics of
Active Learning Spaces

These user-centered perspectives can lead to creating spaces that meet users' actual needs, rather than what we assume they might want.

(Adapted from research by Shannon Crawford Barniskis: http://library.ifla.org/1384/1/079-crawford-barniskis-en.pdf)

Active Learning is…

- Learning happens by doing
- Everyone can participate (social)
- Challenge is constant
- Everything is interconnected

Photos, clockwise: Maker challenge, Glenns Ferry Public Library (ID) by B. Hoffman; Teens deciphering a lockbox mystery, courtesy of Cornwall Public Library (NY); Repair Event, courtesy of King County Library System (WA); Community Garden Project, courtesy of the Sangaree Library (SC)

As a reminder, these are the four dynamics of informal active learning in libraries:
- Learning happens by doing
- Everyone can participate (social)
- Challenge is constant
- Everything is interconnected

Physical space shapes active learning

1. Exposure

2. Flexibility

3. Control

4. Expansiveness

What is it that invites people to come into a space and then to engage with the learning opportunities? There are key characteristics that make a *physical* space conducive to active learning.

In *Creating Space: The Impacts of Spatial Arrangements in Public Library Makerspaces*, Shannon Barniskis identifies four qualities of inviting, engaging space: exposure, flexibility, control, and expansiveness.

EXPOSURE

The space is...
open and *inviting*

Tools are **visible** and **accessible**

STEM Cart: Demco.com

Photos: (L) Reality Room by dee and tula monstah on Flickr CC BY 2.0; (R) Maker Station, Demco.com

Exposure means the space is open and inviting, where users can see the tools available and what kinds of activities might happen in the space. The tools and materials themselves can inspire users to want to start making things with them.

As much as possible, avoid opaque and locked cabinets.

EXPOSURE

The space is… *open* and *inviting*

Projects-in-progress are left lying around

Finished projects are on display

Messy is OKAY!

Projects that are left out on tables in mid-stream show clearly what is possible and provide a springboard for other ideas. *Messy is okay*.

Finished projects on display can inspire other makers.

Make it clear that this is a place where hands-on learning happens. And make it feel inclusive, that all are invited to participate.

FLEXIBILITY

The space is... *flexible*

Movable shelving on casters and small tables for flexible arrangements


Photos by franlhughes on Flickr CC BY-SA 2.0:
(L) Nesting tables; (M) Demco.com; (R) Shelves on wheels

Flexibility is especially important in small spaces. Even in larger spaces, it's an advantage to be able to rearrange the furnishings for a variety of activities.

Put everything on wheels, including large fixtures like shelving.

Think modular, using tables that are designed to nest together or pull apart for smaller learning groups. It's easier to put small tables together when you need a large work surface than it is to accommodate a large, immovable table for most of the time when you don't need it.
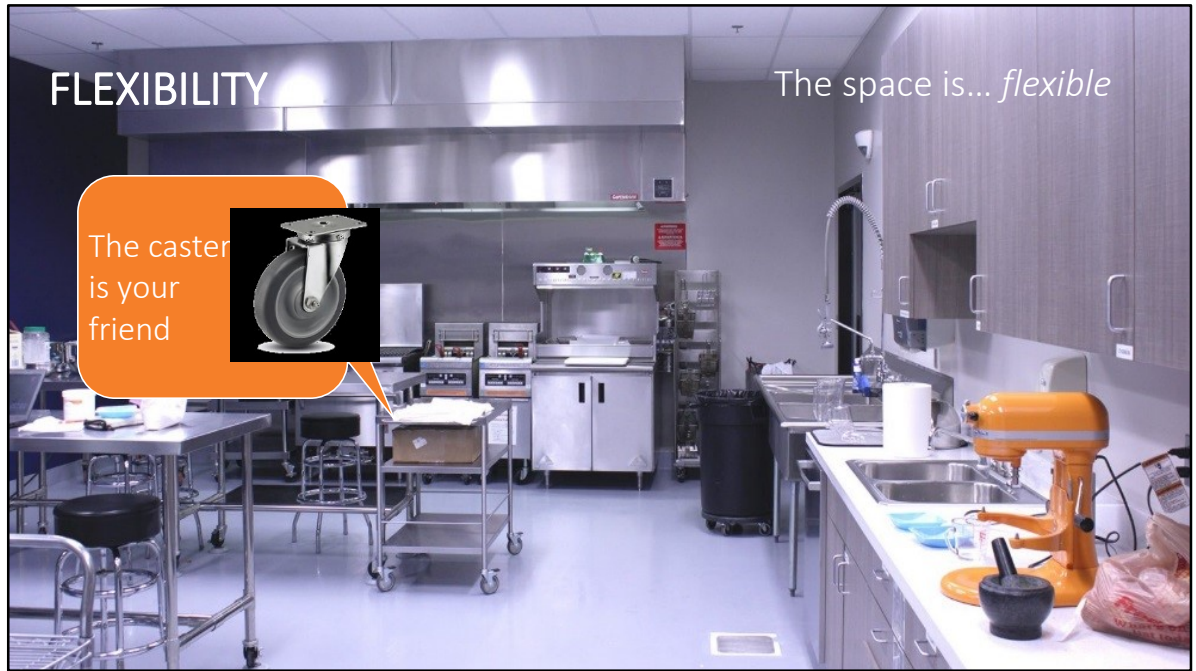
When we say put everything on wheels, we mean *everything*. The humble caster is your friend!

Take a hint from the Lamb Weston Innovation Center in Richland, WA, where potato scientists do research into new and improved potato products. They put their entire test kitchen on wheels, including the stove and refrigerator – everything but the kitchen sink.

When purchasing casters, be sure to match the caster size and function to the load to be borne and the surface it will be wheeled across. Industrial supply businesses, like Grainger (https://www.grainger.com/), will have specifications for load bearing.

CONTROL

The space is… *in the users' hands*

People will move the furniture around

Control is actually about *relinquishing* control to your learners.

Invite users to reconfigure the room according to their learning needs. Get comfortable with the idea of letting patrons move things around --you can reset the furnishings at the end of the day.

It's about *sharing power* –letting users take charge of the tools and environment so they can follow their creativity.

Invite community members to determine what programs they want and to lead the instruction. You and your staff don't have to be subject matter experts in all things. Facilitate situations where users work together to solve their own challenges and learn from each other. Let users decide how they want to arrange their workspace.

When the community is involved in co-creating their active learning, they are more invested in the programs and in the library overall.

EXPANSIVENESS

The space is... *open-ended*

Left: Teenspace games, courtesy of Madison Public Library (SD); Right: Photo shoot at Idea Lab, courtesy of Ignacio Public Library (CO)

Expansiveness is about creating a space that encourages exploration and imagination.

With a sense of expansiveness, learners feel encouraged to explore new activities. There is no prescription for what should be done in the space. This is enhanced when there are a variety of resources to experiment with.

It's even more enhanced by social engagement. When people have opportunities for participatory, hands-on learning with others, where DIY (do it yourself) becomes DIT (do it together), there is no limit to what they can learn.

EQUITABLE SPACE

What might *not* be equitable about this space?

Interactive touchscreen table at Big Walnut Middle School (OH)

One extra element to consider is how **equitable** a space is. Pictured here is a cool technology – an interactive touch-screen table that can be programmed with a wide variety of learning challenges to encourage collaborative exploration and problem-solving. Looks like a great active learning opportunity.

But what might *not* be equitable about this space?

Consider:
- What might be barriers to everyone's physical access to this equipment?
- How might this activity be experienced by users with vision impairment? Or users with other social and emotional needs?
- What might be barriers related to varying levels of comfort or experience with technology?
- What might be barriers to learners feeling invited to participate?

It is good practice to apply this lens to all parts of your active learning space.

Preparing a Space

You may be primed to get started on significantly reconfiguring your library spaces. Let's look at what might get in the way of the reconfiguration.

CLEARING SPACE

Sometimes you need to clear everything out before you can see the possibilities

Sometimes you need to clear everything out of a space to realize its potential. It opens up how you think about the possibilities for the use of that space. By freeing the physical space of objects, you free your mind from subconscious constraints bound up in those objects.

Also, your patrons' curiosity will be sparked when they see the opened-up space—it's an opportunity to build anticipation and even elicit more ideas from them.

So if you *can*, clear everything out before committing to your design.

WEEDING – TOO MANY CHOICES

Often, the first challenge to clearing out space is weeding the collection. Just like there are too many choices in the grocery store, there are often too many choices in the library.

If you think it's always better to have more choice, consider the "choice overload problem." Studies by Sheena Iyengar and others have revealed a paradox of choice –that too many choices can be overwhelming. The more choices that are offered, the more likely a person is defer making a choice or to not choose at all. When they do choose, they are more likely to feel that they made a poor choice.

In terms of improving the choosing process, less is more!

Watch Iyengar's TED talk on The Choice Overload Problem:
https://www.ted.com/talks/sheena_iyengar_choosing_what_to_choose

THE COLLECTION DIET

5
items per square foot

The KCLS rule of thumb

Weeding becomes an activity that is more than eliminating out-of-date items; it's about cutting the number of choices that patrons are faced with.

This collection diet rule comes from the King County Library System (WA) –5 items per square foot. It may seem drastic but in the KCLS system and in many other libraries, the reduction of choices has been shown to actually increase circulation.

In combination with this "diet":
- Use face-out displays where patrons can readily see the attractive covers and quickly scan for what appeals to them. Contrast this with the typical library shelving with spine-out books stuffed in tightly.
- Put items at eye-level and in the patron path; rotate displays regularly to expose more of the collection.
- Locate items where they are relevant to the learning context. In an active learning space, pull together items that support the STEM learning and creativity that you hope will happen there.

This approach may seem unworkable, especially for small libraries, so adjust the rule of thumb to the size of your library. Larger libraries can use active off-site storage and may have more digital options for circulating materials.

Seven Answers to Seven Weeding Questions is a direct response to questions posed by staff in small, rural libraries:
https://www.webjunction.org/news/webjunction/seven-answers-to-seven-weeding-questions.html

IMMOVABLE OBJECTS

Another potential barrier is "Fort Circulation" –it's more than a large immovable physical barrier; it's a barrier to more personal engagement with patrons and collaboration with community members. Other immovable objects include large tables, couches, or display cases.

Your circulation desk or reference desk might seem indispensable. Take encouragement from the many libraries that have torn them down and replaced them with small, often mobile, circulation stands or reference pods. It frees up floor space and it frees library staff to circulate in the space with patrons.

STICK TO NEUTRAL COLORS (NOT)

So many libraries have a drab neutral color palette. WHY?

Do these white, grey, and beige rooms feel energizing?

OH THE NOISE AND THE MESS

Libraries often express apprehension about the potential noise and disruption that active learning introduces into the library. These fears don't necessarily turn out to be justified.

The experience of the Bellingham Public Library (WA) is a fine illustration of unfounded apprehensions.

- Holiday Tech Fair: For several years, the library had hosted the local Best Buy technology team for a holiday season tech fair, where patrons could play with the latest gadgets and ask questions. The event was always held in a basement meeting room far from the quiet main floor of the library. However, one year, the meeting room was not available and the only option seemed to be to set up tables in the middle of the library. Not only did the event attract a record number of visitors, *nobody* complained about the noise.

- A few months later, the library was planning to open an active learning space –Skillshare. They decided to locate the space across from the circulation area right in view and hearing of everyone entering the library. It has been in successful use for years. The location attracts attention, encourages people to jump in and participate, and even leads to patrons offering to lead new programs. Complaints are almost non-existent.

WHAT DO YOU NEED TO LET GO OF?

- ☐ "Fort Circulation" is indispensable
- ☐ Activity and noise will disturb our patrons
- ☐ Projects get too messy and dirty
- ☐ Hands-on activities should be in a separate room
- ☐ The collection shall not be diminished
- ☐ We need to stick to neutral colors
- ☐ Other?

What do you need to let go of in order to implement your active learning space?

Or perhaps the question is what do your administrators and stakeholders need to let go of in order to not stand in your way?

Spicing Up a Space

Now let's look at some ways to enliven the physical space.

We'll start with a quick tour of two small libraries that went through dramatic transformations.

• *Before*: A bland space for DVD's and VHS tapes…

GLENNS FERRY PUBLIC LIBRARY (ID)

Glenns Ferry Public Library is located in rural southeastern Idaho and serves a population of 1,241 in an agriculture-centered economy. The staff identified the back room (actually a trailer attached to the small main building) as the best location for developing an active learning space. It was occupied by shelves full of DVDs and VHS tapes. DVDs are still in demand in rural areas where internet connectivity isn't good enough for streaming services, so that collection needed to find another home in a storage room. Then the clearing and remodeling began.

- *After*: …transformed into a bright, inviting space for STEM-focused active learning.
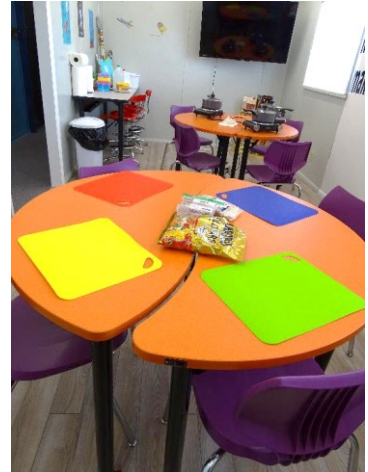
THE GLENNS FERRY MAKE-IT SPACE

It's hard to believe this is the same room. The shelving no longer blocks natural daylight. The fresh paint, new flooring, and bright colors invite patrons to step into the room and play. The director purchased the storage bin unit (pictured on the left) early in the process and let it inspire the color scheme for the rest of the furnishings. The Make-it Space looks lively even when it's not full of active learners.

Read the full Glenns Ferry transformation story: https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/Topics/smart-spaces/glenns-ferry-public-library-story.pdf

CORNWALL PUBLIC LIBRARY (NY)

The almost non-existent teen space crammed
next to the children's area

Prime real estate occupied by the reference desk

- **Before***:* No space for teens in the community to gather

Across the country in upstate New York, Cornwall Public Library serves a population of 12,646. Through their community discovery process, they realized that teens rarely came to the library because they didn't feel like they had a space where they could gather and do things together. That's not surprising –the "teen area" was the red inverted-book pillow and the small desk behind it (pictured left). The challenge was where to carve out more space within the fixed footprint of the library. The director realized how much prime library real estate was occupied by the reference desk (the large immovable object pictured right) and the space behind it that was not open to patrons. So, the reconfiguration began.

After: …transformed into a warm inviting space that teens *own* and activate

THE FINISHED COMMUNITY-BUILT SPACE

And what a transformation! The blue sofa on the left is where the reference desk was; instead of forming a barrier to use, the furnishings and colors define a cozy, inviting space where the community's teens feel it is theirs to occupy and activate. This space is not tucked into a back corner. It is right across from the circulation desk, with the main entrance to the library on the other side of that colorful wall. It's an illustration of the power of design and color to create a sense of separation, a sense of a place where something special can happen.

Read the full Cornwall Library story:
https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/Topics/smart-spaces/cornwall-public-library-story.pdf

You can read all the Smart Spaces Transformation Stories:
https://www.webjunction.org/news/webjunction/smart-spaces-transformation-stories.html

COLOR IS INVITING!

As the Glenns Ferry and Cornwall libraries demonstrate so vividly, color is inviting! And it defines spaces without building walls. Imagine how lackluster the room pictured on the left would be if the walls were all white and the carpet all beige. Or if the furniture in the picture on the right were all beige and brown.

One caution about selecting colorful carpet – consider the wear and tear from active library usage. One library that chose a lovely floral carpet in which lemon yellow was the dominant color regretted it within three months. There was no concealing stains from dirt and spillage. The carpet pictured here manages to be vibrant with orange poppies on an olive-y green field in a way that masks stains.

DECORATE THE WALLS

make it CREATIVE. make it LAST. MAKE IT INSPIRING. MAKE IT work. MAKE IT proud. make it BETTER. make it AWESOME. MAKE IT simple.
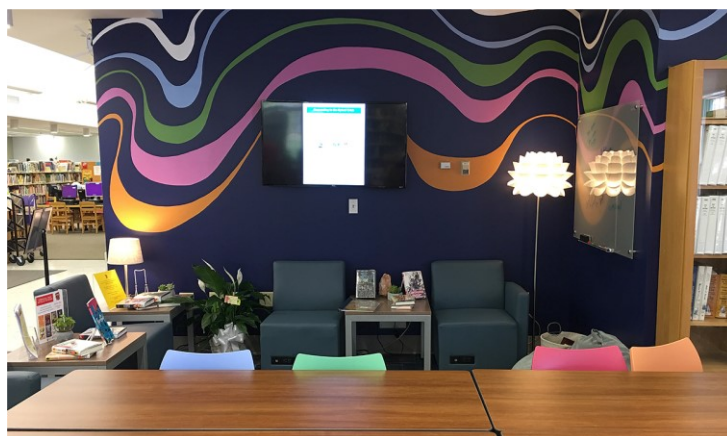
Smart Spaces Libraries: Clockwise from top L: Ignacio Community Library (CO); Cornwall Public Library (NY); Glenns Ferry Public Library (ID)
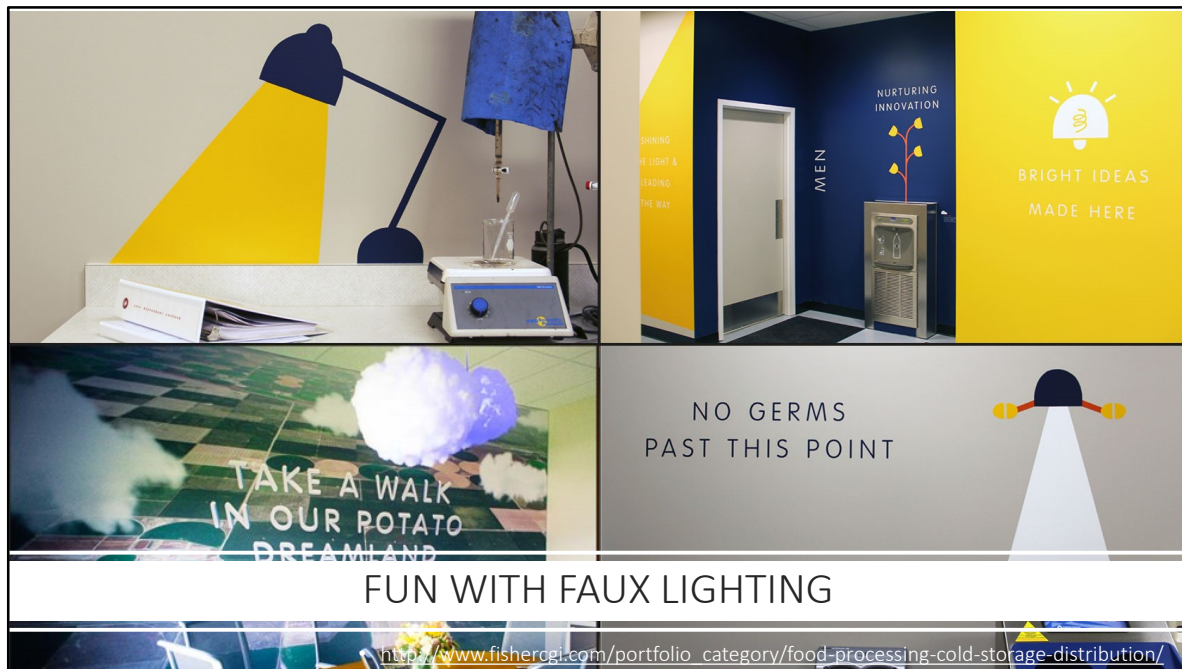
Murals enliven and define a space with a commanding presence. Some libraries are able to hire graphic designers to paint large professional murals, such as a storybook wonderland for a children's area. However, murals can be as simple as getting stick-on lettering and focusing on the message. In the images on the left, these two libraries varied the fonts, size and orientation of the lettering to create inspiring messages.

Or you could tap the creativity in your community. The brilliant waves of color in the photo on the right were painted by two teen sisters from the community. The older teen had graduated from high school and wanted to start a graphic design business, so she volunteered to demonstrate her skills on the wall of the new teen area. She and her younger sister came through with flying colors, and the library benefited most of all.

PUTTING the FUN in "FUNctional"
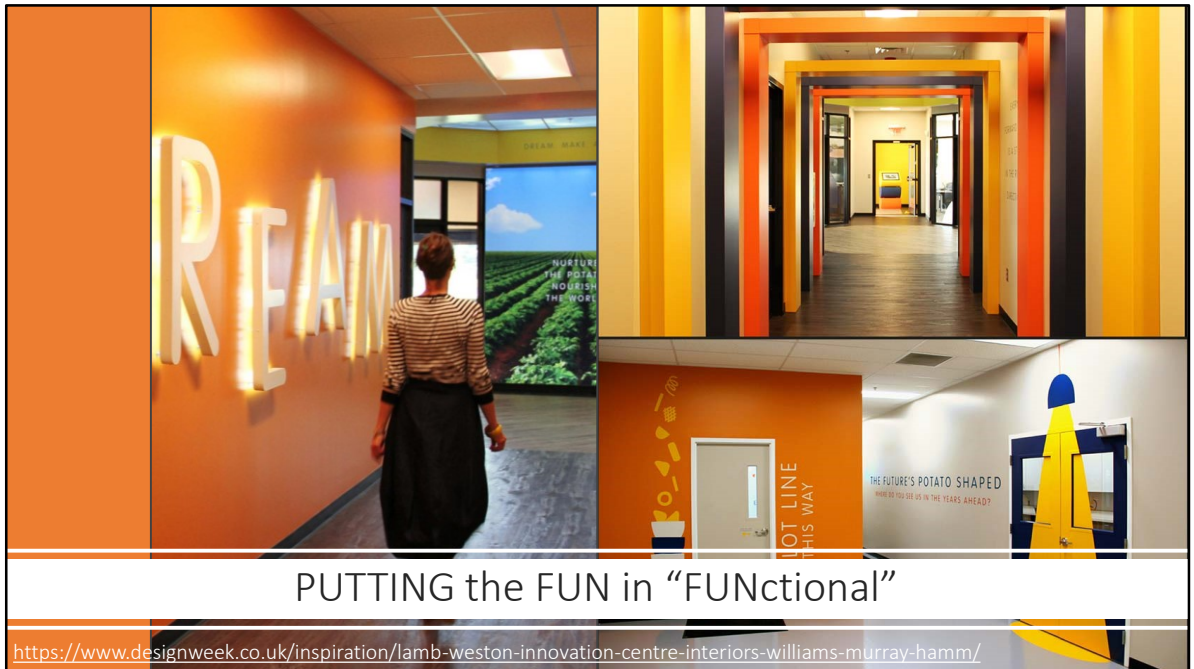
Given the prevalent drabness of library décor, it's a good idea to look outside of the library world for ideas. These clever and simple wall treatment ideas come from the Lamb Weston Innovation Center (LWIC), that potato research facility mentioned earlier. Doesn't the vibrant color make you want to walk down that hallway to see what's happening?

Remember, this is a *potato research facility*!

FUN WITH FAUX LIGHTING

http://www.fishercgi.com/portfolio_category/food-processing-cold-storage-distribution/

Lighting in libraries is often institutional by necessity, with overhead fluorescents or can lights. You could purchase additional mood or task lights that help define specific areas of the library. But did you even think about painting lighting onto your walls? Look at how these faux lights at LWIC really pop into view and create the feeling of spotlighting.

In the lower left photo, there are painted clouds in the mural that echo the actual cloud lamp hanging from the ceiling. These cloud lamps have become quite popular and can be purchased for a range of prices. You can also make your own – a quick internet search will lead you to instructional videos for the DIYer. Just remember to use LED lights that emit very little heat.

What would you change in this space?

Hay War Memorial School Library by OZinOH on Flickr CC BY-NC 2.0

It's your turn. If this were your library that you want to transform into lively, engaging active learning space, what would you change?

Hint: notice the person in the upper left corner, lying prone; it looks like they are trying to create space according to their own learning preference. How could you improve their experience?

MAKE YOUR SPACE COME ALIVE

And remember to take photos at every step of the transformation…

Starting NOW!
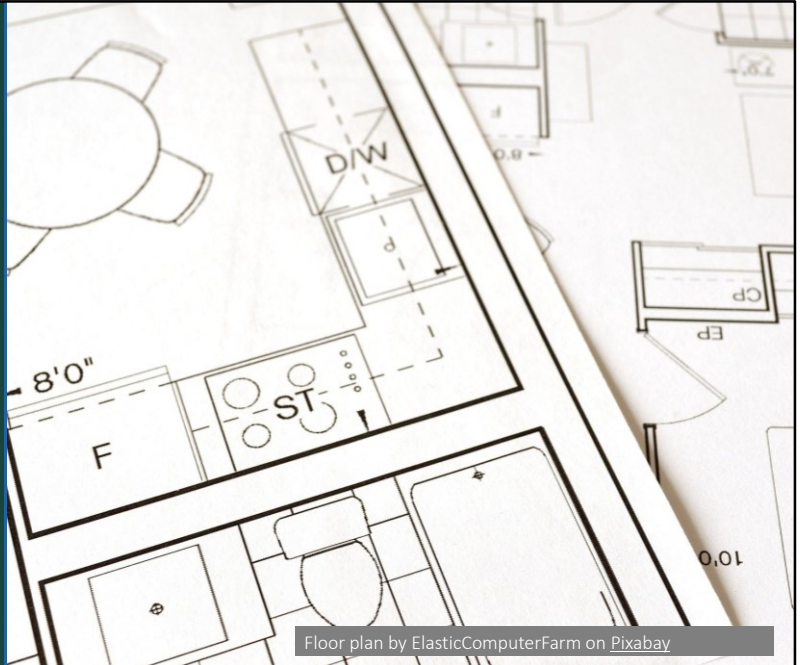
Floor plan by ElasticComputerFarm on Pixabay

As you start sketching ideas for transformed space, then clearing the area, and prototyping your ideas, remember to TAKE PHOTOS! It's easy to forget to document what the space looked like before you got started on the process. So, grab your camera and take photos now. You will appreciate having the dramatic before-and-after images as evidence of just how much you accomplished by the end.

Acknowledgements

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Thank you!