

A Danish Practitioner's View of the Most Effective Drivers of Sustainable Development in the Decision Making Process.

By

Dr. Hanne Tine Ring Hansen, Søren Jensen Consultants

Professor Emeritus, Mary-Ann Knudstrup, Aalborg University Denmark

Political drivers for the Danish building industry



1987
Brundtland
Report

1999
UN Global
Compact

2004
Directive on the
energy
performance of
buildings
(EPBD)

2007
4th climate
report
from IPCC

2010
EU Energy
Performance
of Buildings
Directive

2012 EU
Energy
Efficiency
Directive

2013
REGULATION
(EU) No
305/2011 OF
THE
EUROPEAN
PARLIAMENT
AND OF THE
COUNCIL

2014 EU
Non-
financial
Reporting
Directive

Voluntary drivers for construction clients



CSR / CR
Corporate Social Responsibility
(44%)



Planetary considerations (65%)



Life Cycle Costs (61% 48%) &
'Total value' (51%)



Branding (54%)



Low retention rates (61% 24%)



Future legislation (32% 37%) &
Improved market value (20%) & In
demand (20%)



3rd party verification (17%)



Innovation (41%)



Fewer mistakes at hand over
(27%)

The importance of market scope



National market scope – e.g. Multi-family housing, Public buildings



Global market scope – Manufacturers, Developers, Hedge funds



Multi-national market scope - Scandinavia and Europe



Housing and Pre-schools



Model House 2020: Residential, Pre-schools, Office buildings

Passivhus.dk

Housing, Office buildings and Schools

The importance of culture

Trustbased documentation vs. certification

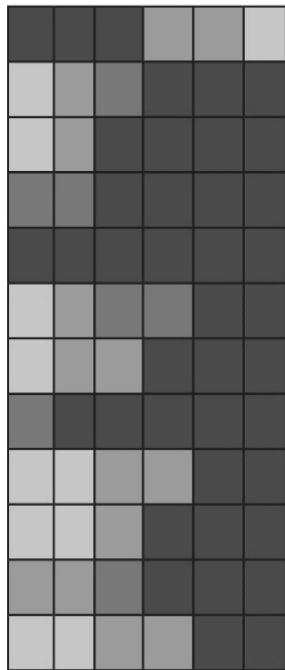
Voluntary building certification becomes a motivational driver when the construction client or tenant:

1. wishes to brand his/her property via third party certification or
2. wishes to change business as usual and challenge his/her organisation, consultants and contractors to improve their performance towards a more sustainable development.

The importance of planning perspective

PLANNING PERSPECTIVE

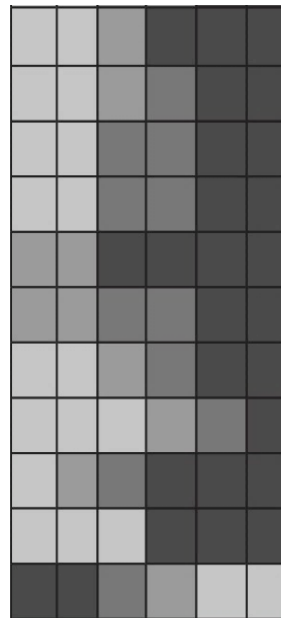
MOTIVATIONAL DRIVERS



- CONSTRUCTION COSTS
- LIFE CYCLE COSTS
- USER COMFORT
- INCREASE IN DELIVERED QUALITY
- LEANER CONSTRUCTION PROCESS
- SUSTAINABLE FACILITY MANAGEMENT
- CORPORATE SOCIAL RESPONSIBILITY
- ENERGY EFFICIENCY
- LOW IMPACT MATERIALS
- HEALTHY MATERIALS
- ROBUST MATERIALS
- DESIGN FOR DISASSEMBLY

PLANNING PERSPECTIVE

MOTIVATIONAL DRIVERS



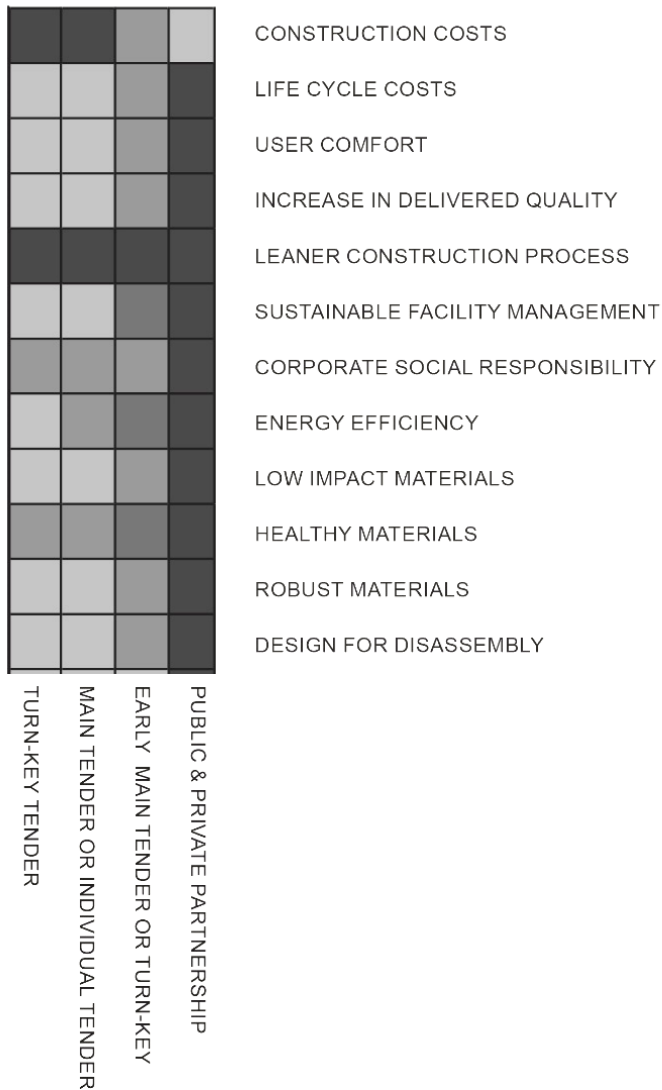
- SOCIAL MEETING SPACES
- HIGH USABILITY AND QUALITY OF EXTERIOR SPACES
- BIODIVERSITY
- SURFACE WATER MANAGEMENT
- LOCATION NEAR PUBLIC TRANSPORTATION
- RESPONSIBLE SOURCING OF MATERIALS
- ENVIRONMENTALLY AND SOCIALLY CONSCIOUS CONTRACTOR
- INNOVATION
- INCREASE FUTURE MARKET VALUE
- LOW TURNOVER ON TENANTS
- 3RD PARTY CERTIFICATION

SHORT ← → LONG

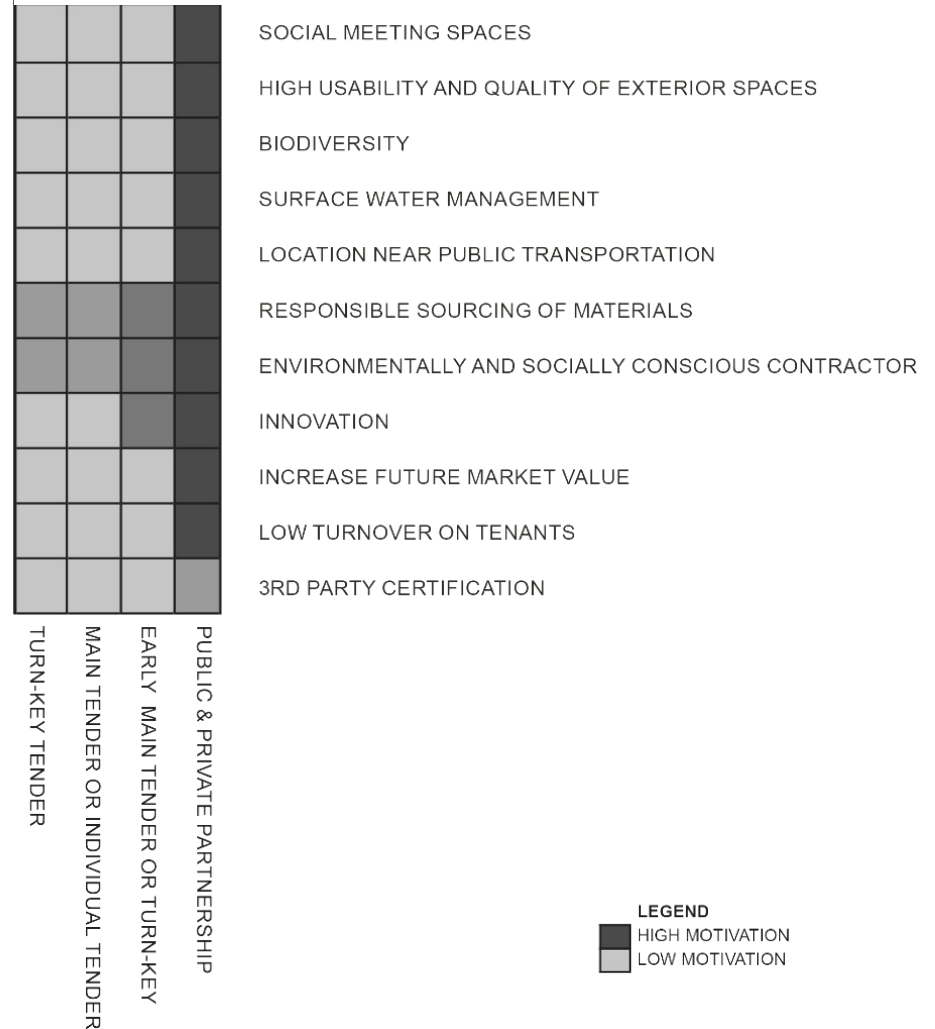
LEGEND
 High Motivation (Dark Gray)
 Low Motivation (Light Gray)

The importance of tender

TYPE OF TENDER MOTIVATIONAL DRIVERS



TYPE OF TENDER MOTIVATIONAL DRIVERS



LEGEND
 HIGH MOTIVATION
 LOW MOTIVATION

Reflection

- Drivers for sustainable development must be identified and prioritised in the initial ideation stage of all projects and an implementation strategy must be developed for the selected project organisation and the type of tender.
- Contractor motivation must be considered to ensure that the Construction Client's drivers for sustainability also motivates the contractor (e.g. by early engagement of the contractor or financial incentives to perform better).
- A lot of clients are not conscious of EU or UN enforced drivers. They do however influence the Danish building regulations which the market analyses from 2015 and 2016 have verified that construction clients are very much aware of.

Reflection

- Political and voluntary drivers together ensure a market demand that in turn engage construction clients and tenants to implement voluntary schemes in their projects.
- Energy efficiency of buildings has more or less become a standard requirement in all building projects which motivates construction clients to differentiate themselves on the social and economic drivers.
- Education of construction clients is necessary due to the importance of early identification and implementation planning of motivational drivers.