



مجلس أبوظبي للتخطيط العمراني
ABU DHABI URBAN PLANNING COUNCIL

Arab Forum For Environment & Development

Estidama

Sustainability at Large

“A Mandate for Success”

Meeting Reference: Arab Forum For Environment & Development 29th October 2013



Estidama
إستدامة

Estidama – The Vision 2030 Sustainable Foundation

estidama renewable
rating industry diligence water
legacy economic social
technology responsibility innovator
resource vision cultural
community climate
children world leader energy
solutions global environment
you future emirate history ideas waste
design pearl
estidama sustainability



إستدامة
estidama

Yasmeen Al Rashedi
Planning Manager
Abu Dhabi Urban Planning Council

The logo for Abu Dhabi Vision 2030 features the Arabic word 'رؤية' (Rū'ya) in a large, teal, stylized font, with '2030' in a gold, stylized font to its right. Below 'رؤية' is the word 'Vision' in a smaller, teal, sans-serif font. Above the main text, the words 'Abu Dhabi' are written in a teal, cursive font, accompanied by a circular emblem containing the Arabic word 'أبوظبي' (Abu Dhabi) in white on a teal background. The entire logo is set against a light gray map of Abu Dhabi.

Abu Dhabi رؤية
رؤية
Vision
2030

Abu Dhabi Vision 2030 is about Planning for the Future
(Abu Dhabi Economic Vision 2030 and Plan Abu Dhabi 2030)

The future is unforeseeable without sustainability

Abu Dhabi is at the forefront of responsible sustainable policies

Estidama – A Numbers Overview



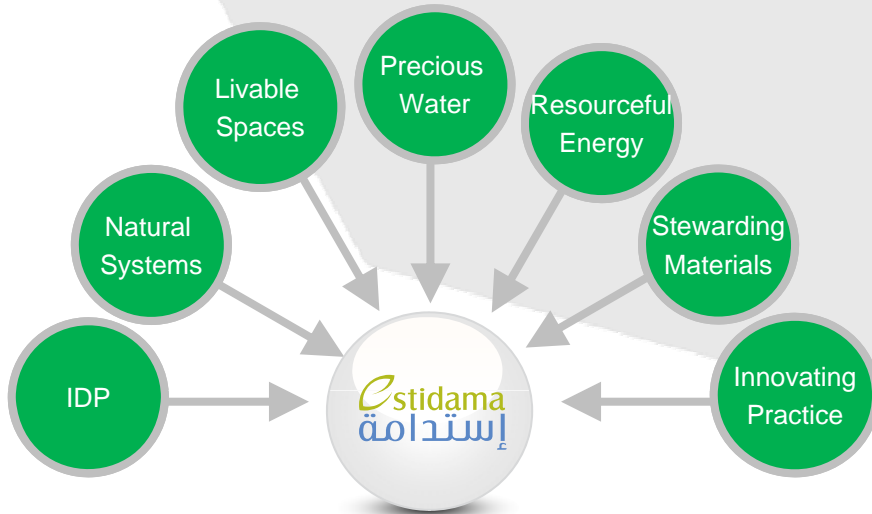
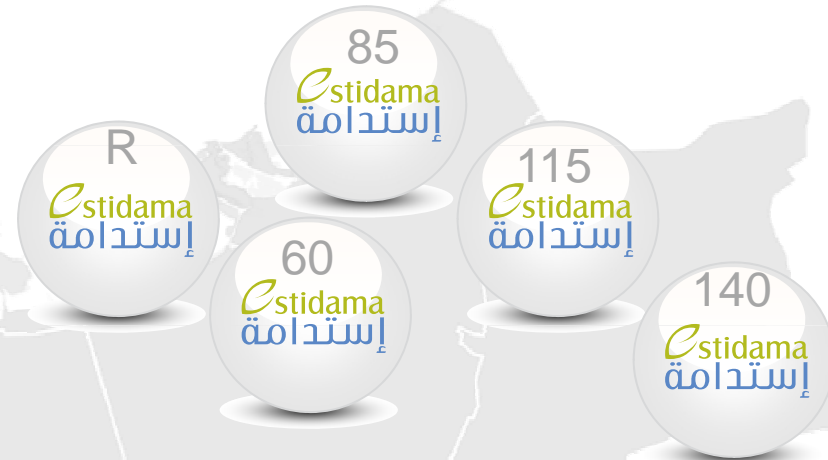
Executive Council Mandate - April 2010

• All New Communities to be:

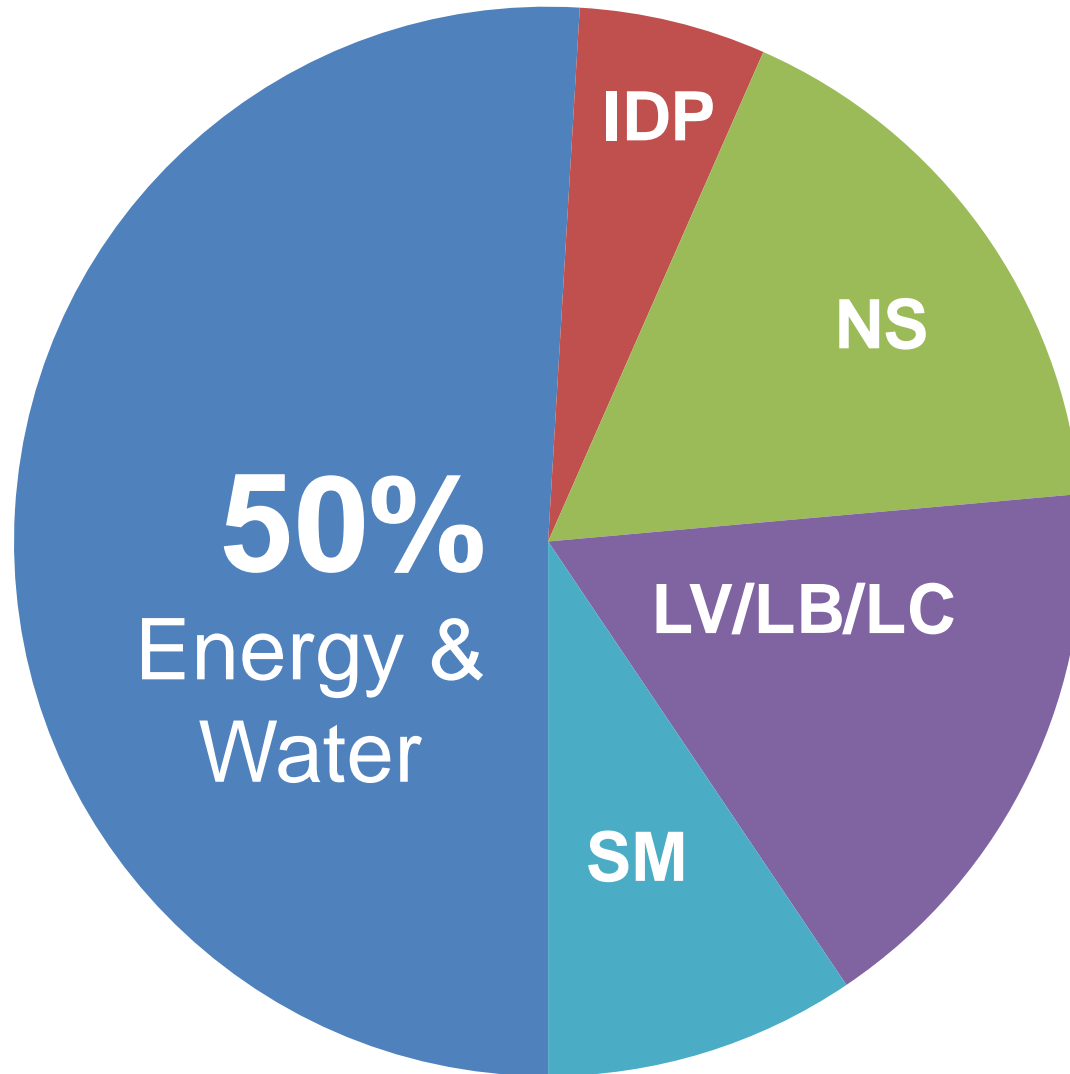
• All New Buildings and Villas to be:

• All Government Buildings & Villas:

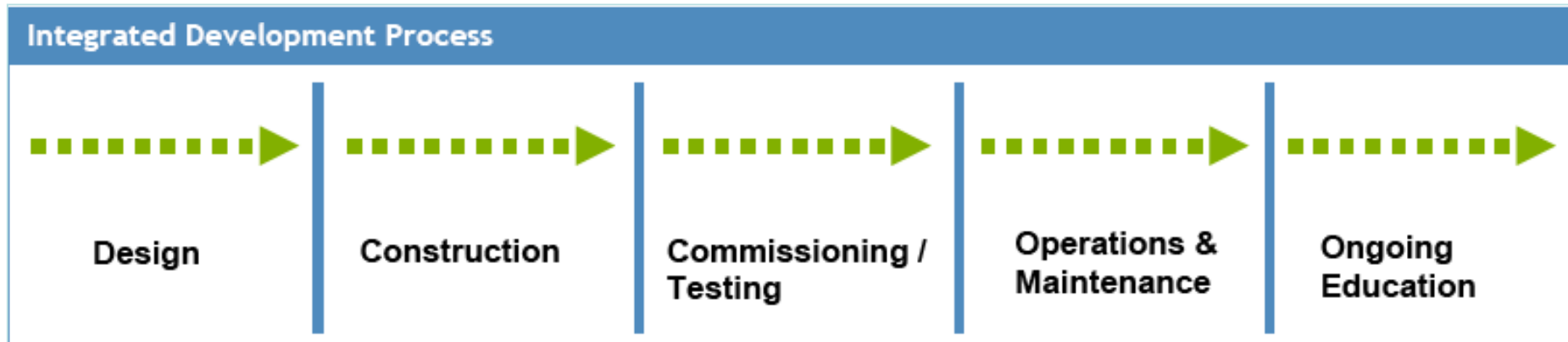
Estidama – Pearl Rating Systems



Estidama – Pearl Rating Systems



Estidama – Pearl Rating Systems – Integrated Development Process



- Establishes collaborative teamwork & iterative design process
- Encourage construction activities that value:
 - workers welfare
 - quality &
 - environmental management
- Prepares for good O&M practices where users play an active role Achieve goals on-time & on-budget

Estidama – Pearl Rating Systems – Integrated Development Process

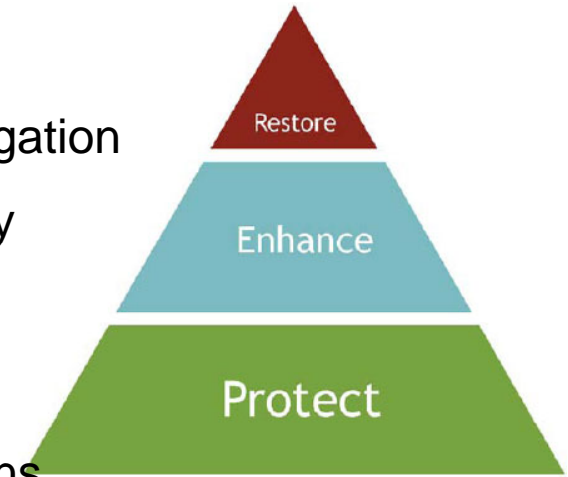
I.D.P vs Conventional Design Process

Integrated Development Process	Conventional Design Process
Involves team members from the outset	Involves team members only when essential
Front-loaded: time & effort invested early	Less time, effort & collaboration demonstrated in early stages
Decisions influenced by broad team	Decisions made by few team members
Iterative process	Linear process
Whole-systems thinking	Systems often considered in isolation
Seeks Synergies	Less opportunities for synergies
Life-cycle Costing	Emphasis on up-front costs
Process continues after construction	Typically finished upon construction

Source: Adopted from 'Roadmap for the Integrated Design Process' by Busby Perkins+Will, Stantec Consulting

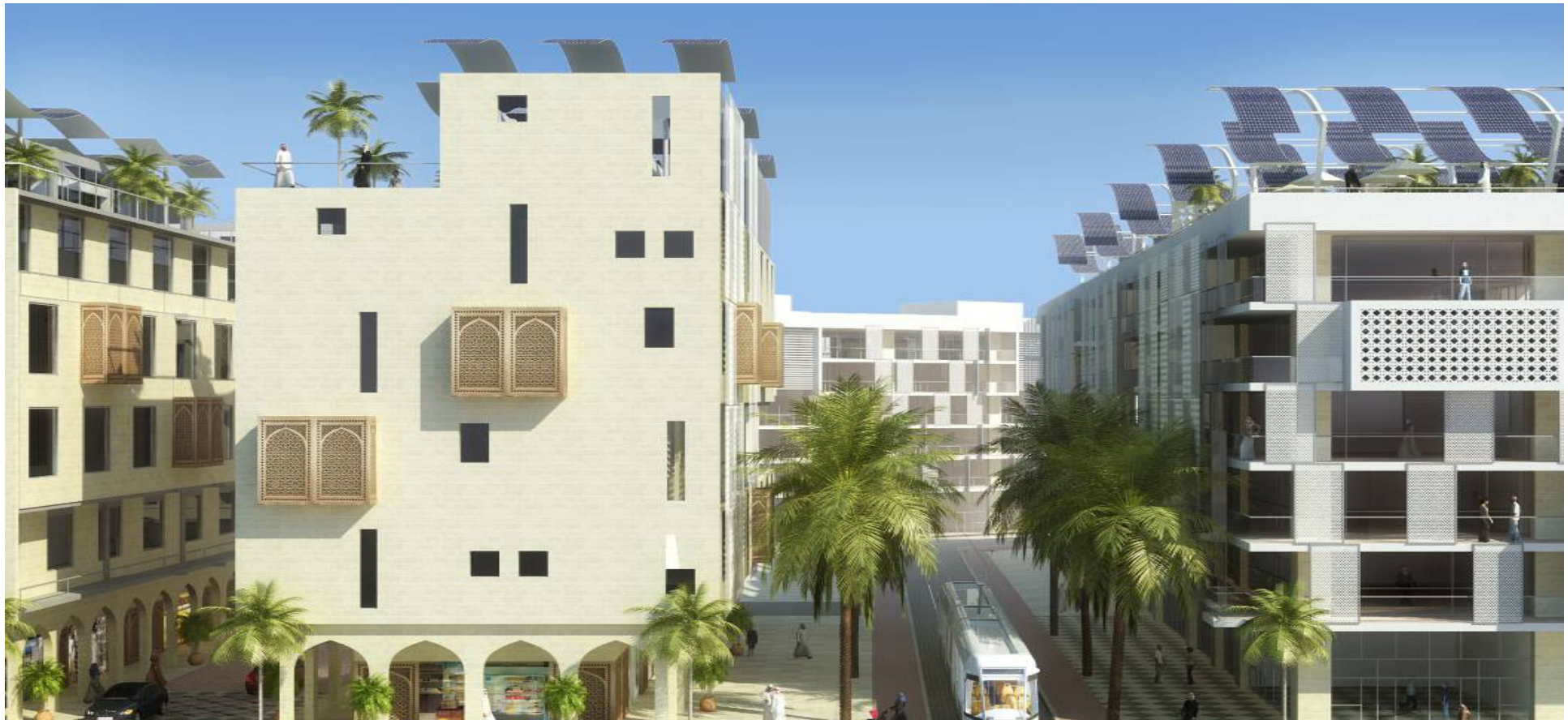
Estidama – Pearl Rating Systems – Natural Systems

- ❑ Analyse and assess of natural systems onsite
- ❑ Conserve existing natural systems through protection or mitigation
- ❑ Develop a Natural System Design and Management Strategy
- ❑ Encourage the reuse of land
- ❑ Enhance ecological value
- ❑ Create habitat, restore habitat and provide habitat connections

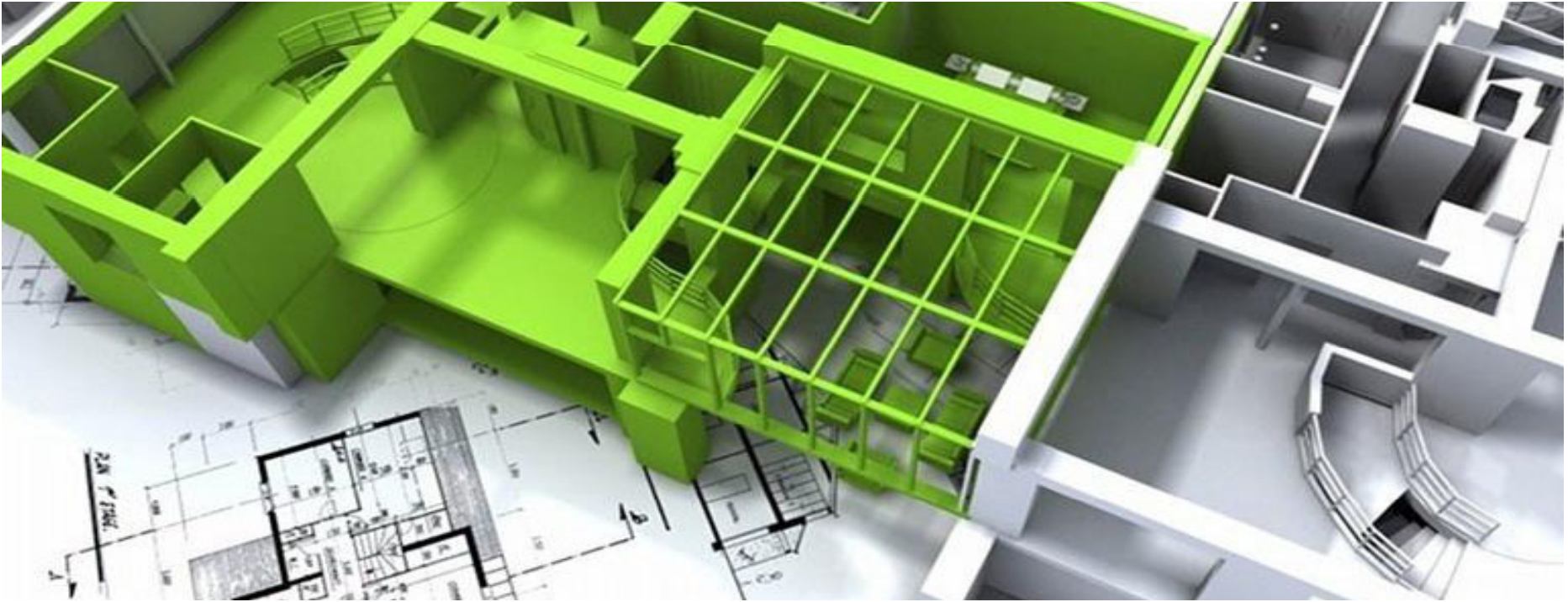


Estidama – Pearl Rating Systems – Livable Buildings Outdoor

- Provide shaded walkways
- Promote a more thermally comfortable outdoor space
- Encourage the use of active urban environments
- Provide accessible local amenities
- Encourage the use of alternative modes of transport
- Reduce urban light pollution

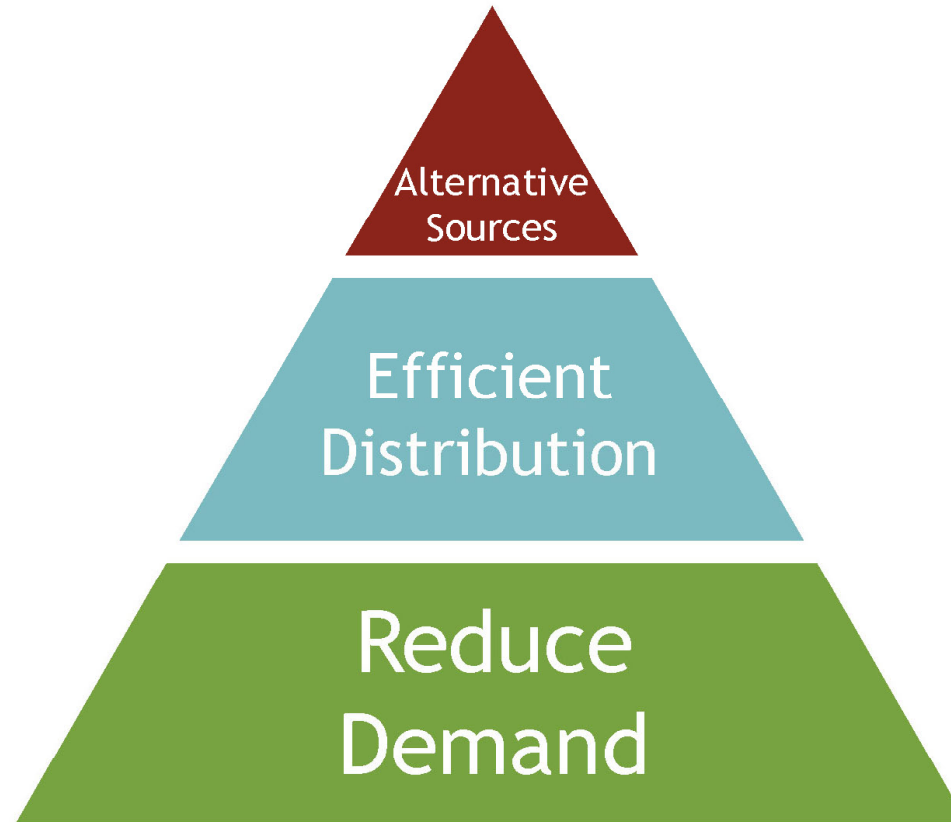


Estidama – Pearl Rating Systems – Livable Buildings Indoor



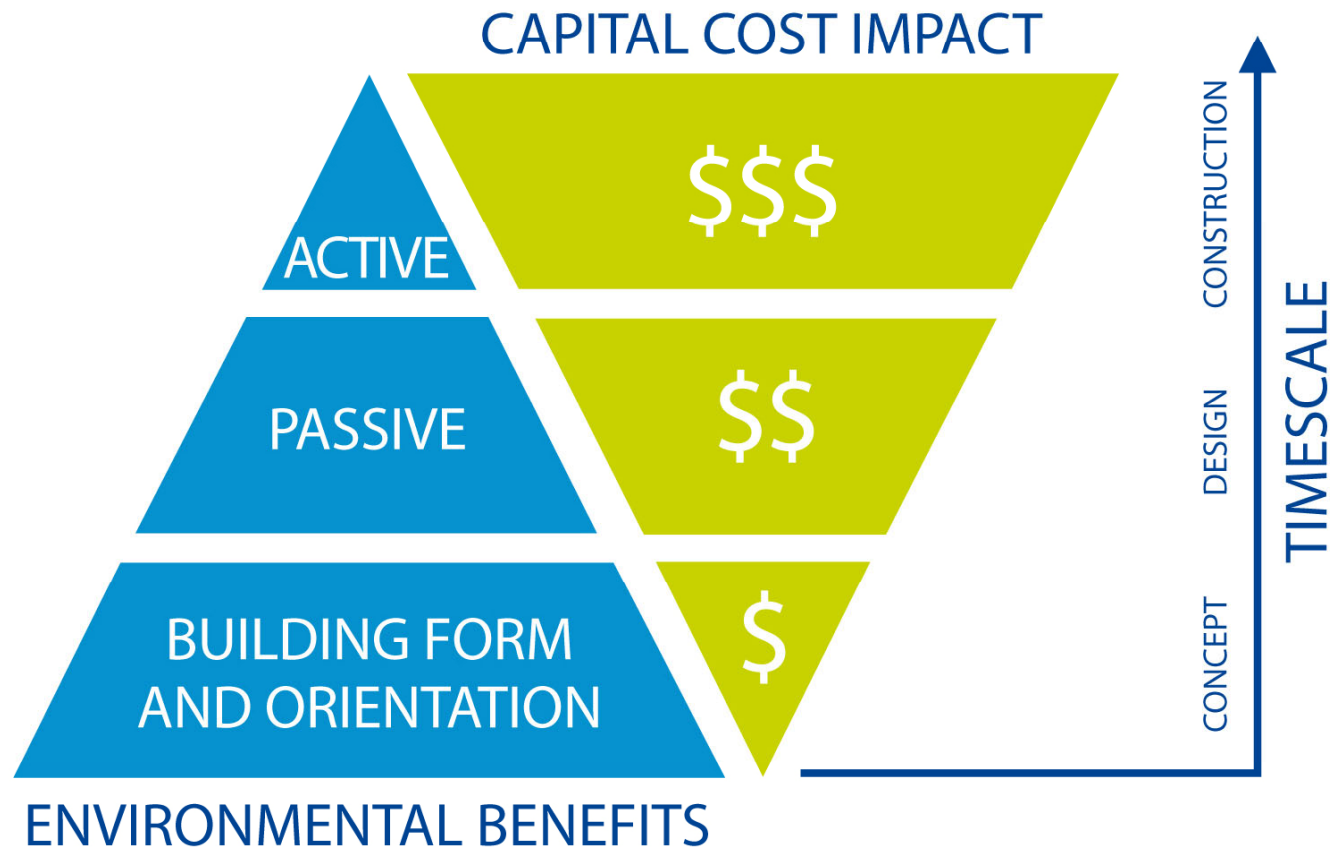
- Promote indoor air quality management during construction & operation
- Improve ventilation quality during normal building operation
- Select materials to reduce harmful emissions
- Improve indoor thermal comfort (occupant control)
- Create visually comfortable environments (reduce glare, views etc.)

Estidama – Pearl Rating Systems – Precious Water



- Reduce indoor & outdoor water demand
- Reduce losses – monitoring
- Use alternative sources – onsite treatment & grey water

Estidama – Pearl Rating Systems – Resourceful Energy



- Reduce energy demand through passive design
- Improve efficiency (HVAC, lighting, appliances)
- Incentivize renewable sources of energy

Estidama – Pearl Rating Systems – Stewarding Materials



- Prohibit the use of hazardous materials
- Implement comprehensive waste management (Construction and Operational)
- Reduce materials usage
- Sustainable sourcing of materials
- Promote the use of recycled materials
- Promote recycling industry

Estidama – Pearl Rating Systems – Innovating Practice



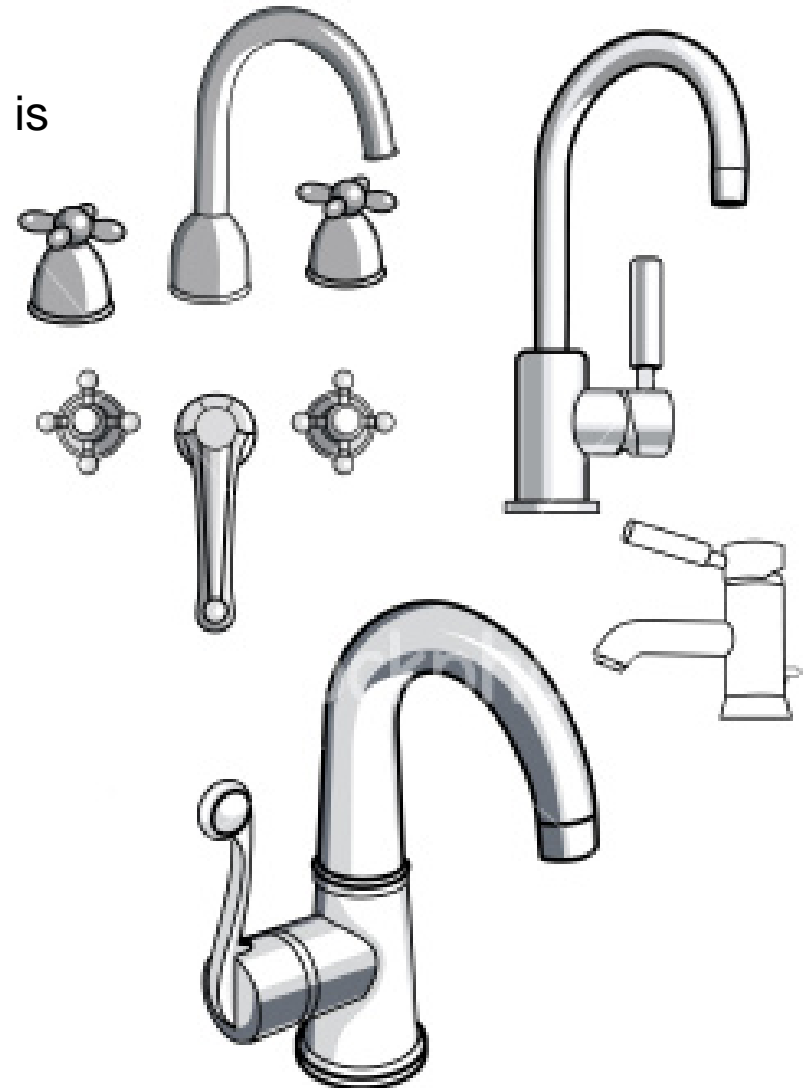
- ❑ Showcase of cultural and regional design strategies
- ❑ Innovative solutions during design or construction

Estidama – Pearl Rating Systems – EVPD

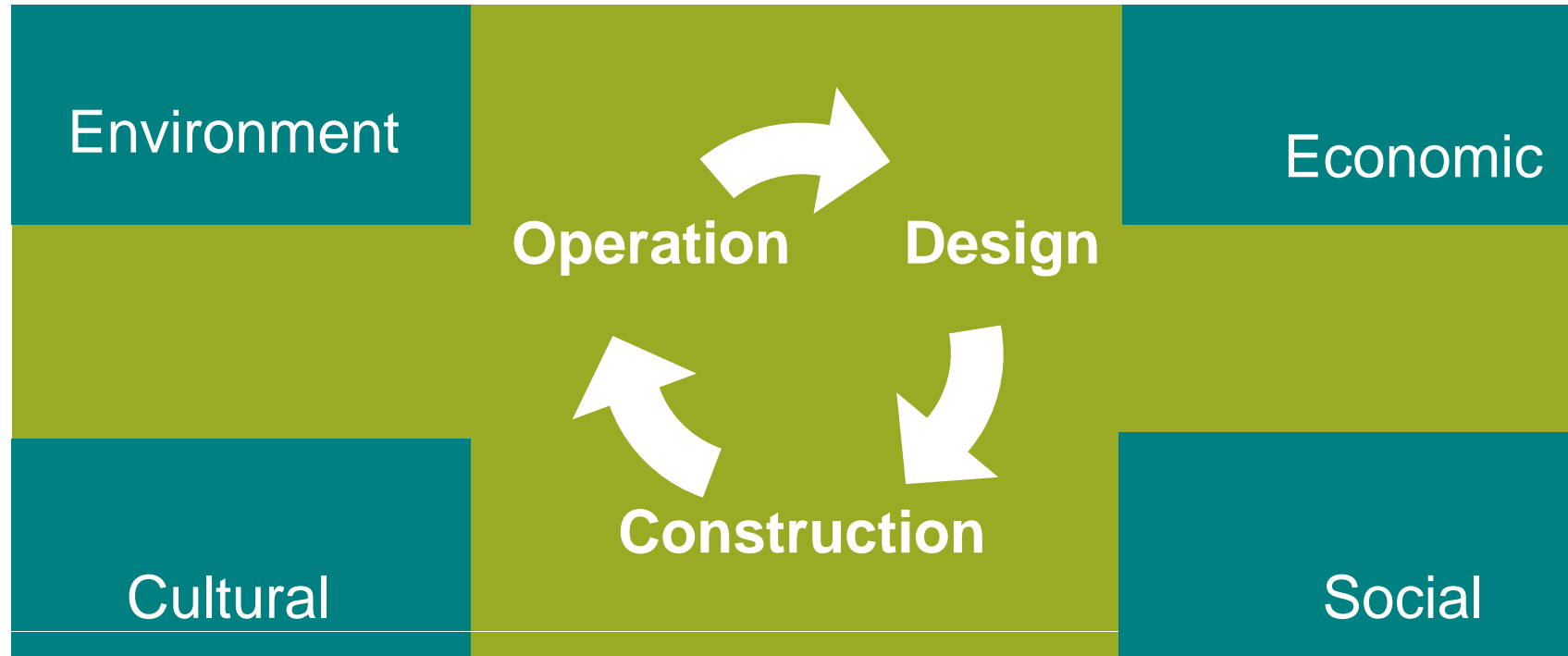
The Estidama Villa Products Database (EVPD) is a database of products that have been determined to be compliant with the Pearl Villa Rating System (PVRS) requirements.

The EVPD covers the following product categories all of which are applicable to the PVRS:

- Water Fixtures & Fittings
- Insulation Products & Systems
- Windows & Glazing
- Air Conditioning Equipment
- Solar Hot Water



Estidama – Pearl Rating Systems

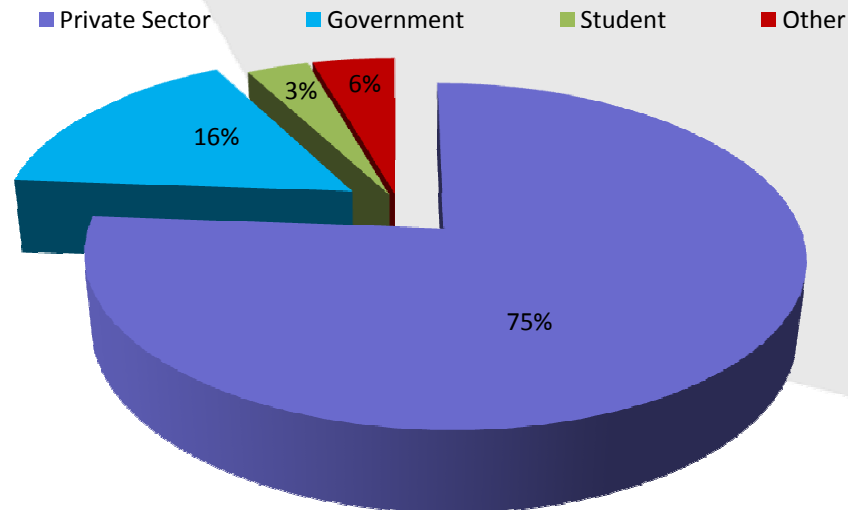


The *Pearl Rating System* aims to address the sustainability performance of a development throughout its lifecycle and in relation to the 4 pillars of Estidama.

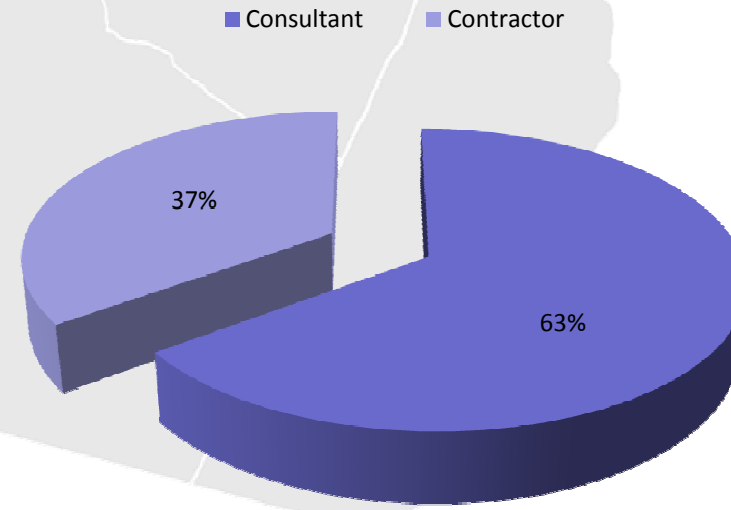
Estidama Training Program

Course Type	Number of Sessions	Total Attendees <i>(as of 12-Sep-2013)</i>
Design Rating Training *	337	7,014
Construction Rating Audit Training	23	464
GRAND TOTAL	360	7,478

Training Attendees



Private Sector- Occupation



- *Design Rating Training consist of the following sessions:
- Understanding Estidama & the PRS (2 hours)
 - Understanding the EVPD for Consultants (1.5 hours)
 - PBRS: 1 Pearl Training / Workshop (7 hours)

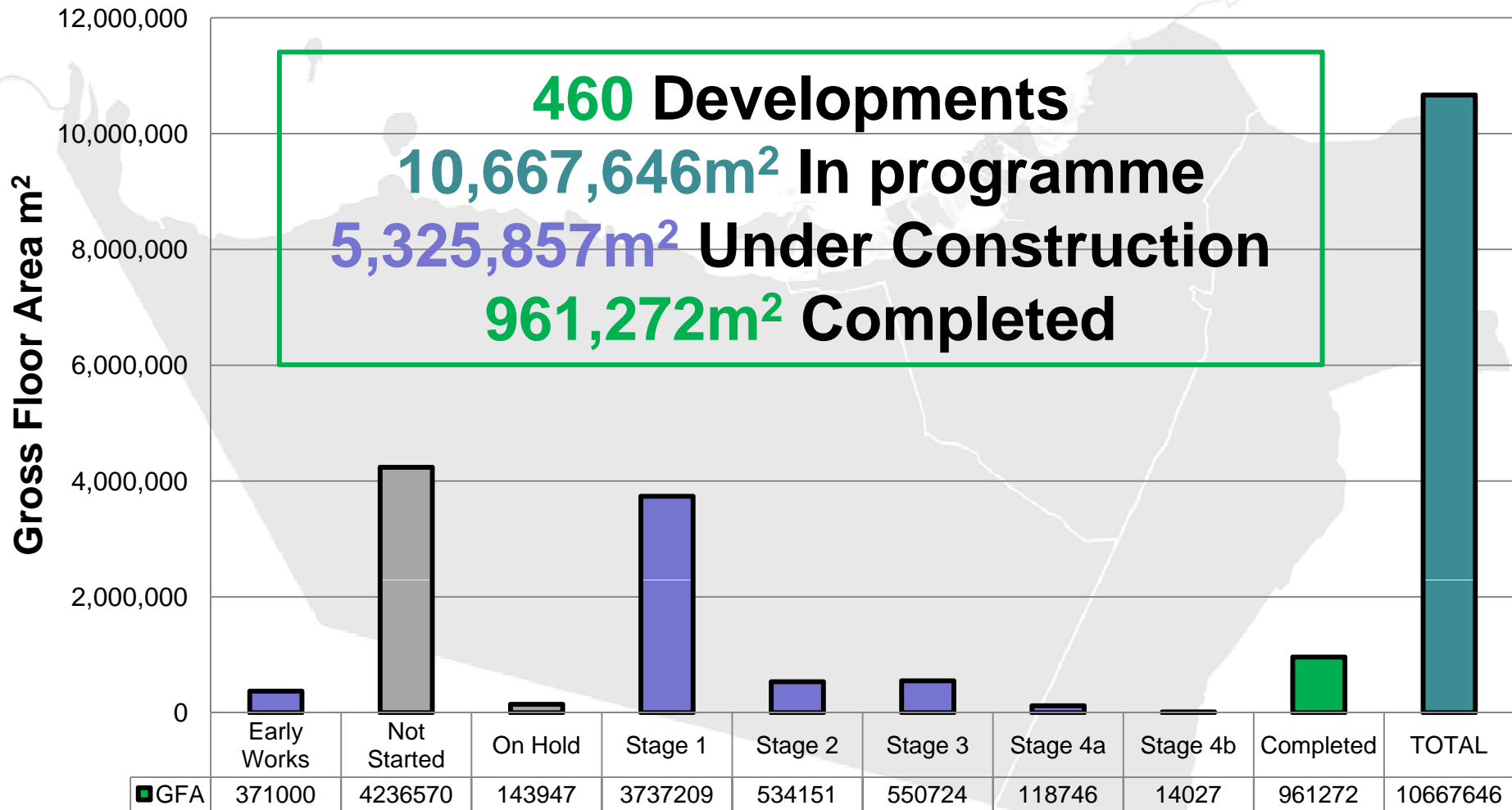
Source: Estidama Training Attendee Database

Why Estidama – Pearl Rating Systems ?

- ❑ Tailored to Abu Dhabi's unique climate, culture and transformational ambitions
- ❑ Government Mandate
- ❑ Reinforces Plan 2030 and local codes
- ❑ Recognizes traditional design and cultural practices
- ❑ Emphasizes integrated design from project inception

Estidama Developments - Stages

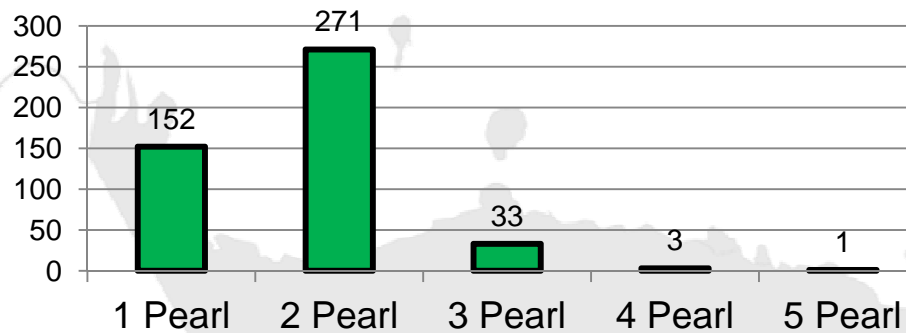
Estidama Rated Buildings and Villas



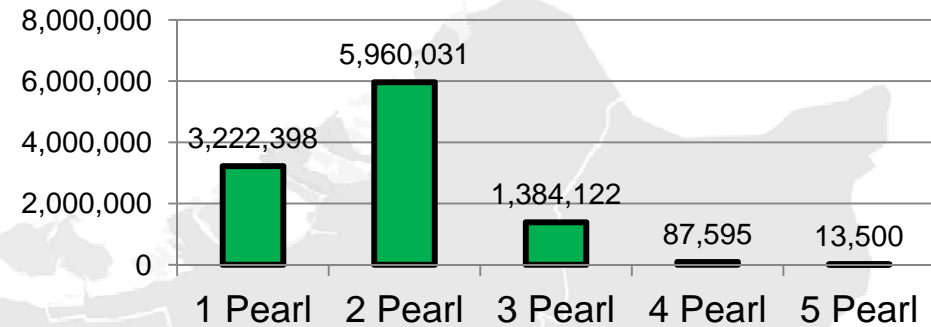
Source/: Estidama Project Log (27th October 2013)

Estidama – Development Summary

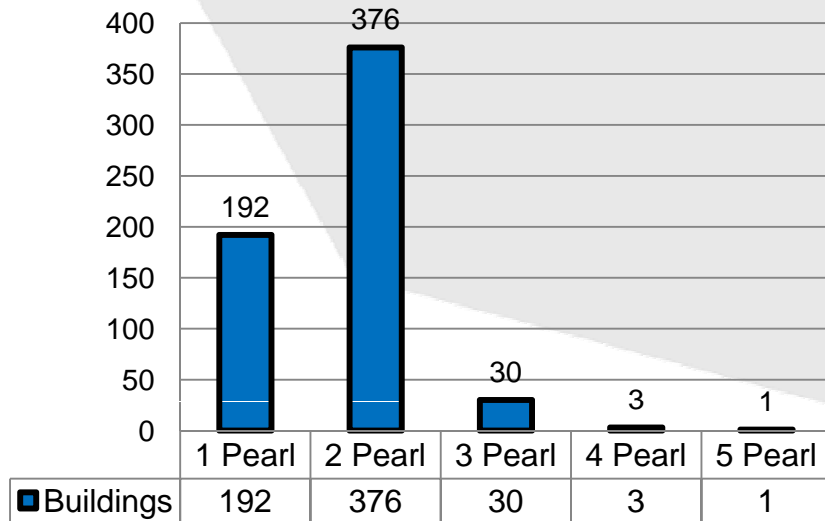
Project Pearls



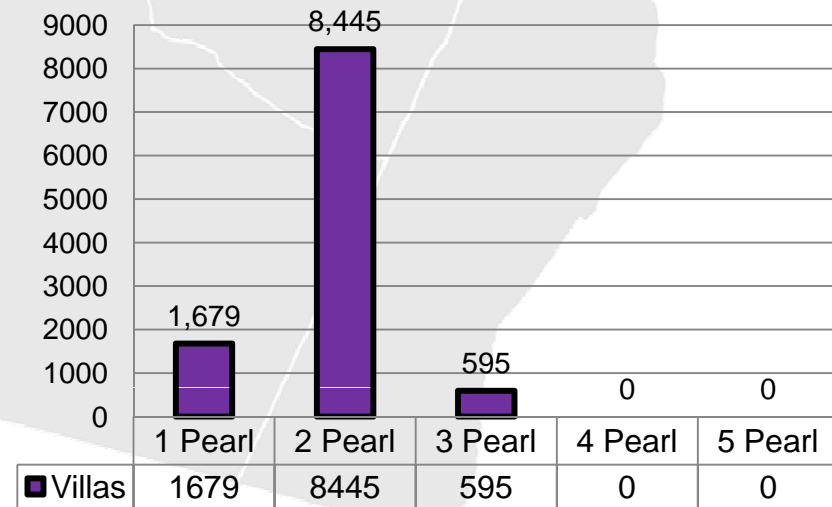
Pearl GFAm²



Buildings Numbers by Rating

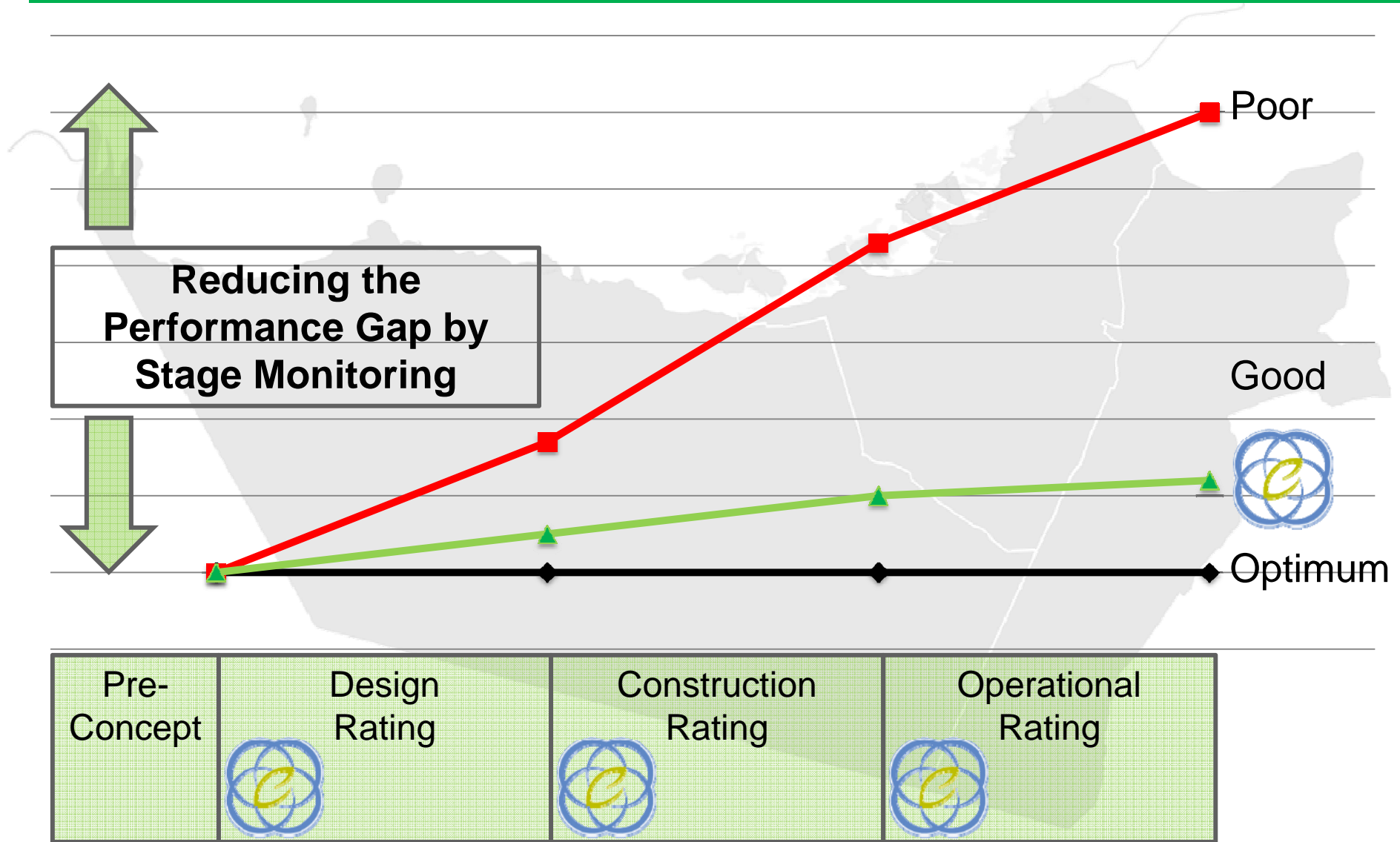


Villa Numbers by Rating



Source/: Estidama Project Log (27th October 2013)

How Do We Ensure Savings Are Achieved



Estidama – Building Case Study

Al Ain General Facts

- **Rating** **2 Pearl**
- Date of opening Oct 2011
- Total GFA 5,855m²
- Landscape Area 286m²
- Cooling Source Chillers
- Glazing Percentage 29%
- Fenestration Double
- Walls Insulated
- Skylight Double
- Renewables Hot Water
- Construction Cost 50m AED

Abu Dhabi General Facts

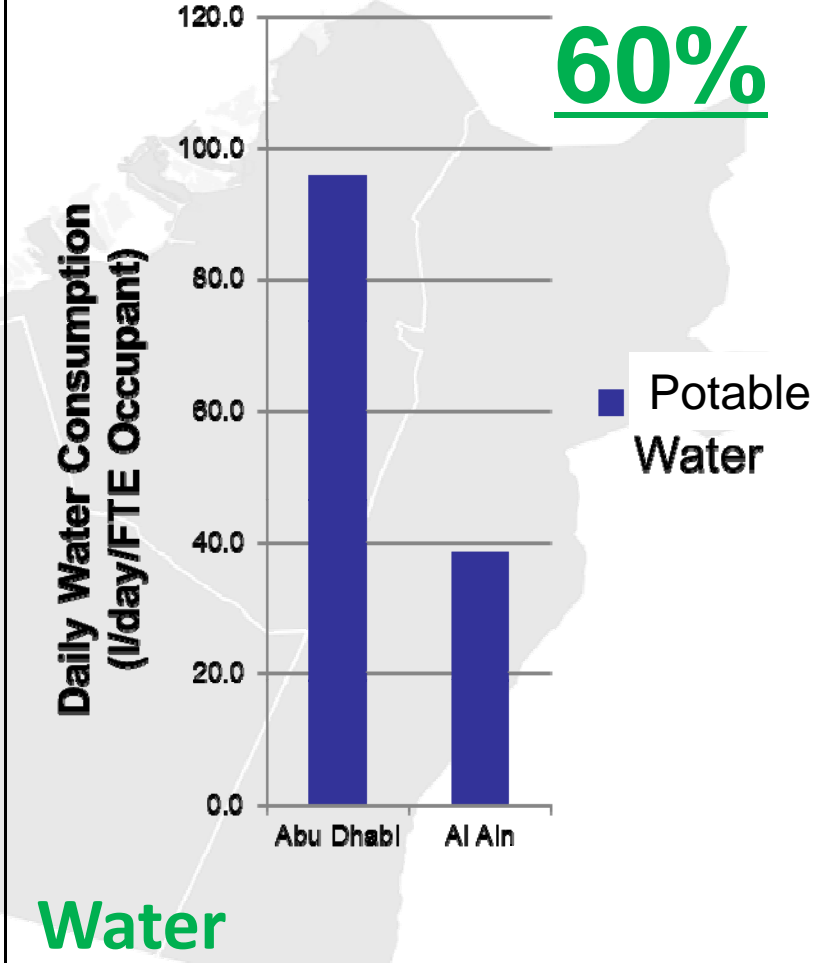
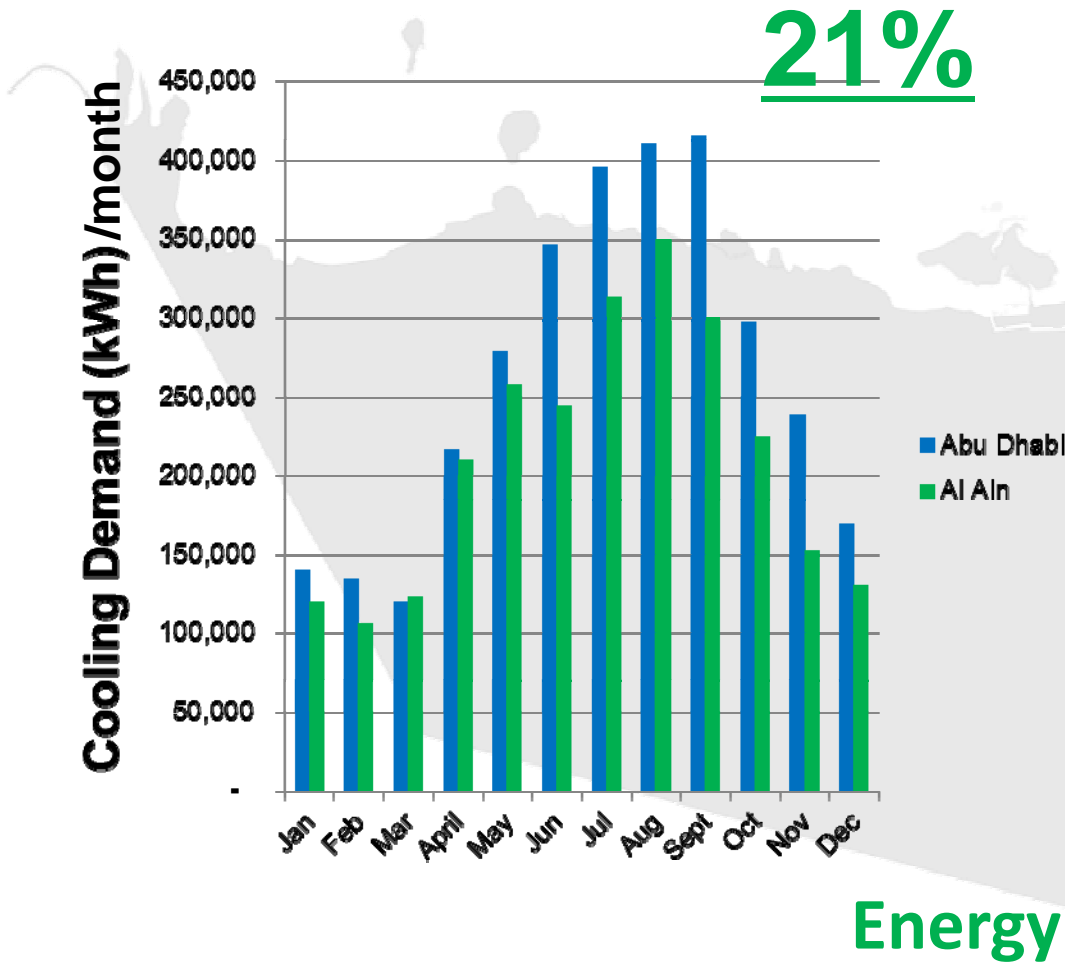
- **Rating** **None**
- Date of opening June 2006
- Total GFA 5,950m²
- Landscape Area 392m²
- Cooling Source District Cooling
- Glazing Percentage 27%
- Fenestration Single
- Walls Block
- Skylight Single
- Renewables None



Source/ Basis: ICLDC/ Estidama Project Log



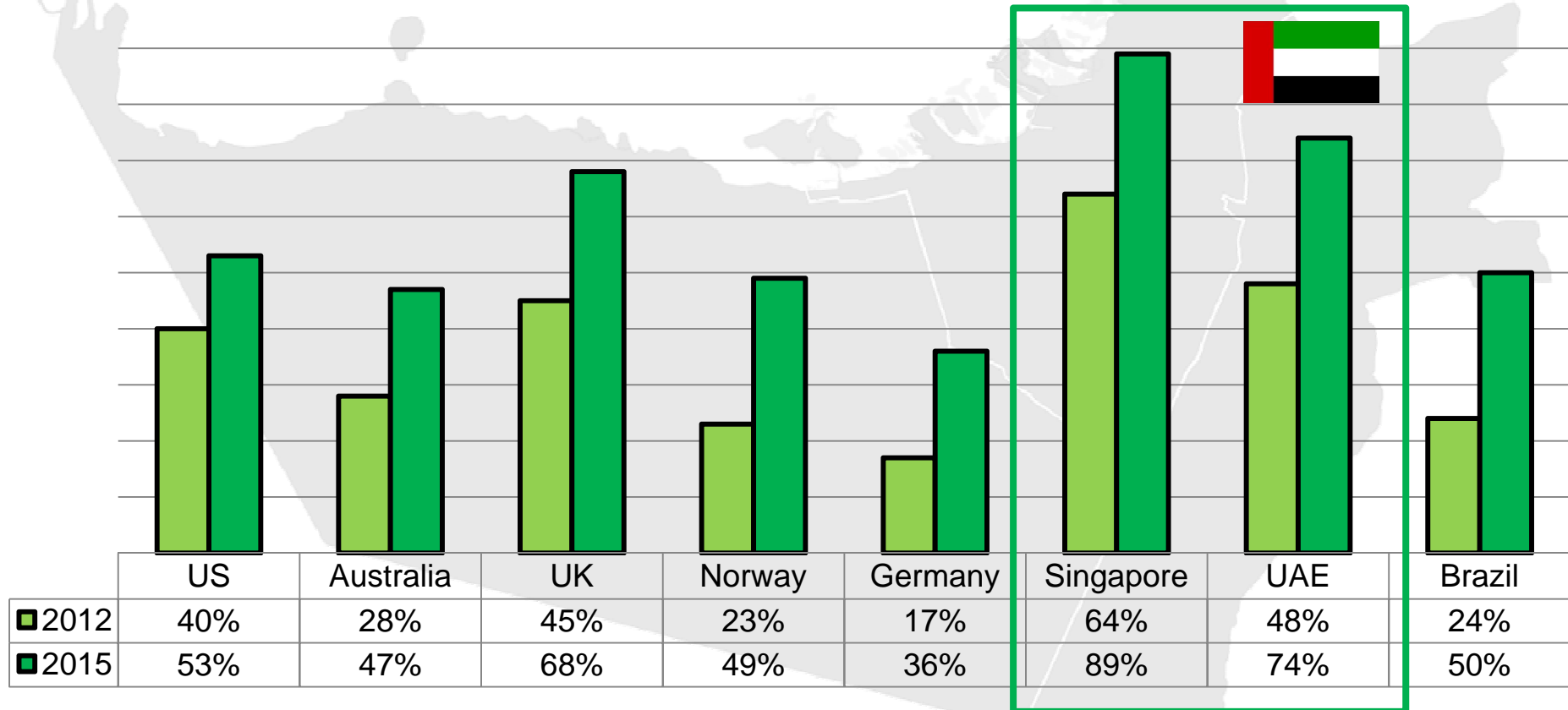
Estidama – Building Case- Al Ain Study



Source/ Basis: Abu Dhabi Distribution Company Meters/ Imperial College London Diabetes College (ICLDC)/ Tabreed/ Estidama Project Log

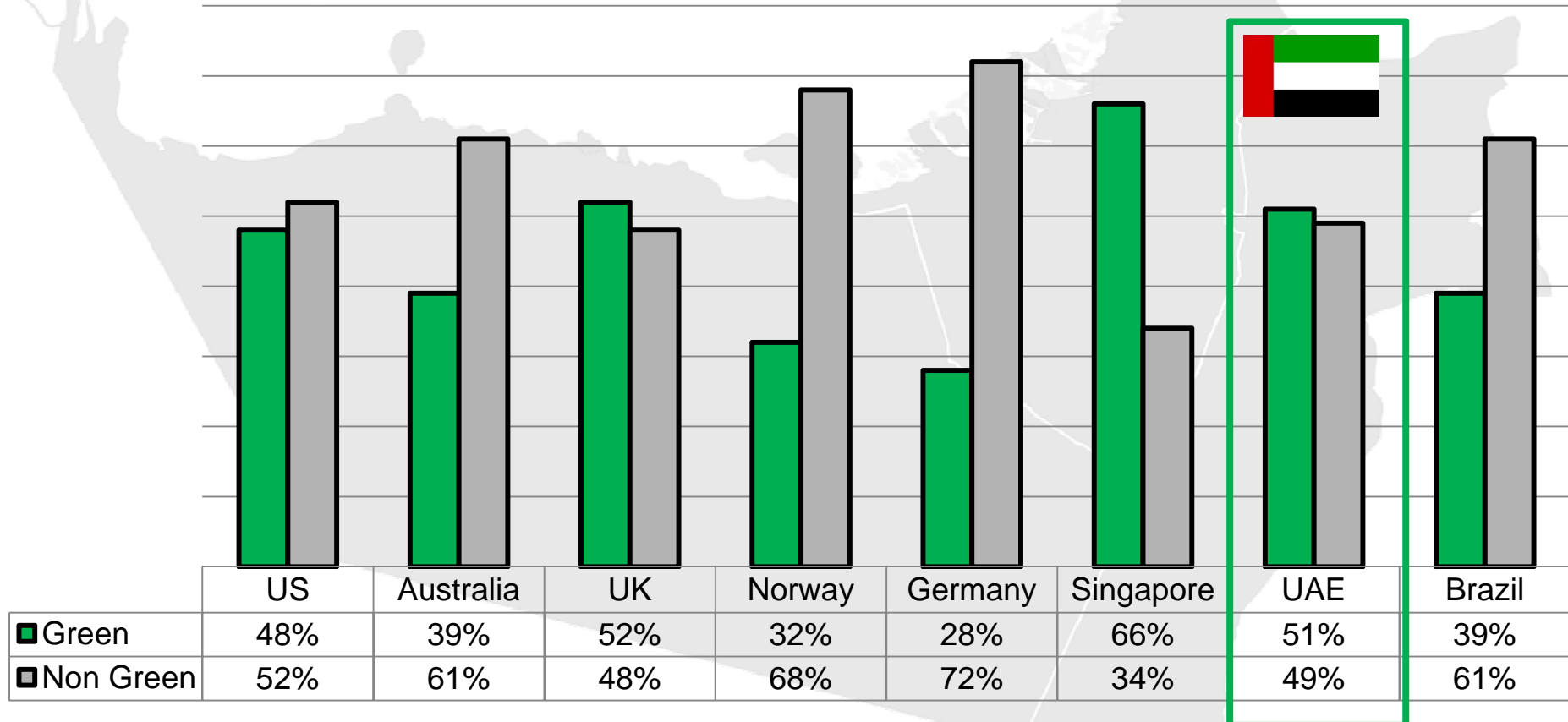


Green Building Taking Global Trend:



Source: McGraw Hill WGBC Report – World Green Building Trends

Level of Green Building Activity:



Source: McGraw-Hill WGBC Report – World Green Building Trends

Triggers for Driving Green Buildings:

	US	Australia	Europe	UAE	Singapore	Brazil	South Africa
1st Reason	Client Demand 41%	Market Demand 37%	Client Demand 39%	Regulations 55%	Regulations 41%	Market Demand 52%	Right thing to do 44%
2nd Reason	CSR 32%	Client Demand 35%	Market Demand 37%	Client Demand 50%	CSR 35%	CSR 26%	Lower Operating Costs 42%

Source: McGraw-Hill WGBC Report – World Green Building Trends

World Green Building Trends Research

Most Important Reason:

	US	Australia	Europe	UAE	Singapore	Brazil	South Africa
Energy Reduction	1 78%	1 68%	1 70%	1 86%	1 93%	1 61%	1 76%
Water Reduction	2 32%	4 21%	5 10%	2 64%	2 24%	2 39%	3 40%
Improved IAQ	3 25%	4 21%	4 17%	3 23%	4 17%	5 13%	5 14%
Protect Natural Resource	4 19%	3 23%	3 29%	4 14%	2 24%	3 26%	2 48%
Lower Greenhouse Gases	5 14%	2 38%	2 31%	5 5%	4 17%	4 22%	4 18%

Source: McGraw-Hill WGBC Report – World Green Building Trends



Green Buildings



Better Places



Healthier People



مجلس أبوظبي للتخطيط العمراني
ABU DHABI URBAN PLANNING COUNCIL



إستدامة
estidama



تعرف على كيفية إنشاء
مستقبل مستدام

Find out how we're creating a sustainable future

Abu Dhabi
2030 رؤية
Vision

estidama
إستدامة