

The Role of Intuition in Evidence-Based Design

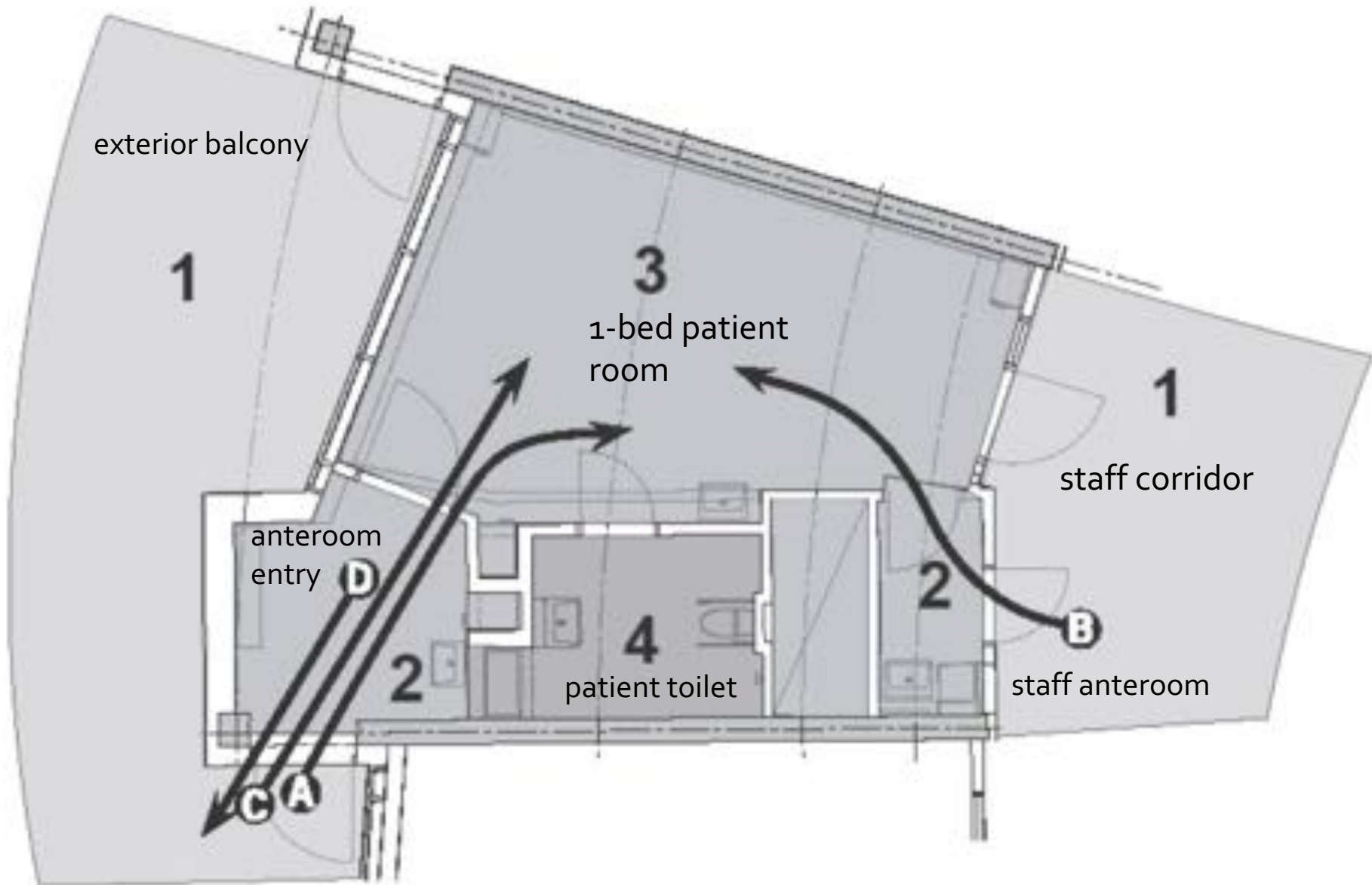
European Healthcare Design Conference, 17-19 June 2019, London

D. Kirk Hamilton, Beale Professor, Texas A&M University, USA
Stefan Lundin, Architect and Partner, White Arkitekter, Sweden



Skåne University Hospital, Malmö, Sweden

Architect: C.F. Møller, Aarhus, Denmark





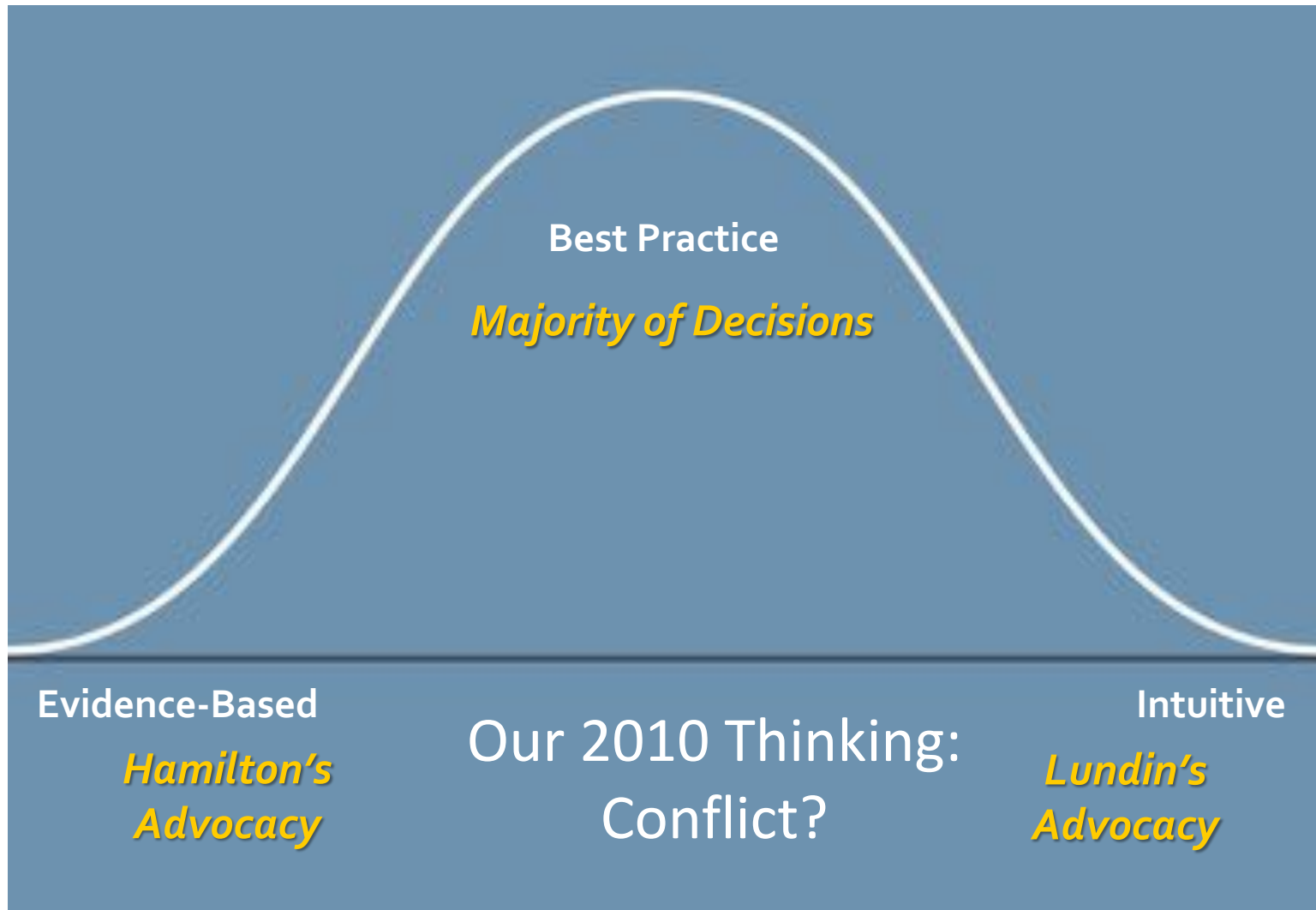
What is Evidence-Based Design?

- “Evidence-based design is the conscientious, explicit and judicious use of current best evidence from research and practice in making critical decisions, together with an informed client, about the design of each individual and unique project.”

Hamilton, 2007, 2008, 2009

- *making decisions*
- *individual projects*
- *current best evidence*

Design Decisions: Number / Project



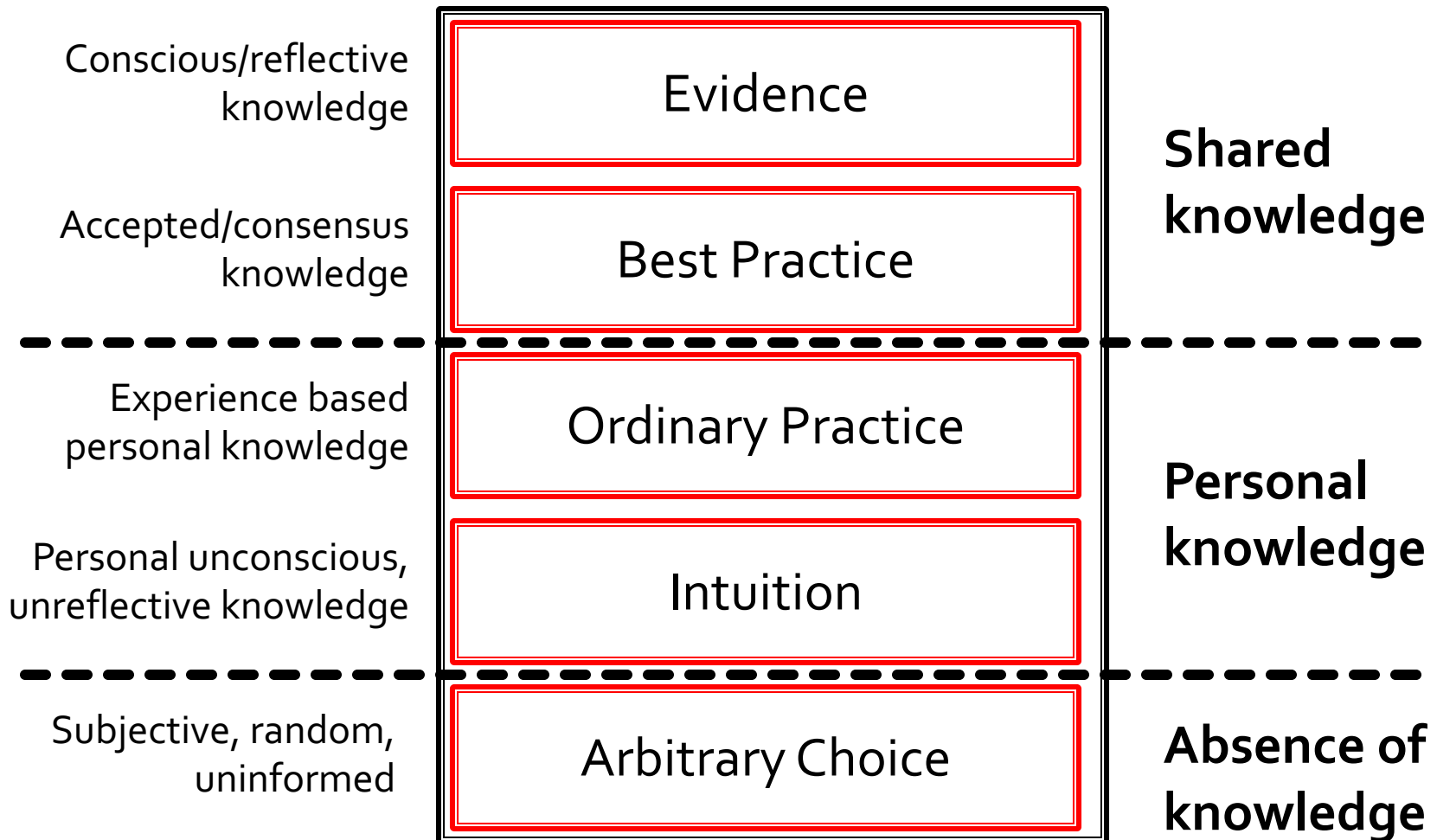
Design Decisions: Number / Project



Design Decisions: Number / Project



Knowledge in Practice



Adapted from S.Lundin, 2015 PhD Thesis, Chalmers Technical University

What Is Increased Rigor in Design?

- Serious search for relevant evidence
- **Chain of logic:** evidence to design concept
 - Critical thinking, careful interpretation
- Hypothesize expected outcomes
 - Document design intent in advance
- Commit to measure outcomes
 - Use of appropriate methods
- Share knowledge gained

Intuition & Creativity

- Making a few important decisions on the basis of research findings does *NOT* mean ignoring creativity
- Creativity & intuition are required to interpret the implications of research linking design and clinical outcomes
- Multiple design decisions are made intuitively on topics that appear to require no evidence
- Aesthetic creativity is still cherished!

Östra Hospital Acute Psychiatry Ward, Göteborg, Sweden



Architect: White Arkitekter

Östra

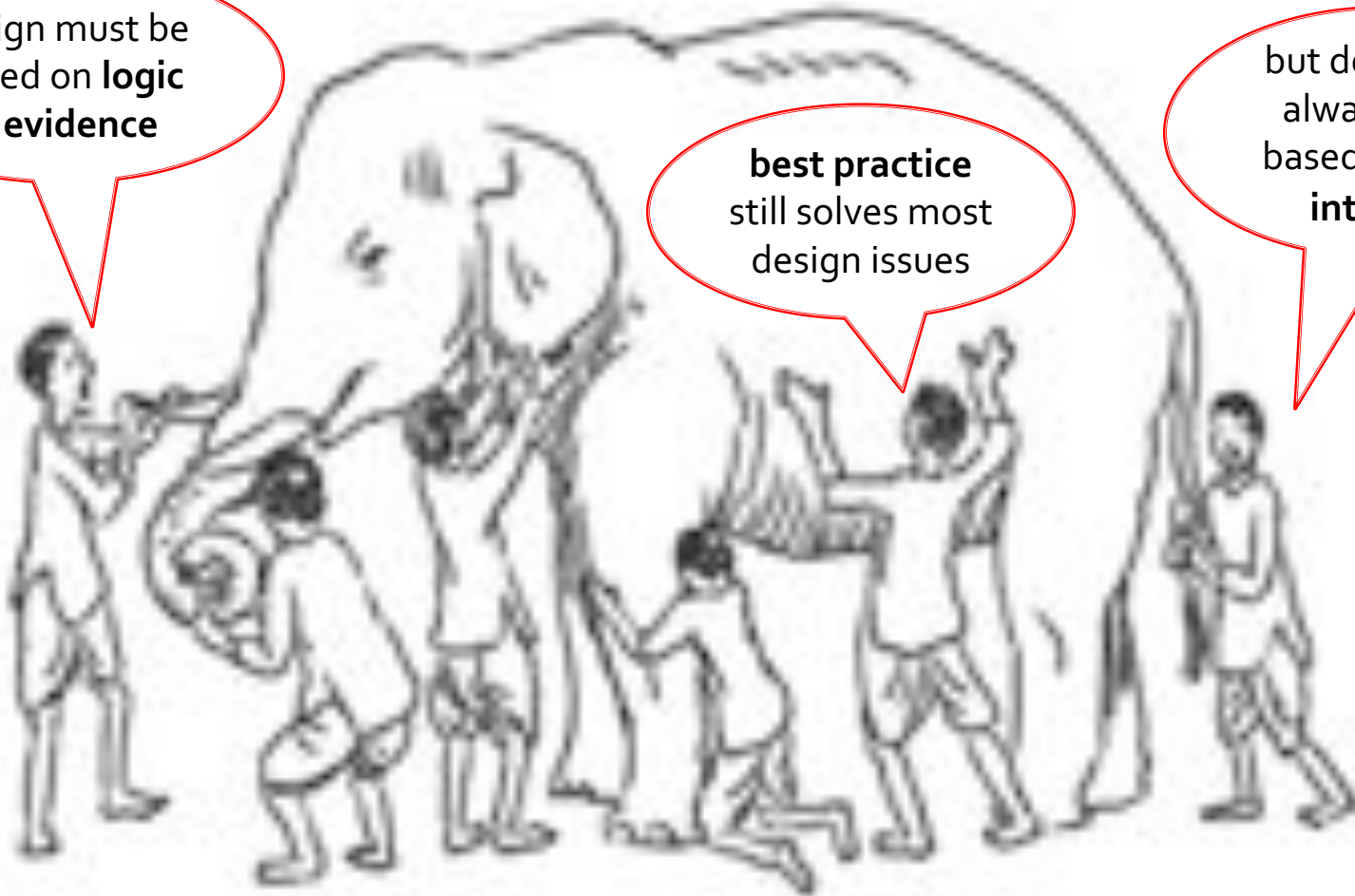
- The Östra project was celebrated by Roger Ulrich for including all but one known evidence-based concept for behavioral health facilities.
- The architect, Stefan Lundin of Sweden's White Architects, had not been aware of the research or the evidence.
- He proclaimed that the success was based upon experience and intuition!

Parable: Blind Men & the Elephant

design must be based on **logic & evidence**

best practice
still solves most
design issues

but design has
always been based on **art & intuition**



Parable: Blind Men & the Elephant

**Creative &
Intuitive
Concepts**

Best Practice

Fire & Safety
Regulations

Building
Materials
Research

Equipment
Testing

Infection Control

Waterproofing

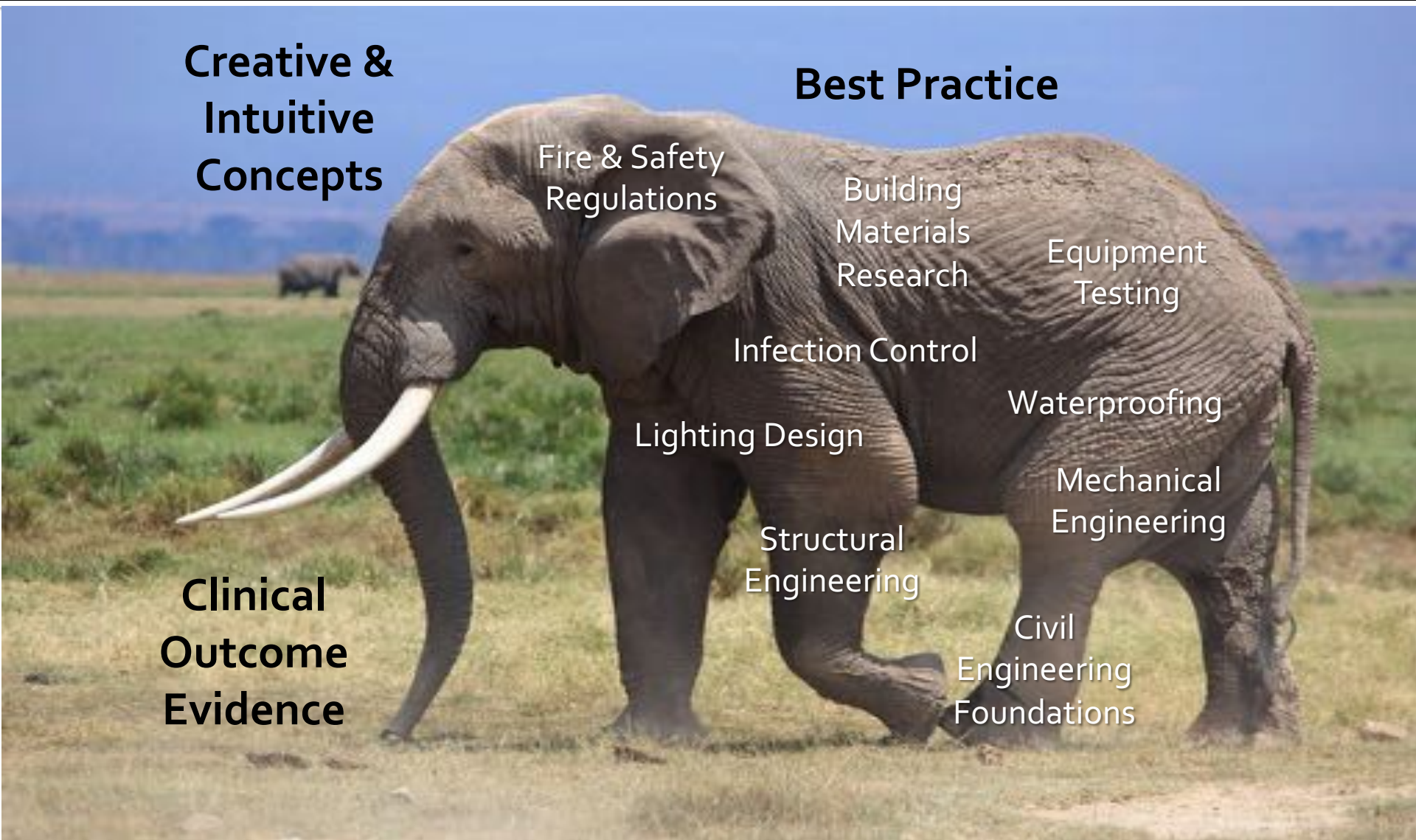
Lighting Design

Mechanical
Engineering

Structural
Engineering

Civil
Engineering
Foundations

**Clinical
Outcome
Evidence**



Dublin Methodist, Dublin, Ohio



evidence-based does not mean mundane architecture...

Architect: Karlsberger & CAMA, Inc.

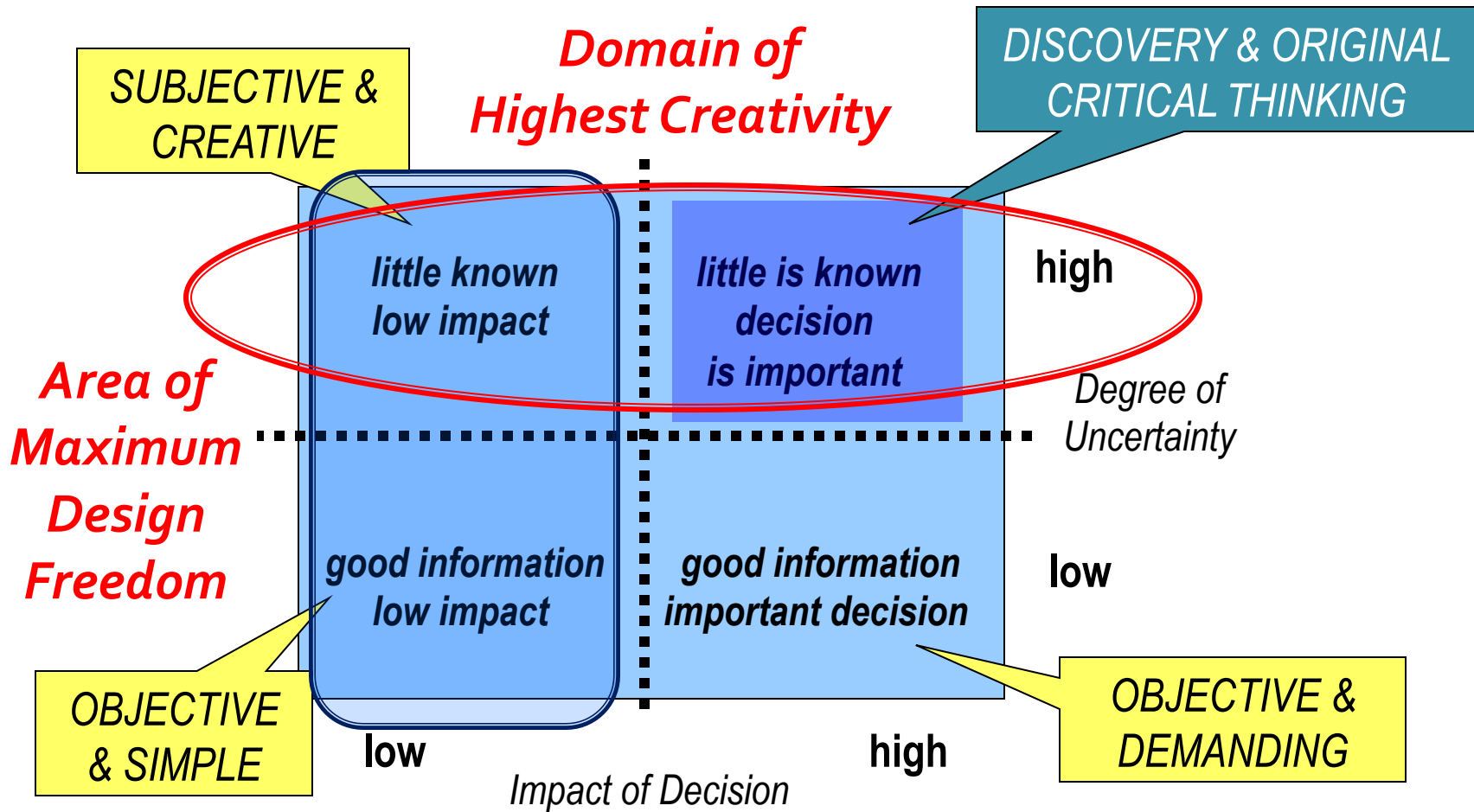
Dublin Methodist, Dublin, Ohio

- Accessible roof areas (elevated)
- Acoustic environment
- Acuity-adaptable rooms
- Bathroom on headwall with handrail
- Distributed staff work stations
- Internal courtyards (non-elevated)
- Large doors in patient rooms
- Large doors in patient bathrooms
- Large private rooms with family space
- Natural light in 90% of occupied spaces/Lighting
- Like-handed rooms
- Water feature in lobby
- Well-located hand hygiene stations

Evidence-Based
Design
Features

Opened January 2008

Where is the Art?



Discussion

- How do you gain new knowledge to support innovation?
- Do you make intuitive design decisions?
- Are you using tacit knowledge?
- Are you involved in design dialogue with the project stakeholders?
- Does design dialogue help avoid arbitrary decisions?

The Role of Intuition in Evidence-Based Design

Thank you!

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