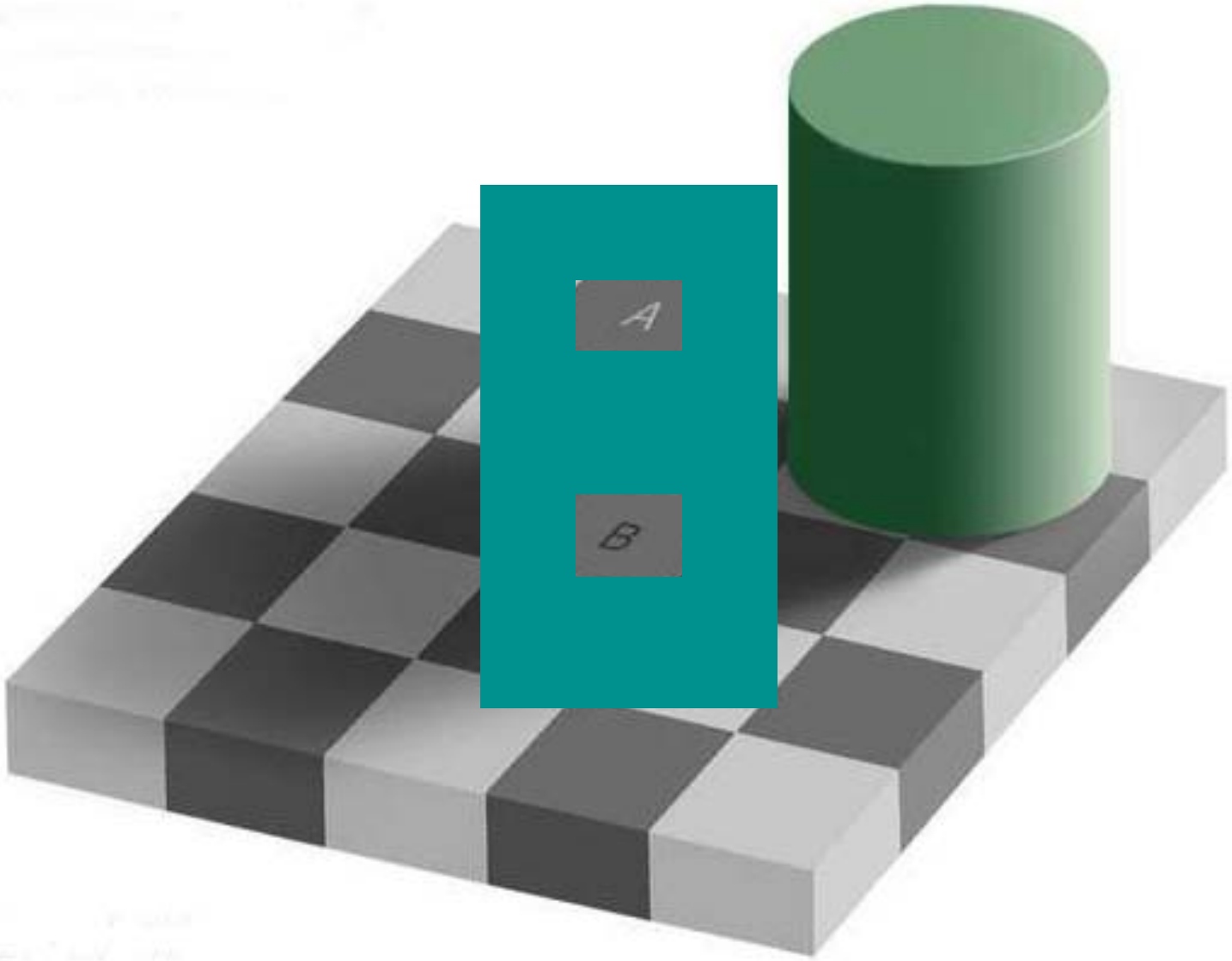
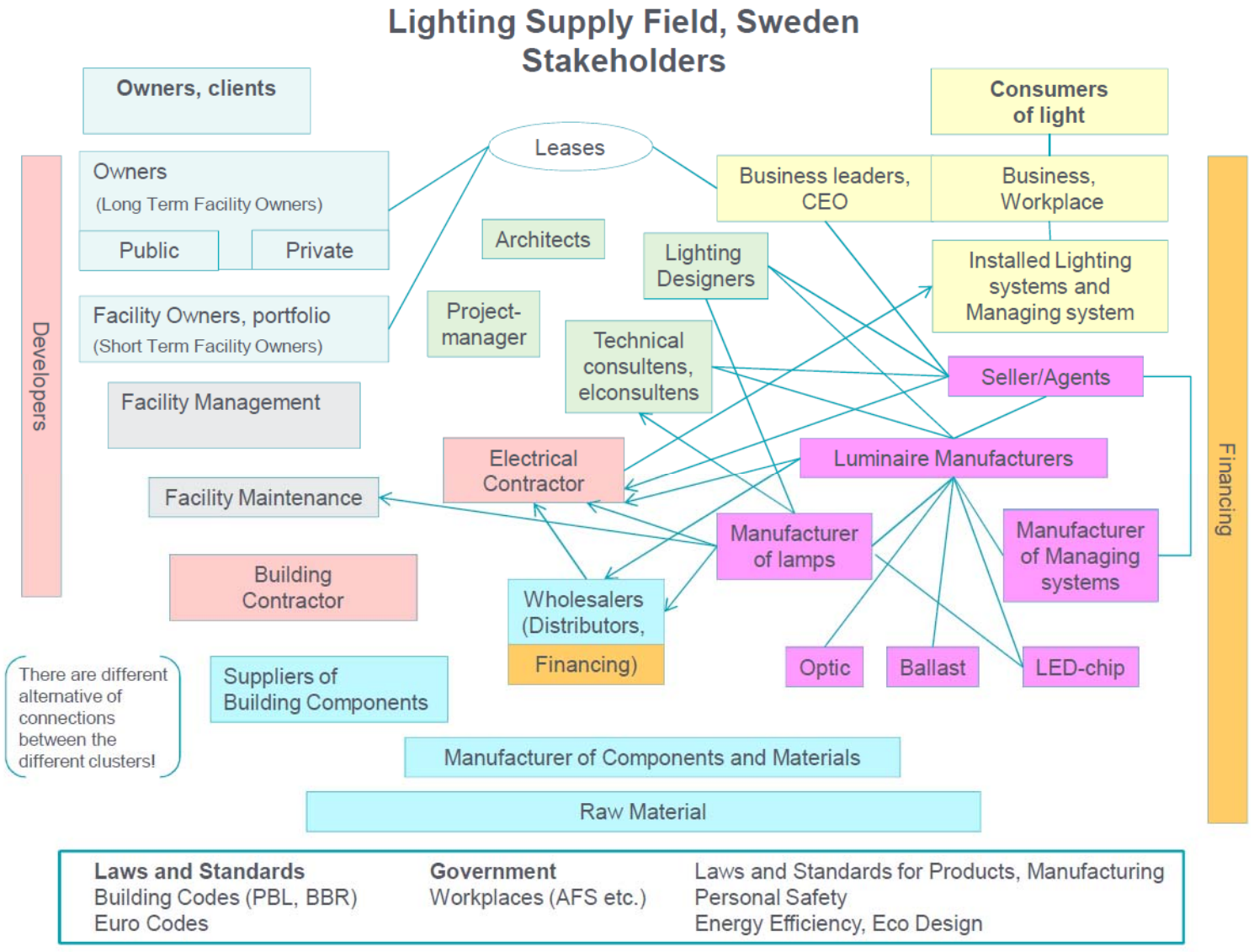
The role of different stackeholders in lighting retrofits- a lighting designers perspective

Or light and problem

Johan Röklander
Ålesund 2015


A
B

Target groups



Research
Education

The Swedish Energy Agency's interest in lighting is based on the fact that we used an estimated 14 TWh of electricity on lighting and that lighting accounts for around 20-25% of a building's electricity consumption.

The lighting sector has carried out surveys that show that at least 50% of our lighting installations have a savings potential of more than 50%.

In Sweden over 120 000 persons are directly involved in the “light business”


43
mamma

Problems

Results concerning current problems can be summarized as follows:

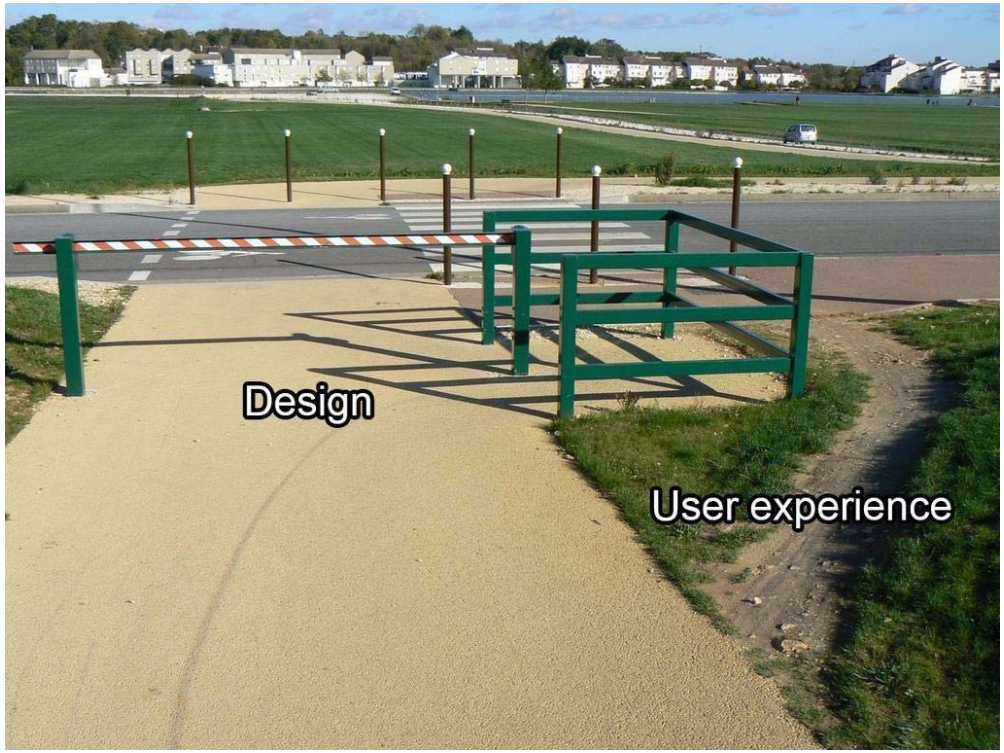
- **Lack of commitment, competence and knowledge among actors in different stages of the construction process.**

Problems

- **The focus on private gain overshadows ambitions to take a holistic perspective.**

Problems

- **Competence and knowledge may exist but are not used in the right way at the right time.**
- **Decisions are made with a too short time horizon.**
- **The construction process has characteristics that might it difficult to learn from earlier projects.**
- **Control and follow-ups are often inadequate.**



Recommendations

The proposals that are put forward concerns three key areas - Competence, Incentives and Resources - and can be summarized as follows:

- **More resources should be allocated to early stages of a project.**
- **Design should be made in closer cooperation between client, architect and technical consultants.**
- **Long-term partnering-like relations should be established between the client and especially the architect/technical consultant. This also creates room for development of competence and knowledge on both sides.**
- **The project should be carried out as a Design-Bid-Build project as the possibilities to control details of the project then are higher.**

Examples of key actors in the process and their roles are:

- Authorities:
  laws, regulations, new standards.
- The financial market:
  provides capital
- Building proprietors, property owners:
  Rent out or sell space
- Project managers:
  the building proprietor's project management, coordination of various actors
- Users:
  laying down requirements for the indoor environment/workplaces:
- Architects and consultants:
  advisers to building proprietors and users
- Contractors:
  carry through projected structures, procure materials etc.
- Manufactures / sellers:
  Develop new products, provides material to market
- Research and education:

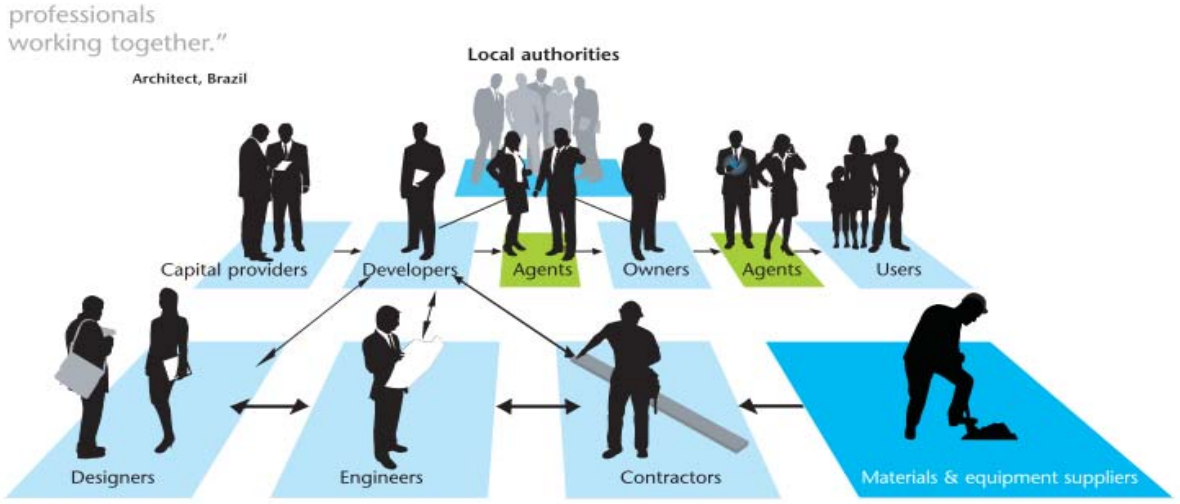
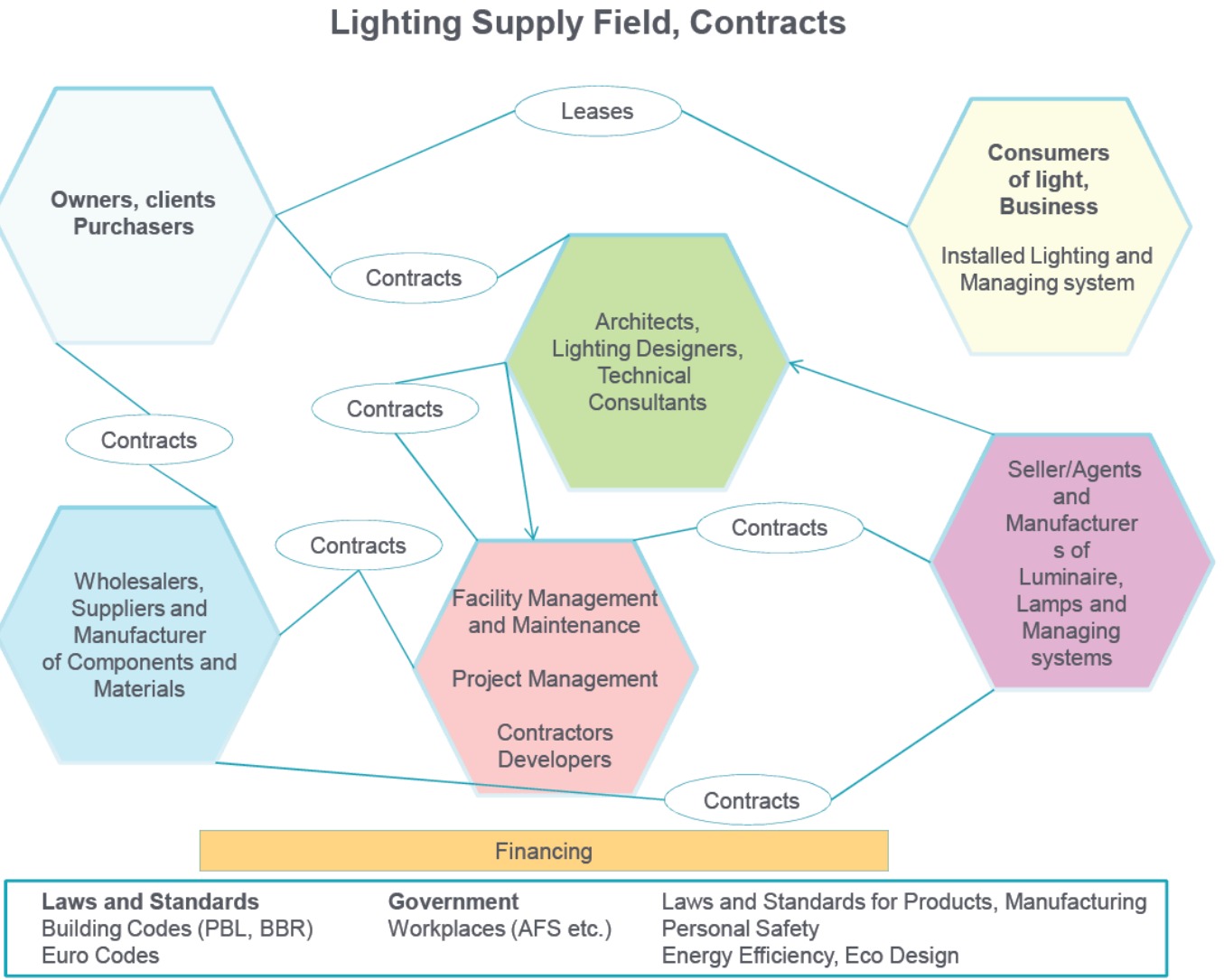


Figure 8: The complex value chain


All
Audio
Environment
Settings
Power Off
Dining Area
HELLO
ENTRY WAY
BE SEATED
STUDY
GREAT ROOM
PLAY
LANDSCP
AWAY
GOOD BYE
SACD
iPod Music


AT&T
9:03 PM
Smart Lights
Refresh
Kitchen Light
100%
Living Room
Bar Light
100%

Real Estate, lighting and contracts – one picture



“Don't give too much opportunity to the electrical contractor to change luminaries.” There are diverse private economical interests in the construction process. The Moral Hazard problem.

“If we know witch Tenants we are building for, it is important to have an dialog with them and discuss the rental contract to see if there are possibilities to do something about the split incentives regarding energy use.”

Note: That the standard is a minimum standard and it’s not taken into account all aspect of quality and human needs for light. It´s allowed doing better than the standard prescribes and it´s not necessarily less energy efficient to do so (use of daylight, better light design, LED etc).