



**INTEGRATED
ENVIRONMENTAL
SOLUTIONS**

Driving Measurable Change

Uncover Hidden Savings



IES

Global thought leaders in measurable sustainability. We help businesses reduce the carbon emissions of buildings like nobody else can. We enhance our customers' triple bottom line: economic, social and environmental

- IES founded in June 1994
- Head office in Glasgow, Scotland
- Offices in Dublin, Boston, Vancouver, Atlanta, Pune, Melbourne
- Software in over 130 Countries
- International Sustainability Consultancy Services including LEED, BREEAM, GSAS and ESTIDAMA



What is unique about IES?

SCAN Software

- Unmatched ability to 'fine tune' 3D virtual building against real building using operational data
- Latest analytical tools for easy interrogation of BMS data to uncover hidden savings
- Largest building analytics team in the world

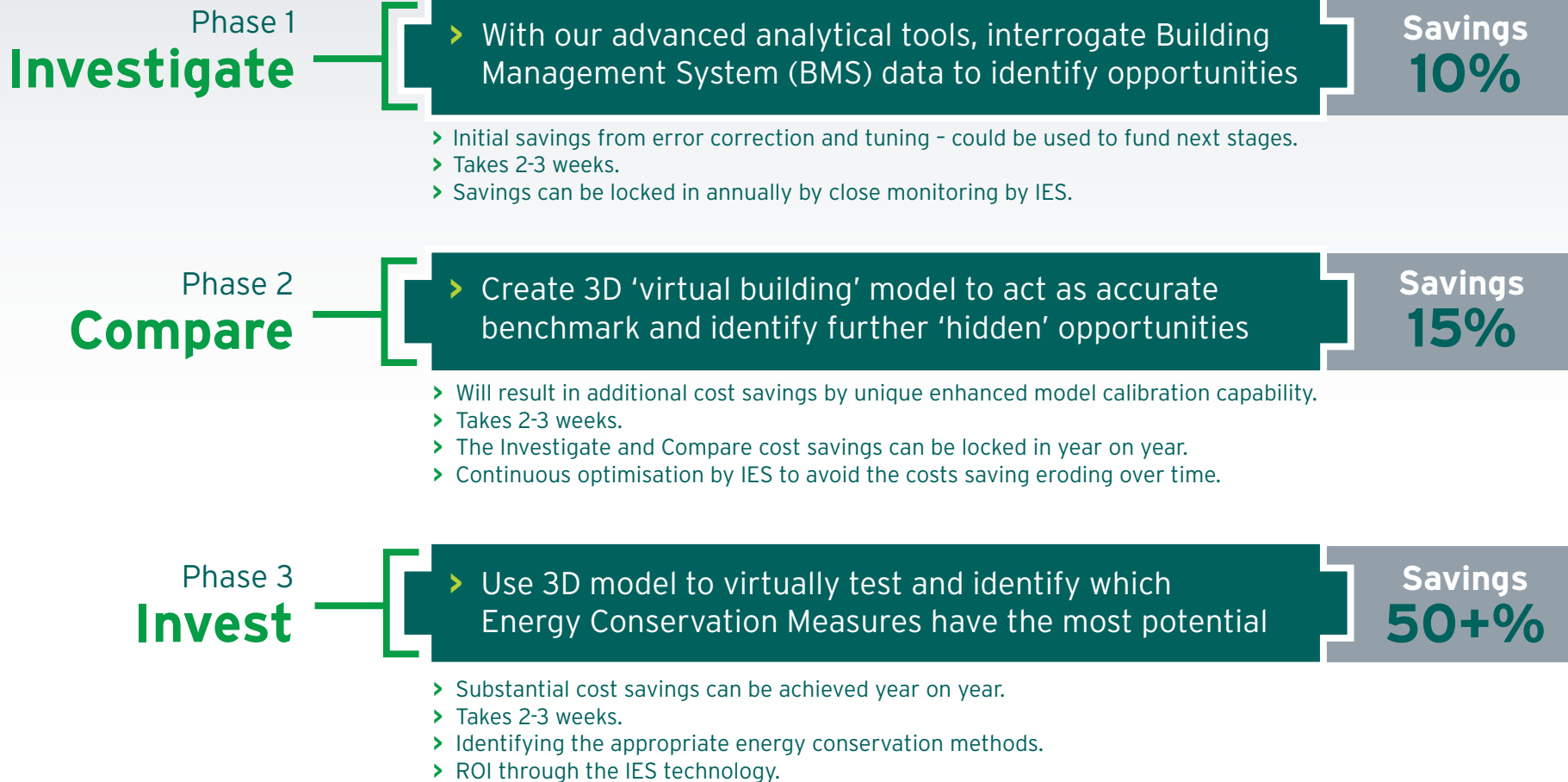
Most comprehensive, most rigorous, and best integrated suite of tools for building energy design and analysis on the world market today... A+ ... Highly recommended.

Jerry Laiserin
Cadalyt-Labs Review

Know How

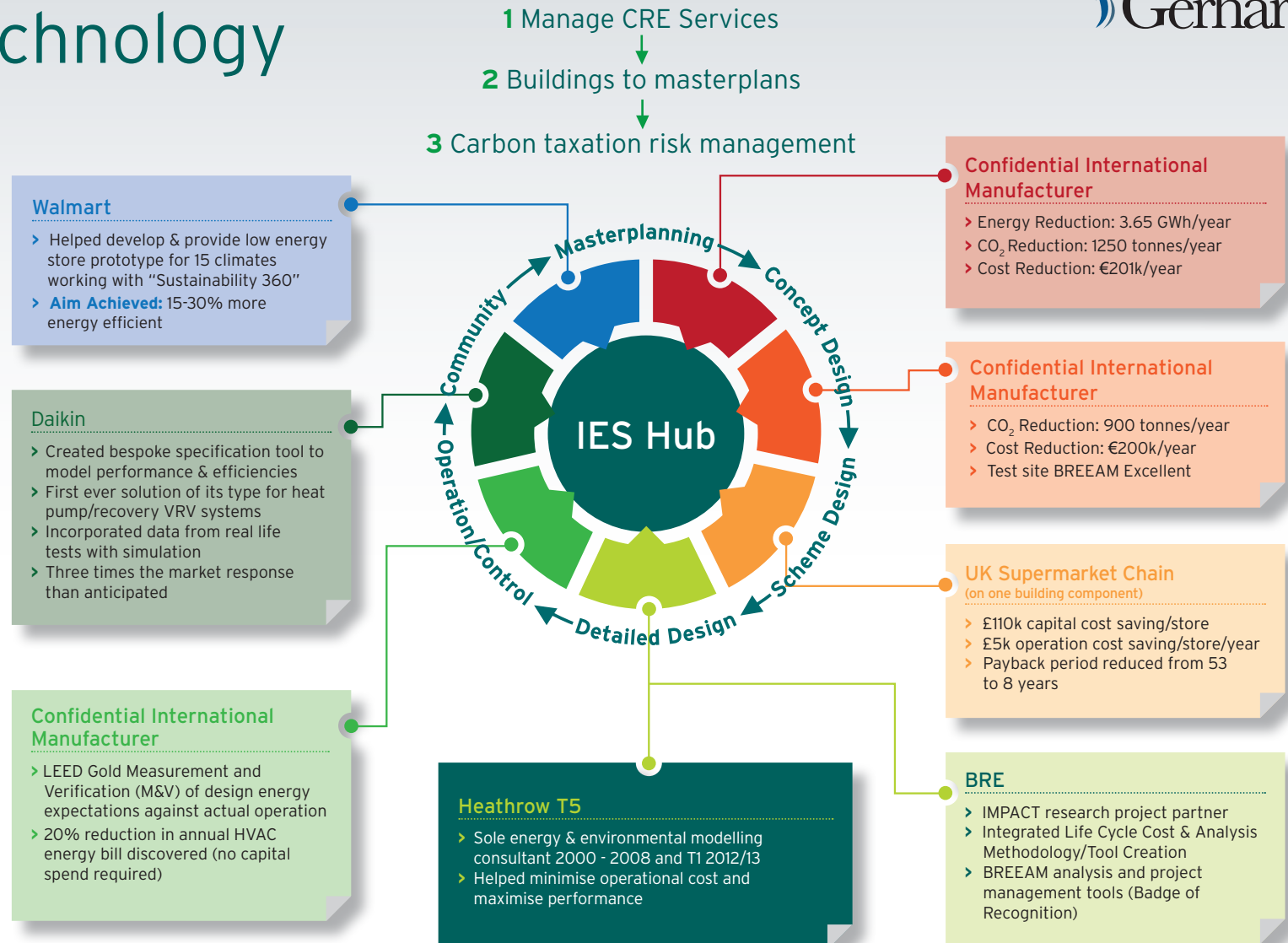
- IES' technology can also be used to help manage a portfolio of buildings throughout the world and help address the unique requirements for each country
- IES' technology is appropriate throughout the building lifecycle: from single buildings to masterplans and from design concept to building operation and refurbishment
- When managing a portfolio IES can help formulate, implement and track an appropriate carbon reduction strategy identifying and targeting the poorest performing buildings first

How we would deliver value



IES Hub Technology at work

Unlock hidden savings



Measureable Sustainability

If you can't
measure it you can't
improve it

Lord Kelvin

Benefits

1 OPEX Savings

- **Continuous optimisation, maintain cost savings over time**
 - Identify drift/implement remedy
- **Predictive Maintenance**
 - Early investment in HVAC refurbishment
 - Avoid excessive FM service fees
- **Increase Portfolio Value**
 - LEED Platinum vs LEED Gold
 - Buy, Renovate, Sell
 - Clarification of Estate

2 Smarter Decisions

- Implement targetted maintenance plan

3 Risk Reduction

- Carbon policy changes - increased tax?
- Climate change effects on energy demand

IES Can Drive Costs Down

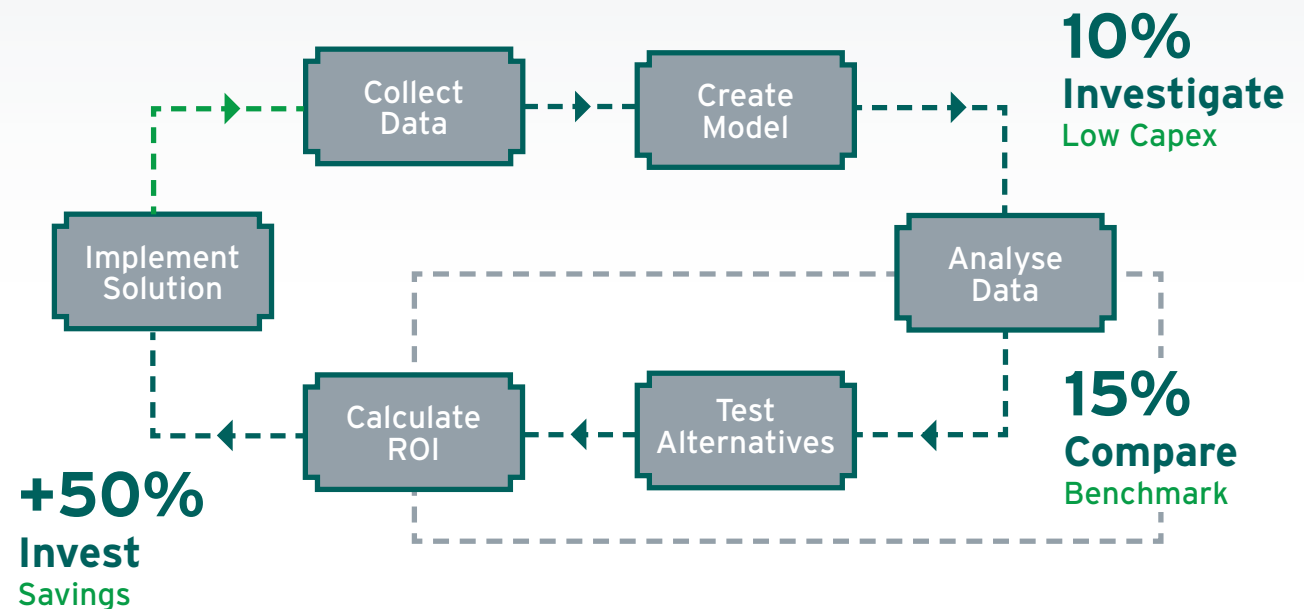
Measureable Sustainability

Lets move forward

1 Pilot

Initially identify appropriate buildings for pilot study.

2 Phased Analysis



Measureable Sustainability

Lets move forward

3 Operational

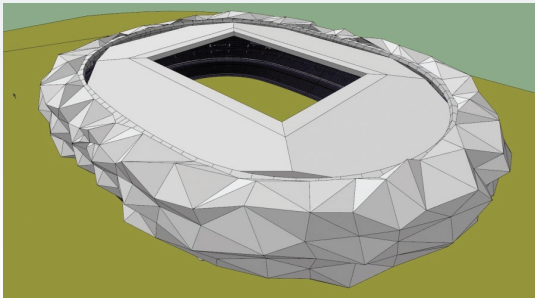
Define and implement carbon reduction strategy for whole Portfolio

- A** Decide buildings to lease, renovate, sell, buy or build
- B** Perform Step 2 as per the pilot study for each building
- C** Increase Portfolio Value by improving pertinent building rating or labelling system

4 Progress

Progress towards all buildings operating at Compare Level employing continuous optimisation with regular Investment reviews.

Measureable Sustainability



Concept design development of HVAC & solar shading solutions for Qatar World Cup 2022



High-profile customers

- › Scottish Parliament
- › Sowaah Square (Abu Dhabi Financial Center)
- › MGM Grand (Las Vegas)
- › WalMart
- › Johnson & Johnson
- › Sainsbury's
- › Atkins
- › SOM
- › ARUP
- › Gensler
- › AECOM
- › HOK
- › Buro Happold
- › URS Scott Wilson
- › WSP Group
- › Stantec
- › RMJM

Partners

- › Daikin
- › Monodraught
- › Tata
- › Somfy/Phillips
- › Jurong/BCA
- › Toyota
- › Airbus
- › Trelligence
- › TrimbleSketchUp
- › Vectorworks
- › Singapore Technologies

The VE contains the most complete set of advanced analysis tools in an integrated software suite that we have seen. It is a major advantage to be able to build a model once, and then perform everything from a PRM simulation to CFD without rebuilding.

Kim Shinn
Principal/Senior Sustainability Consultant, TLC

The Virtual Environment allowed us to see the impact our ideas would have on the energy consumption of these buildings. The superior graphics, visualisation and presentation capabilities made it easy to communicate the benefits to our client.

Brian Tysoe
Mechanical Engineer, MCW

Measurable Sustainability

Summary

This is an opportunity to reach a long term collaborative relationship which will support our client, its supply chain and its partners by helping them meet sustainability targets, reducing operating costs, year on year. (Initial results within weeks/ months) Through our leading edge technology, expertise, on-going research and consulting we can enable our client to be at the forefront of sustainability in the corporate arena.

- Pilot Projects self funding to prove concept; low risk to our client, IES rewards based on success
- IES engage with our clients Sustainability Personnel
 - To select a series of buildings for pilot, non-intrusive.
 - To collaborate on access to BMS and drawings data
 - Initial results typically within 3-4 weeks
- Roll out beyond pilot to pre-agreed programme ROI and costs