Why should “Functional Space Planning” be important to you?

Benefits include:
1. Increased revenue
2. Better workflow
3. Improved patient safety and satisfaction
4. Fewer change orders and shorter construction time period.

How to quantify benefits?
Evidence Based Design (EBD)?
Our Premise:
The traditional process used to design Radiology Departments is flawed.

Key Takeaway
“You only get one chance to make the design right!”
Kathy Altergott
Banner Good Samaritan Medical Center

Objective for Today’s Talk
To share tools and techniques to enable YOU to avoid design landmines that destroy workflow, patient safety and patient satisfaction.

Banner Good Samaritan Hospital
My “Ah-ha” moment

The Starting Point
No significant changes would be allowed, but *refinements* would be considered.

Landmines to Avoid
1. Do not start with “a clean sheet of paper”

Key Takeaway
Design your department as **YOU** would a new home
Tools and Techniques to adopt
Identify existing sites to use as benchmarks for design, technology and workflow – and learn from them

Example of a “Cockpit Design”

Landmines to Avoid
2. Beware of the “Space Program”

Key Takeaway
Do not get blown away by the first step in the process
Where should one go to get the BEST Square Footage estimates for room sizes?

- Owner
- Architects?
- Vendors?
- Consultants?

How much space does a CT require?

- A. 194 Square Feet
- B. 290 Square Feet
- C. 330 Square Feet
- D. 436 Square Feet
- E. 639 Square Feet
- E. Possibly none of the above.

A typical mobile CT has 360 SF of interior space!
Is 397 Square Feet adequate for a CT suite?

How much space does a CT require?

A. 194 Square Feet
B. 290 Square Feet
C. 330 Square Feet
D. 436 Square Feet
E. 639 Square Feet

Key Takeway
Square footage estimates without a drawing mean nothing.

Landmines to Avoid
3. Using architectural drawing to analyze workflow

Key Takeway
Use CAD (Computer Aided Design) software for design AND process improvement
Landmines to Avoid

4. Do not start at ground level.
   The view from 2,000'

Tools and Techniques to Adopt

Color code drawing to understand workflow

Is 639 Square Feet adequate for CT suite?

Proposed CT Space Program

<table>
<thead>
<tr>
<th></th>
<th>SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Room</td>
<td>305</td>
</tr>
<tr>
<td>Equipment Area</td>
<td>61</td>
</tr>
<tr>
<td>Control Booth</td>
<td>95</td>
</tr>
<tr>
<td>Dedicated Toilet</td>
<td>63</td>
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<tr>
<td>Dressing Booth</td>
<td>59</td>
</tr>
<tr>
<td>Vestibule</td>
<td>61</td>
</tr>
</tbody>
</table>

639 SF
Key Takeaway

To understand architectural drawings, they must first be converted into a "Functional Format".

Landmines to Avoid

5. Not involving ALL key stakeholders in the RIGHT way
Tools and Techniques to Adopt

Landmines to Avoid

6. Not using mockups to refine design

Key Takeaway
Involve all key stakeholders
AND make the process fun

Mockup with scale models
Summary of “Refinements” to CT suite

Before

After

Test to see if tools and techniques actually work
Would you approve this Digital Rad Room?

500’ View
“Functional Drawing” of radiographic rooms

“Refinements” made to DR Room

The “Cockpit” Design

Photo courtesy of UCSD

Overview of “Refinements” to diagnostic area

Key Takeaway:
Avoid designing to minimum room size.
Traditional Space Planning Process
1. Programming
2. Schematic Design
3. Design Development
4. Construction Document
5. Bidding and Negotiations
6. Construction
7. Occupancy

Key Takeaway:
Stay involved

Landmines to Avoid
8. Being blindsided by design changes others make after YOUR design has been “finalized”

Understand current state conditions BEFORE you start your design process
Landmines to Avoid

9. Beware of “Value Engineering”
Example of “Value Engineering”

Key Takeaway:
Stay involved

CAD (Computer Aided Design) Demo
- A must for design and process improvement initiatives
Best Design for Fluoro? A or B?
Further improvements to make?

Value of:
- Better workflow?
- Space savings?
- Elimination of one toilet?
- Creation of staff work area?

If I could start all over...
Conclusions:

#1 Key Takeaway
Demonstrate the value of “refinements.”
Do not request changes.

How can a “Functional Space Planning Analysis” be of value to you?

Benefits include:
1. Increased income
2. Well-designed space is a necessity, not a luxury.
3. Better workflow
4. Improved patient safety and satisfaction
5. Fewer change orders and shorter construction time period.

Key “Functional Planning” Tools and Techniques
1. You only get one chance to make the design right!
2. Well-designed space is a necessity, not a luxury.
3. Focus on presenting “refinements”, not making changes.
4. Design your Department as you would a new home
5. Square footage estimates without a drawing mean nothing.
6. Convert drawings into a “Functional Format” to first understand, then improve upon designs.
7. Involve all key players in the process and make it fun.
8. Stay involved in the entire process to optimize the outcome.
9. Avoid designing rooms to minimum requirements.
Comments?
Questions?
- Interest in "Evidence-Based Design"?
Feedback?

Please fill in your critique form AND let us know if you see any way we could better explain what we presented.

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