

**ENERGY PERFORMANCE
CONTRACTING** - An Incentive for
Improving the Energy Performance
of the Building Envelope in Existing
Commercial Office Buildings

Rob Kilgour
GHD, Dubai, UAE

Attilio Pigneri
Massey University, NZ

ENERGY CONSUMPTION

79%
OF **PRIMARY**
ENERGY
FROM FOSSIL
FUELS
(UNDP, 2004)



BUILDING ENERGY PERFORMANCE – INFLUENCING FACTORS



CLIMATE



SITING



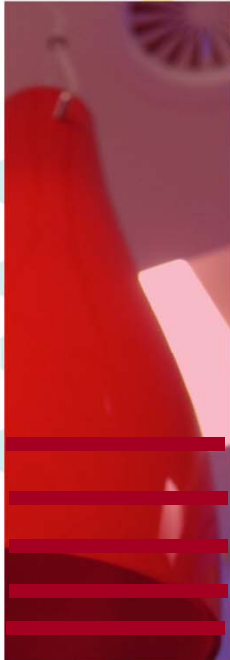
OCCUPANCY



ENVELOPE



INTERIORS



EQUIPMENT



ENERGY PERFORMANCE UPGRADES – THE BARRIERS



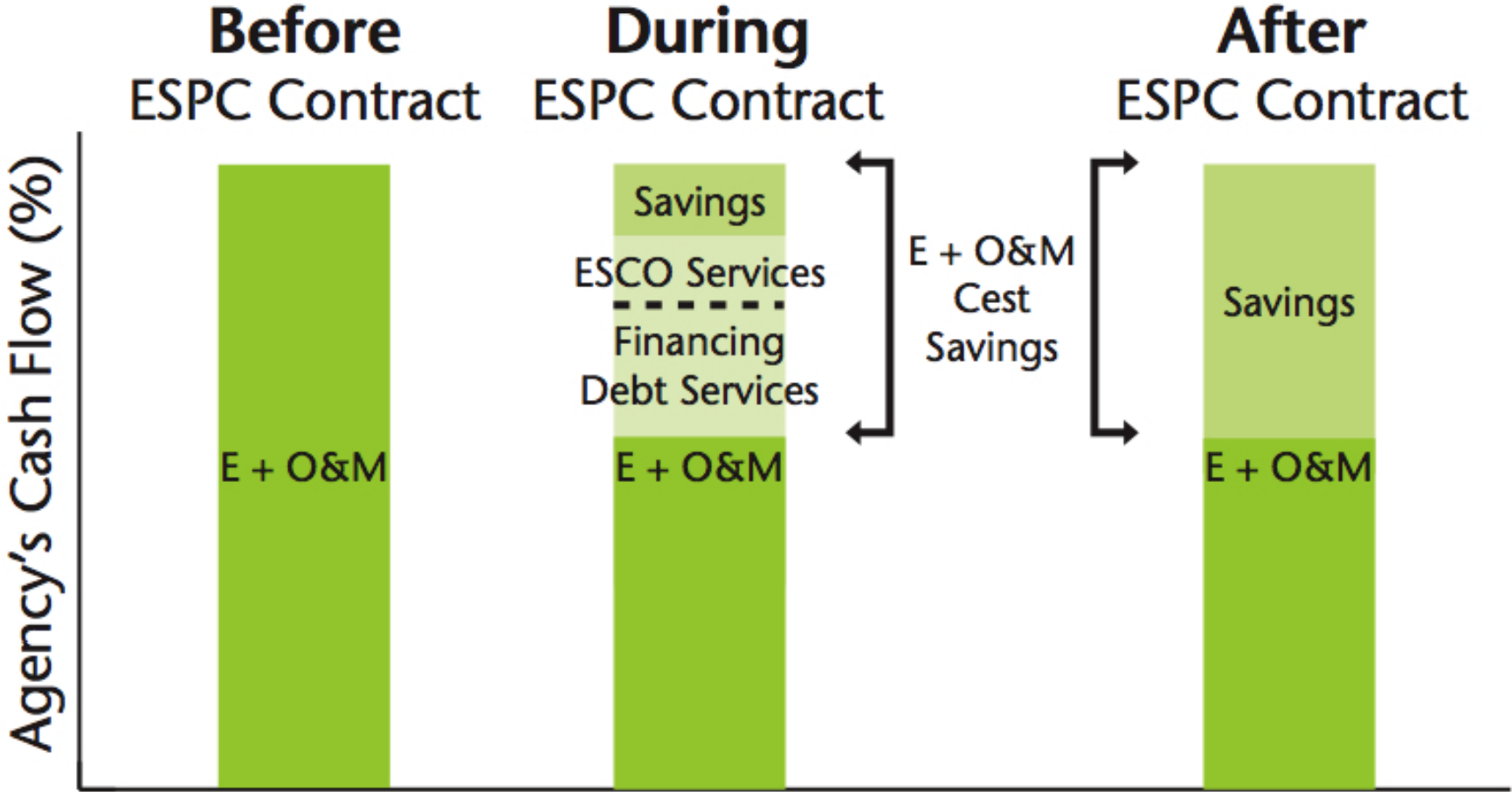
FINANCE

RISK

INFORMATION

SPLIT INCENTIVES

BREAKING DOWN THE BARRIERS



Source: FEMP, 2001.

Source: WBCSD 2008

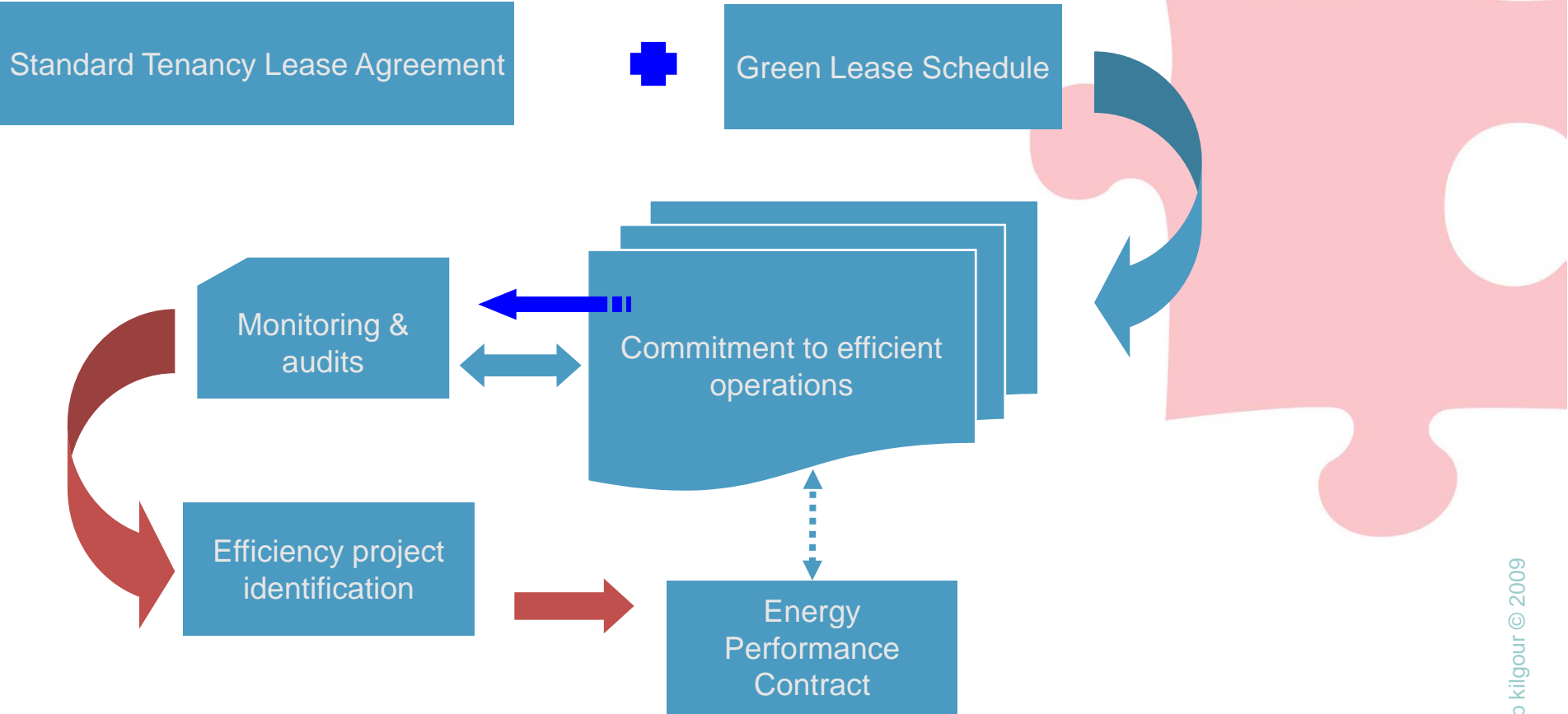
BREAKING DOWN THE BARRIERS

GREEN LEASES

- 
- ✓ ENCOURAGE **COOPERATION**
 - ✓ RESOLVE **SPLIT INCENTIVES**
 - ✓ TARGET **ENERGY EFFICIENCY**

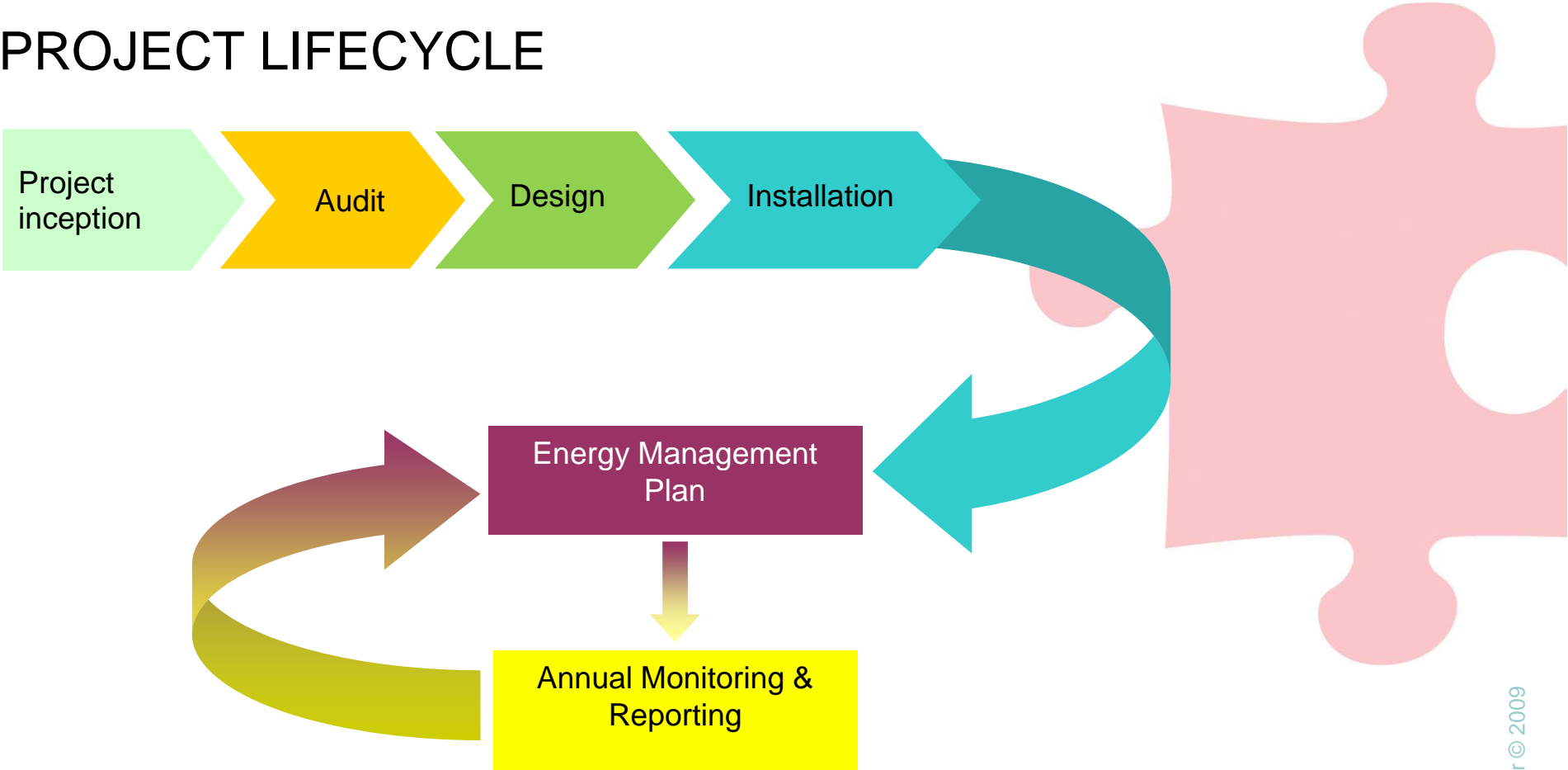
DELIVERING ENERGY EFFICIENCY

ENVELOPE UPGRADE DELIVERY FRAMEWORK



DELIVERING ENERGY EFFICIENCY

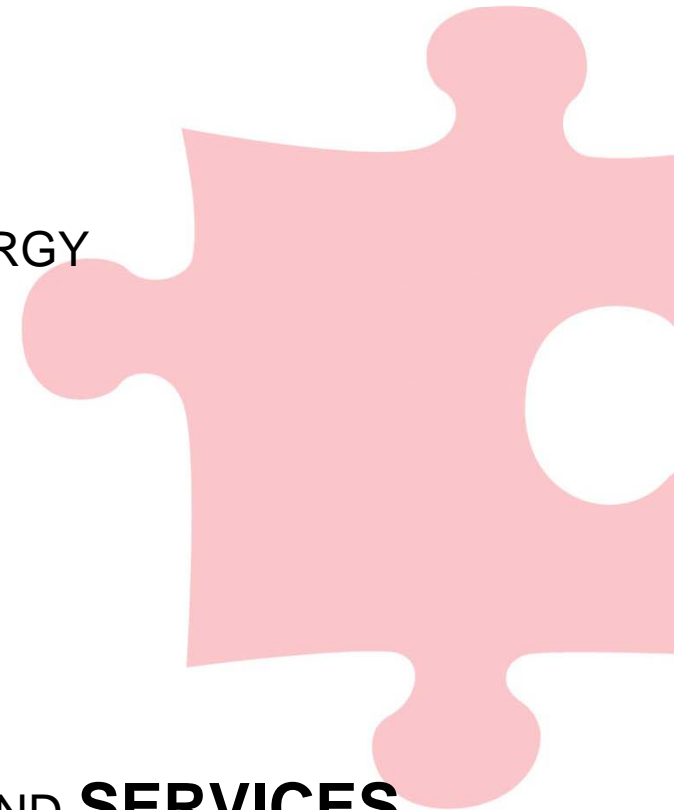
PROJECT LIFECYCLE



CONCLUSIONS

AN INCENTIVE?

- ✓ EPCs HELP REMOVE **BARRIERS** TO ENERGY PERFORMANCE IMPROVEMENT
- ✓ SUCCESS DEPENDENT ON:
 - ENERGY COST **AWARENESS**
 - SUITABLE LEGAL **FRAMEWORKS**
 - COMPETITIVE MARKETS FOR **FINANCE** AND **SERVICES**



THANKYOU



QUESTIONS?



Contact: Rob Kilgour robert.kilgour@ghd.com.au or bobiljim@gmail.com