



# Sustainability Report 2015



## About this report

The fourth edition of Masdar's annual Sustainability Report continues to provide leadership in transparency and disclosure of notable sustainability initiatives in the region.

Masdar has developed this report in accordance with the Global Reporting Initiative's G4 guidelines' core option encompassing the periods from October 2014 to September 2015.

These GRI guidelines are an internationally recognised, voluntary tool that can help maximise the sustainability reporting process. This helps to keep Masdar at the forefront of sustainable practise in the region and beyond.

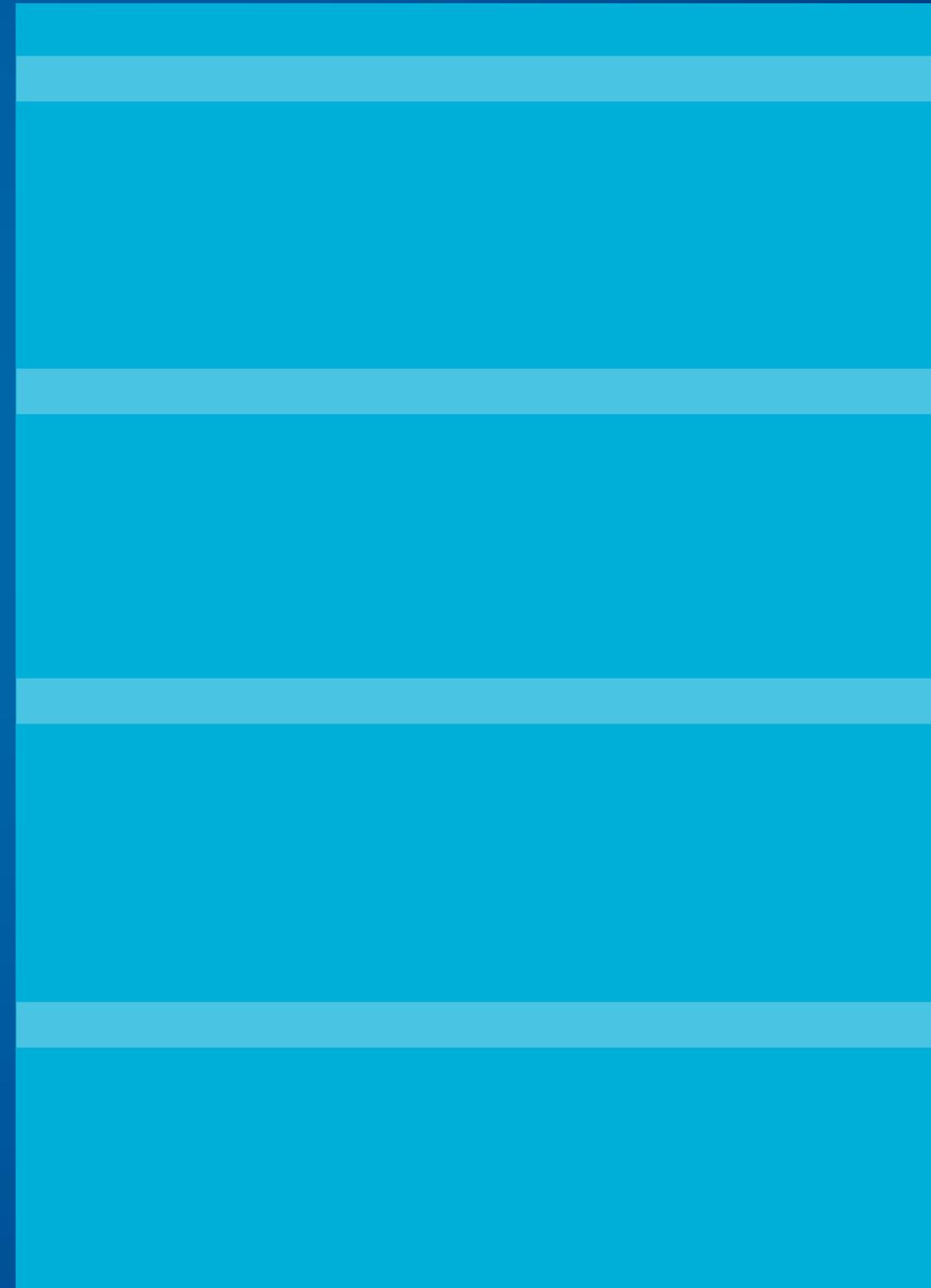
For more information on GRI, visit

[www.globalreporting.org](http://www.globalreporting.org)

### Contact:

For feedback and any questions related to this report, or regarding any of Masdar's Sustainability Initiatives, please contact [Sustainability@Masdar.ae](mailto:Sustainability@Masdar.ae)

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# Message from the Chairman

In a year that highlighted the exciting innovations taking place across the UAE, and finished with the critical climate change negotiations in Paris, Masdar continues to reinforce our commitment to supporting sustainable development in the UAE and the world, while also setting best practices in sustainable business.

The Fourth Annual Masdar Sustainability Report reaffirms the obligation Masdar has to maintaining strong sustainable business practices, while responsibly addressing today's pressing sustainability challenges.

Masdar's drive to ensure a sustainable future is underpinned by its commitment to transparency and knowledge transfer, which allows Masdar to serve as a model that can be used to contribute to global prosperity in an ever changing world. This report gives insight into the role that Masdar has assumed, as pioneers in sustainable business practices in the region.

**Dr. Sultan Al Jaber**  
UAE Minister of State  
Chairman of Masdar



# Message from the CEO

Sustainability is at the core of everything we do. It supports long-term value creation, enhances our brand and, most importantly, gives us licence to operate as an organisation that focuses not only on driving development in the renewables industry and profitability, but on making a positive social impact. In applying both local and international best practices, we are enhancing people's lives and setting an inspiring example across the region.

I am proud to introduce the fourth annual Masdar Sustainability Report, which continues our aim of delivering on our commitment to transparency for our stakeholders, while also reinforcing sustainability as an essential element of our everyday work.

To highlight some of our key project milestones of the year, we have started the construction phase of the Dudgeon 402 Megawatt wind farm in the United Kingdom, delivered three additional solar facilities in Pacific island nations under the UAE Pacific Partnership Fund and broken ground on construction of three additional facilities in the Islamic Kingdom of Mauritania. Here in the UAE, Masdar City welcomed the International Renewable Energy Agency into their new headquarters and initiated new construction and expansion plans.

This year's report offers valuable insight into our ongoing commitments and achievements and I hope you find it useful and productive. I welcome any feedback you may have as we continue to work together for a sustainable future.

**Dr Ahmad Belhoul**  
CEO  
Masdar



# What is Masdar?

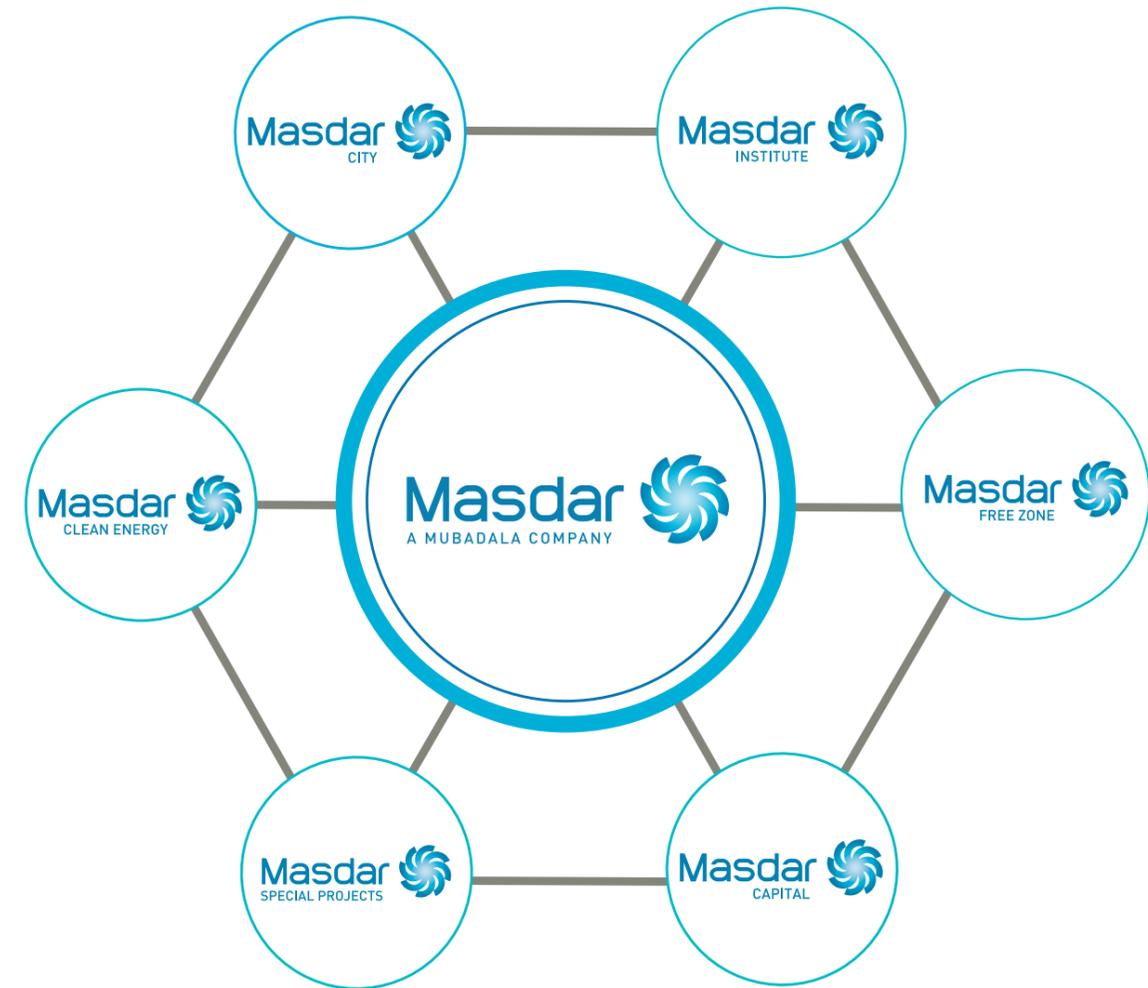
Masdar is a commercially-driven renewable energy company based in Abu Dhabi, United Arab Emirates. A strategic government initiative, the company has a mandate to invest in, develop and establish the sustainable energy industry in Abu Dhabi and around the world.

Masdar is comprised of four business units--namely Masdar Capital, Masdar Clean Energy, Masdar Special Projects and Masdar City. It is complemented by Masdar Institute, an independent, research-driven graduate university.

Masdar is a fully-owned subsidiary of the Mubadala Development Company, an entity owned by the Abu Dhabi government. Masdar sits under the newly (established?) Mubadala Energy Division.

Masdar represents Abu Dhabi's answer to the growing environmental and energy concerns of this century. Through sustainable practices and initiatives, Masdar serves as a leader in the efforts to create a more sustainable world.

This report is intended to display to the world how we aim to achieve our goals.



## Masdar invests in Dudgeon, a 402 MW Offshore Wind Farm in the UK



2014

The UAE hosts the 'Abu Dhabi Ascent' in preparation for the UN Climate Summit

The Siemens Middle East HQ at Masdar City is inaugurated

- The first LEED Platinum-certified office building in Abu Dhabi
- The building achieved a 63% saving of energy consumption and a 52% saving of water consumption, compared to a standard Abu Dhabi office building



Masdar and the Zayed Future Energy Prize launch the Women in Sustainability, Environment and Renewable Energy (WiSER) initiative

IRENA moves into its new headquarters in Masdar City

- The complex received the UAE's first Four Pearls, the highest rating from Estidama
- The building demands 42% less energy than global energy-efficiency standards and 64% less than typical buildings in Abu Dhabi
- The renewable energy systems output of the building will cover more than 10% of the building energy demand

Masdar receives a special recognition award from the United Nations Department of Economic and Social Affairs (UN-DESA) for its leadership in innovation that advances sustainable energy

2015

Tafila Wind Farm in Jordan completed in 2015.

- Capacity: 117 MW
- The project will increase Jordan's power capacity by 3%
- Will produce approximately 400 GWh of electricity annually and displace 235,000 tonnes of CO<sub>2</sub> emissions per year

Masdar CEO Dr. Ahmed Belhoul is recognised as the 'Energy Business Leader of the Year' at the Gulf Business Industry Awards 2015

The annual Abu Dhabi Sustainability Week kicks off the UAE's 'Year of Innovation'

Faisal Al Marzooqi and Aamena Al Shamsi become the first UAE nationals to receive Doctorate degrees from the Masdar Institute of Science and Technology



Solar Impulse 2, hosted by Masdar, takes off from Abu Dhabi for the first attempt at a solar-powered around-the-world flight

## Masdar Vision

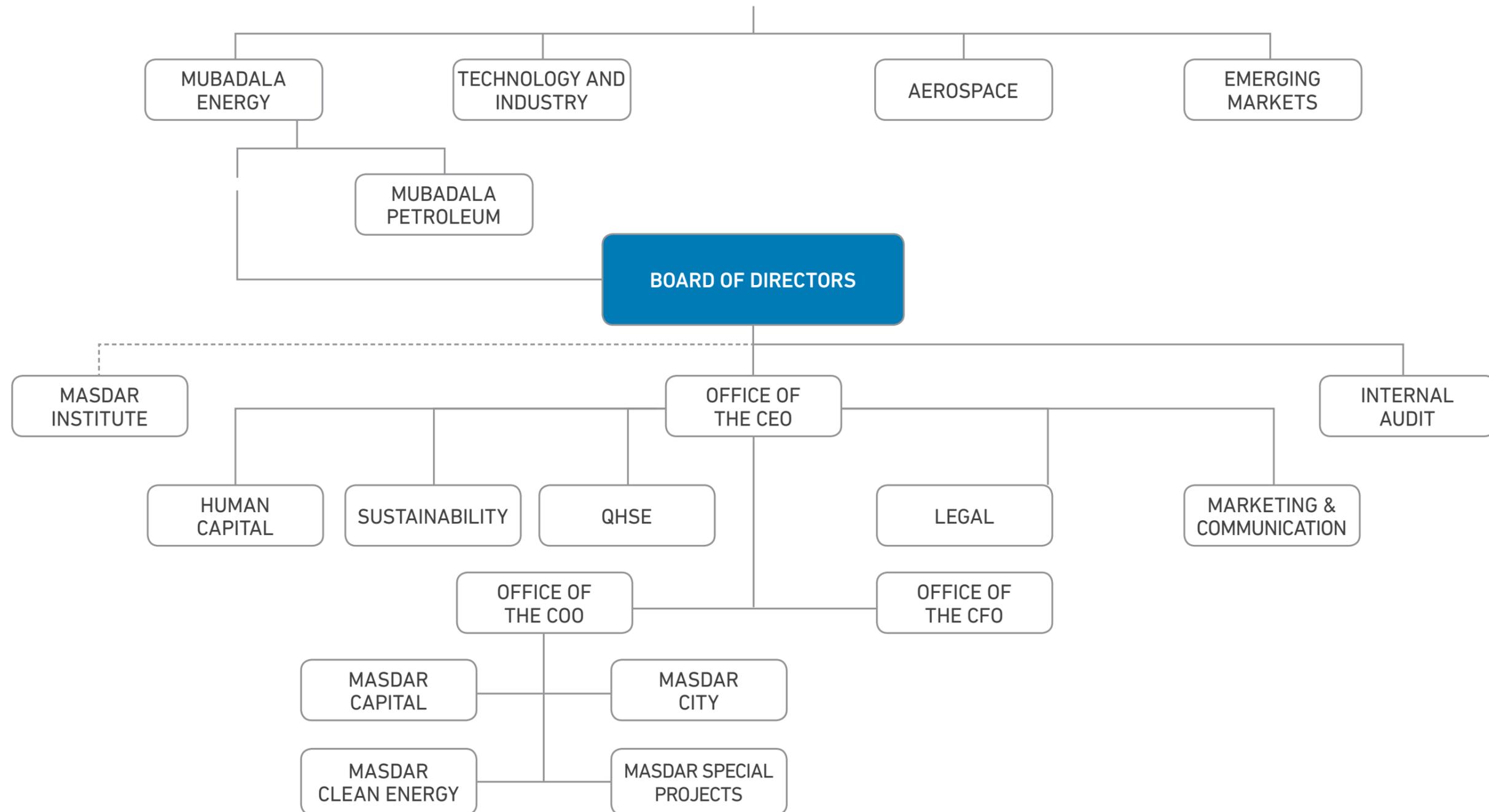
To make Abu Dhabi the preeminent source of renewable energy knowledge, development and implementation, and the world's benchmark for sustainable development.

## Masdar Mission

To advance renewable energy and sustainable technologies through education, research and development, investment, commercialisation and adoption.



# Masdar Organisational Chart



# Our Framework for Sustainability Best Practice

Masdar has maintained the same sustainability methodology outlined in the previous annual reports. In this way, we are enabling us to assess the development of key focus areas outlined through our sustainability reporting framework. This enables us to achieve continuity in our methodology of addressing, monitoring and managing our sustainability performance.

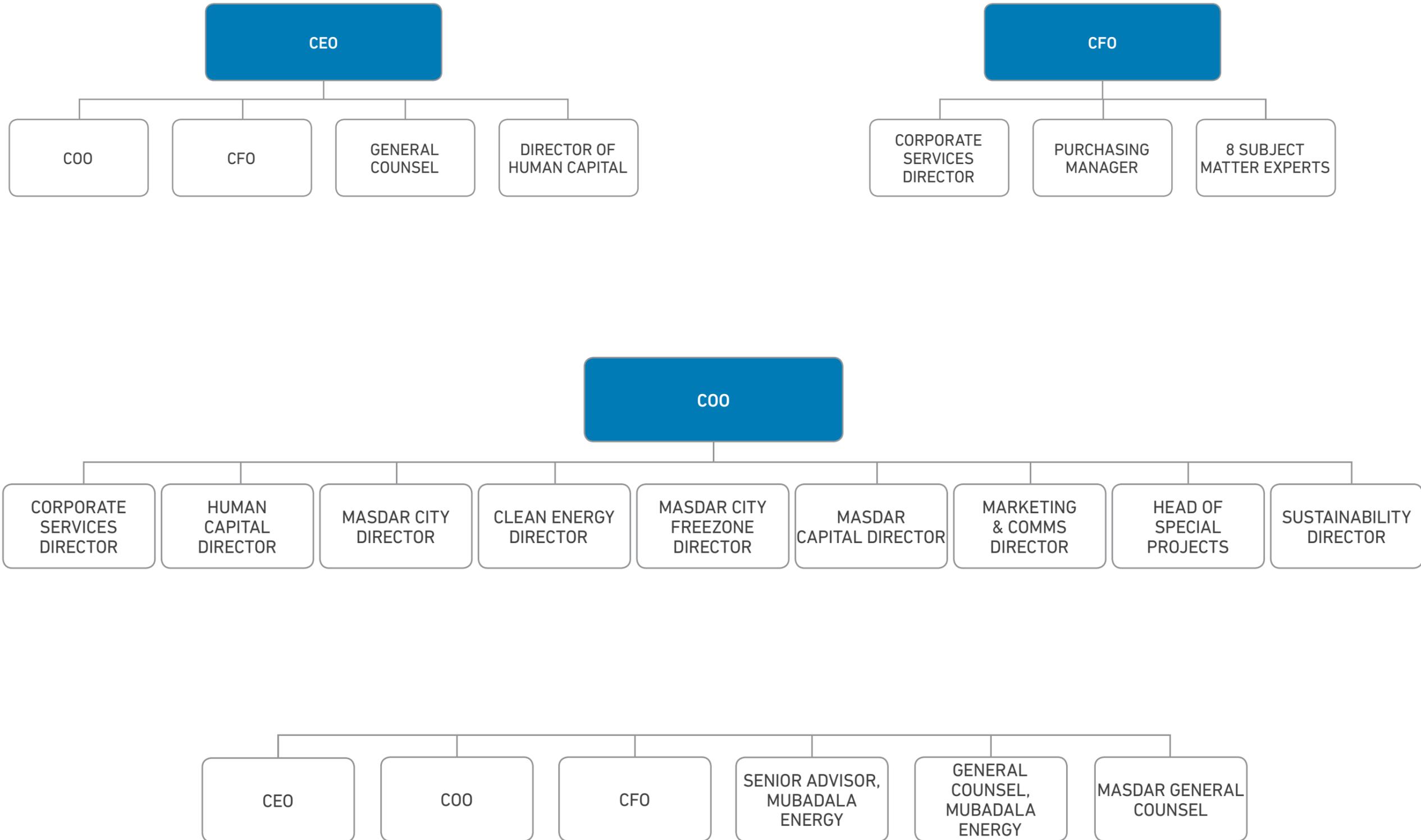
## Our sustainability policy was developed to drive sustainability excellence in the organisation through these principles:

- Drive innovation and operational efficiency
- Foster the growth and well-being of our people
- Engage and respond to stakeholder expectations
- Invest in communities and people that support our business
- Act as a responsible corporate citizen



# Corporate Governance at Masdar

In order to foster proper governance and to meet the expectations of our stakeholders, Masdar relies on a number of committees. Each committee is tasked with addressing specific areas of our business operations, ranging from the company's sustainability efforts to ensuring the integrity of our governance framework.



# Organisational Culture

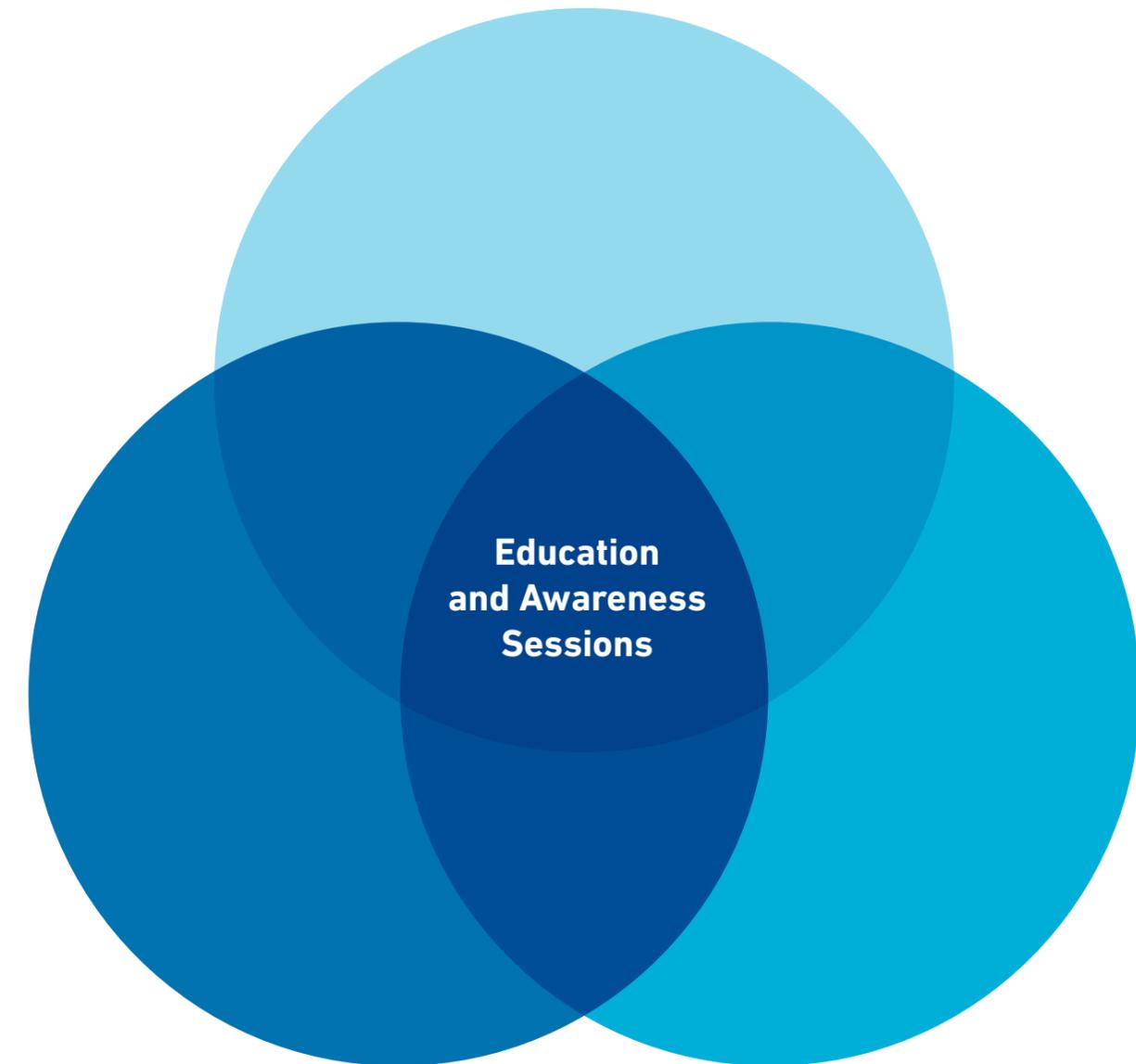


# Mubadala Code of Conduct

Mubadala has set forth within their world class business structure, a robust set of guiding principles of how each employee should behave. These guidelines are clearly communicated through the corporate code of conduct. Masdar has adopted the Mubadala code of conduct to ensure the company operates in a respectful and responsible manner that satisfies all stakeholder requirements through these themes:

- ▶ **CONDUCTING BUSINESS**
- ▶ **WORKING WITH STAKEHOLDERS**
- ▶ **PROTECTING OUR COMPANY**
- ▶ **WORKING TOGETHER**
- ▶ **SUPPORTING OUR COMMUNITIES**

For Mubadala's complete code of conduct,



# Risk Management

## Internal Audit

The Internal Audit assists the company in accomplishing its objectives by bringing a systematic, disciplined approach to evaluate risks to ensure:

- Risks are appropriately identified and managed.
- Interaction with the various governance groups occurs as needed.
- Significant financial, managerial and operating information is accurate, reliable and timely.
- Employees' actions are in compliance with policies, standards, procedures, code of ethics and applicable laws and regulations.
- Resources are acquired economically, used efficiently and adequately protected.
- Programmes, plans and objectives are achieved.
- Quality and continuous improvement are fostered in Masdar's control process.
- Significant legislative or regulatory issues impacting Masdar are complied with and addressed appropriately.
- Opportunities for improving management control, output and Masdar's image.

## Portfolio Risk Management

In pursuing new investments, Masdar is responsible for generating returns on investments and managing risks by considering risk adjusted returns. This strategy involves breaking risk categories into their smallest components and examining their effects on our investment portfolios. This done through a software called Active Risk Manager which is used by all business units.

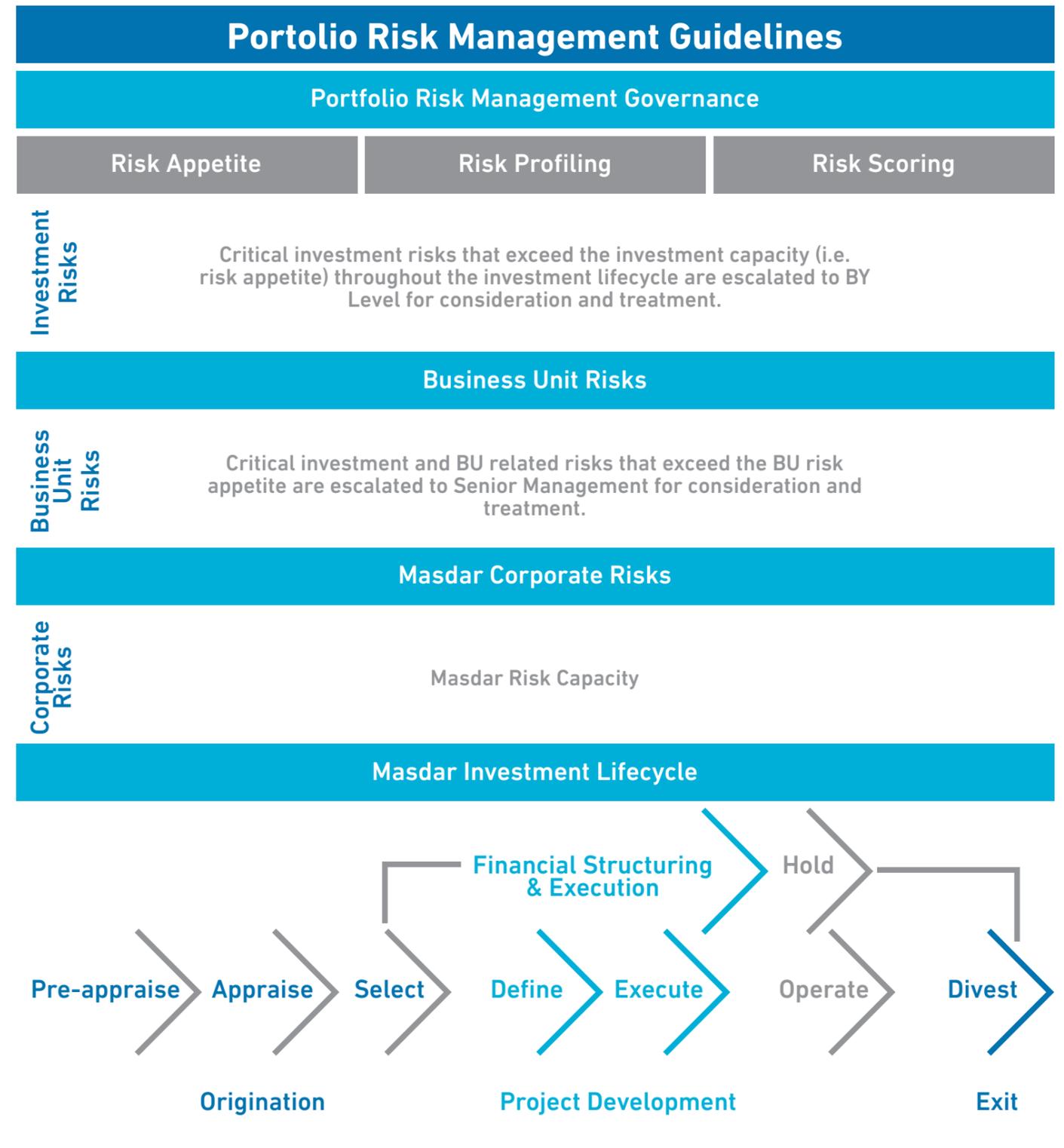


Figure 1 – Masdar's Portfolio Risk Management Framework

# Stakeholder Engagement:





# Our Approach to Stakeholder Engagement

## Our Approach to Stakeholder Engagement

For Masdar, a stakeholder is a person, group or organisation that has a direct or indirect stake in an organisation because of how they can affect or be affected by the organisation's actions, objectives and policies.

This section addresses how we interact with key stakeholders to address their wants, needs and concerns regarding Masdar's business functions.

# Stakeholder Mapping

## Process of Mapping Stakeholders

Masdar uses Stakeholder Engagement Mapping for knowledge exchange, to guide, shape, and influence meaningful stakeholder engagement practices to attain long term commercial development.

### ANALYZE STAKEHOLDERS

- Enables management to broaden the vision beyond commercial contract obligations to assess expectations, interests and claims.
- Agility to address changing stakeholder needs, interests, power and influence
- Provides valuable insights on how to progress in the relationship

### GAIN STRATEGIC INSIGHTS

- Identify hidden interests
- Provide analytical mechanisms to address troublesome or inert relationships
- Identify risks that may occur due to changing circumstances
- Collaborative knowledge management to keep all team members informed
- Negotiation / coalition building tactics are enhanced

### INCREASE RETURN ON INVESTMENT

- Increased percentage of commercial considerations
- Increased number of positive referrals for project opportunities
- Time spend on opportunity discussions
- Time spent on issue discussion
- Measure number of stakeholder touch points
- Stakeholder feedback satisfaction values

### INCREASE VALUE OPPORTUNITY

- Stakeholder to our strategy and business plans reduces risks
- A different viewpoint increases knowledge creation to second value commercial activity.
- Enables long-term thinking and structure to manage current and future relationships
- Identifies gaps in our relationships and seek ideal/target stakeholders

# Stakeholder Groups

**Masdar has redefined its Stakeholders into 3 groups:**

Commercial Stakeholders, Relational Stakeholders and Internal Stakeholders. Below showcases the revised stakeholder groups and descriptions:

Masdar Rating Scale		
PARTNER	STRATEGIC	Entity with a commercial contract attached to a project / project finance alignment.
	KEY	Entity with an MOU agreement to develop key relationships, resources or project development.
TENANT	STRATEGIC	Anchor tenant that advances the Masdar City technology, cluster, or incubator agendas.
	BASIC	Entity with a lease agreement.
INTEREST PARTY / INDIVIDUAL	STRATEGIC	Entity or individual of interest that falls within the strategy or business plan scope or advances brand or footprint.
	BASIC	Entity or individual with an undefined scope for business alignment.



# Stakeholder Engagement

For Masdar, a stakeholder is a person, group or organisation that has a direct or indirect stake in an organisation because of how they can affect or be affected by the organisation's actions, objectives and policies.

This report highlights the type and frequency of engagement at every level of the organization, which was developed in the revised stakeholder engagement exercise of 2014. This section addresses how we interact with key stakeholders to address their wants, needs and concerns regarding Masdar's business functions.

10845 people toured Masdar City in the reporting period

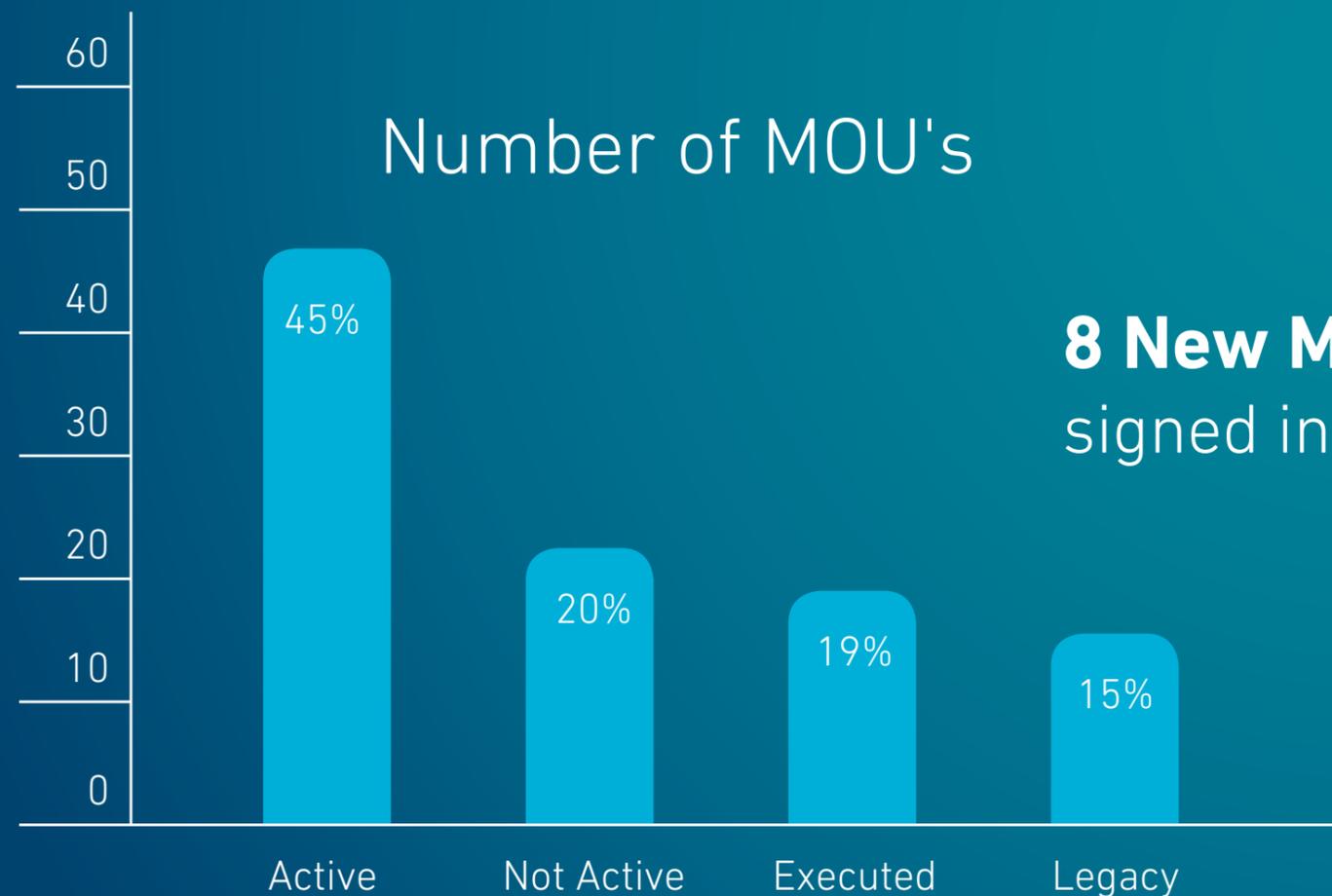
STAKEHOLDER ENGAGEMENT MATRIX									
STAKEHOLDER CATEGORIES		C LEVEL	HEAD	MANAGER	BU DIRECTOR	HEAD	MCC/CR	ADSW	
PARTNER	Strategic	Bi Annual Key Meetings Travel to host 1 X year	MI Tour Working groups Monthly meetings	CRM tracking Progress Reports Annual Survey	Bi Annual	MI Tour Bi Annual Working Group		YES	
	Key	Bi Annual Meeting	Monthly meeting Progress reports	CRM tracking / campaigns Sttend meetings Annual Survey		Progress Reports	MI Tour	YES	
TENANT	Strategic	When required	Business Development monthly MOU progress reports	Attend meetings	Bi Annual	CRM Monthly meeting		YES	
	Core					Audits / Surveys Tenant Activities		NO	
Service Provider / Vendor						Bi Annual Meeting Audit / Surveys		YES	
Customer						Audits Surveys		YES	
Financial Institution		CFO – Quarterly						YES	
Academic Institution						Social Media Newsletters	MI Tour	NO	
Regulatory Government			Enabling Meetings Service / budget reviews	Progress Meetings CRM Activities			MI Tour	YES	
NGO							MI Tour	NO	
Local Community						Social Media Newsletters	MI Tour	NO	
INTEREST PARTY	Strategic	Corporate Overview (20 min)	Presentation / Masdar Experience Tours Conferences / panels	Progress Meetings CRM Activities	Meetings	Presentation / Masdar Experience Tours	MI Tour	YES	
	Employees			CRM Activities			Corporate PPT / MI Tour	NO	

MAIN	CATEGORY	STAKEHOLDER ENGAGEMENT AND IMPACT MATRIX			
MASDAR STAKEHOLDER		HOW MASDAR ENGAGES	MATERIAL ISSUES RAISED DURING ENGAGEMENT	RESPONSE TO MATERIAL ISSUES	
COMMERCIAL STAKEHOLDER	Partner	Working groups Monthly progress reports Conferences/panels MOUs	C Level meetings Assigned Bu Focal Point Stakeholder Engagement activities CRM activities	Adherence to International Standards Demonstration of Ethical Policies Showcase Best Practices	Governance Economic development Performance
	Tenant	Helpline Engagement events Audits Surveys	Email campaigns (CRM) Newsletters Social Media Tenant Forums / Meetings	Access to business State of the art facilities Networking opportunities Performance data	Economic development Products and Services Reporting and Communication
	Customer	Social Media Newsletters Local activities	Business development activities Conferences / panels Website / Press releases	Policies Showcase best practices Supply chain practices Performance	Products and services Community involvement Economic Development
	Service Provider/Vendor	Progress meetings Service / budget reviews	Customer service feedback surveys Audits	Supply Chain Management Policies Recognition of performance	Performance management Supply Chain
RELATIONAL STAKEHOLDER	Financial Institution	Progress meetings Service / budget reviews	Customer service feedback surveys Audits	Policies Portfolio Progression	Tools and Systems Culture
	Academic Institution	MOUs Conference / panels	Social media CRM activities	Advancement of industry issues Best Practices Performance data	Products and Services Community Involvement
	Regulatory / Government Body	MOUs Conferences / panels Progress reports	C Level meetings Business development Working groups	Compliance efforts Continuous disclosure Lessons learned Credibility of performance data	Reporting and Communications Economic development Product and Services
	Non Government Organization (NGO)	Congerences / panels Social media	Newsletter Reports	Targets and commitments Follow up on past commitments Community programs	Environment Stakeholder engagement
	Local Community	Social media Engagement events	Masdar City tours Newsletters	Environmental and Social Impacts Benefits of amenities Performance data	Community involvement Reporting and Communications
	Interest Party / Individual	Social media Engagement events	Social media Website	Practices Performance data Best Practices	Environment awareness Stakeholder engagement
INTERNAL STAKEHOLDER	Shareholder(s)	Progress meetings C Level and BoD meetings Annual reports	Engagement events Working groups Talent mobility	Portfolio Progress Social impacts Emiratization Demonstrating best practices	Economic Development Governance Performance
	Employees	Progress meetings Engagement events	Surveys Intranet / Emails	Job Security Career development Recognition of work Portfolio Progress	Performance management Stakeholder engagement

# MASDAR MOU's

The development of a Memorandum of Understanding (MOU) is one of the ways Masdar engages with its stakeholders. As of September 2015, there were 118 MOUs, categorized into four classifications:

- **Active:** MOUs that have an ongoing relationship with a manager assigned to the relationship
- **Executed:** MOUs with a binding agreement that has been executed and signed
- **Not Active:** MOU that is no longer active
- ↳ **Legacy MOU:** A Mubadala signed contract



**8 New MOU's**  
signed in 2015

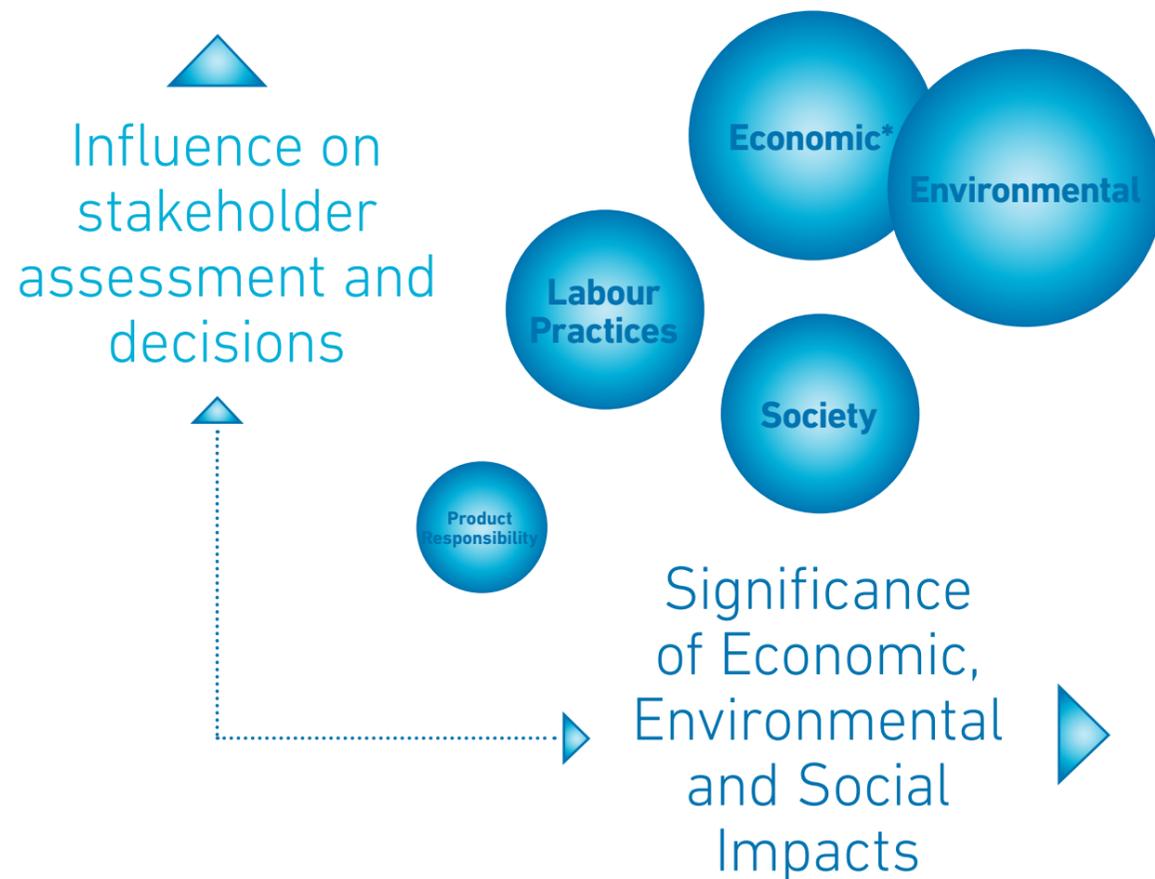
# Stakeholder Engagement

## Stakeholder Engagement Activities



# Masdar GRI G4 Materiality Analysis

As part of the GRI G4 guidelines, Masdar has developed the below table to indicate the general and specific standard disclosure indicators that have particular relevance to Masdar's defined stakeholders. The table also gives the reader of this report an indication of the boundaries set for each material indicator.



\* Economic aspects are material to Masdar however parameters for reporting on financial performance are limited by the Shareholder

MASDAR SUSTAINABILITY REPORTING FRAMEWORK	KEY STAKEHOLDERS	RELEVANT GRI G4 ASPECTS
<b>Governance</b>	Partners – Regulatory /Government bodies	Investment
<b>Culture</b>	Customers – Service Provider/Vendor – Employees – Academic Institutions	Environmental Grievance Mechanisms Labour Practices Grievance Mechanisms Human Rights Grievance Mechanisms Grievance Mechanisms for Impacts on Society Ethics and Integrity
<b>Stakeholder Engagement</b>	n/a	<b>General Standard Disclosure</b>
<b>Performance Management</b>	Partners – Regulatory/Government bodies – Shareholders – Non-governmental Organisations (NGO's) – Academic Institutions	Compliance
<b>Tool and Systems</b>	– Non-governmental organisations (NGO's)	Labour/Management Relations
<b>Reporting and Communication</b>	– Tenants – Local community	<b>General Standard Disclosure</b>
<b>Environment</b>	– Partners – Regulatory/Government bodies – Customers – Employees – Service Provider/Vendor – Non-governmental organizations (NGO's) – Local community – Academic Institutions	Energy Water Emissions Effluents and Waste Transport Local Communities
<b>Workforce</b>	Employees – Shareholders – Local community	Employment Occupational Health and Safety Training and Education Diversity and Equal Opportunity
<b>Community Involvement</b>	Shareholders – Employees – Tenants – Local community	<b>General Standard Disclosure</b>
<b>Economic Development</b>	Tenants – Local community – Shareholders – Service Provider/Vendor	Economic Performance Market Presence Indirect Economic Impacts
<b>Product &amp; Services</b>	– Partners – Tenants – Customers – Employees	<b>General Standard Disclosure</b>
<b>Supply Chain</b>	– Partners – Customers – Service Provider/Vendor – Shareholders - Non-governmental organisations (NGO's) – Academic Institutions	Procurement Practices Materials Supplier Environmental Assessment Supplier Assessment for Labour Practices Child Labour Forced or Compulsory Labour Assessment Supplier Assessment for Human Rights



# Performance Management:



# The Value of Performance Management

## Objectives

Masdar sets operational objectives as a vehicle to define the expected corporate, business unit and individual outcomes to achieve the overall business plan. Incorporating sustainability into the development of annual objectives is a critical step in the integration of sustainability into how Masdar is run.

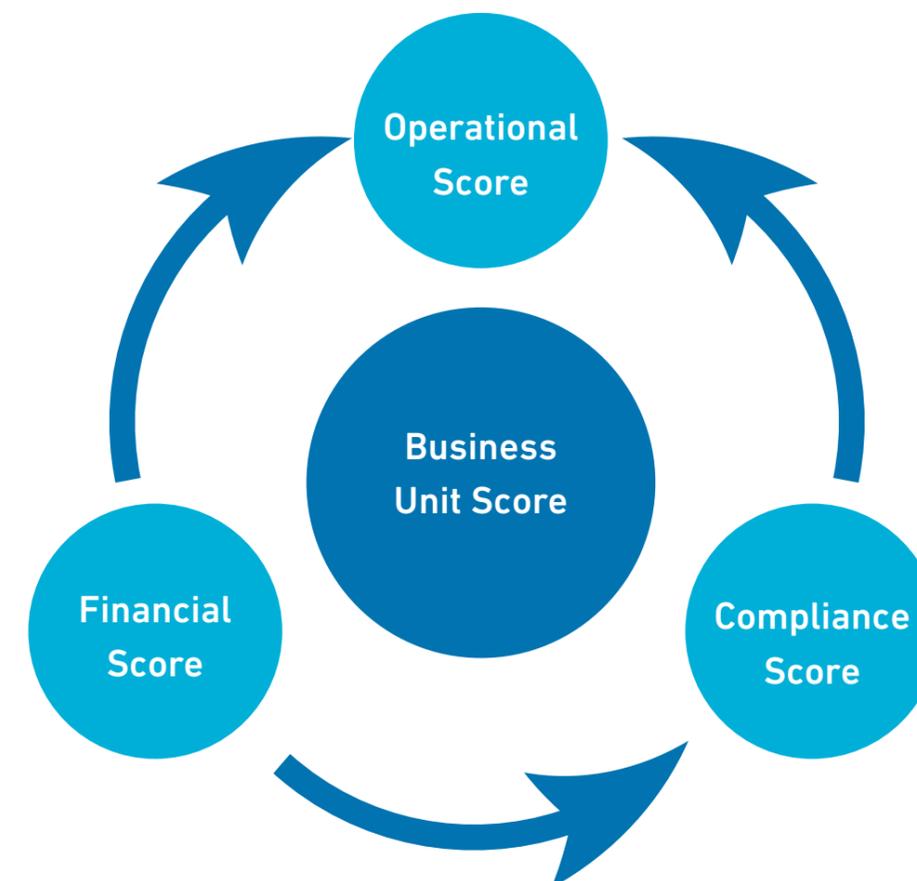
## Key Performance Indicators (KPIs)

Masdar acknowledges that sustainability performance leadership begins with a selection of strategic KPIs that enables the organisation to focus on important issues. The defined KPIs are the measurable pieces of information or data used to track performance against Masdar's high-level sustainability goals and desired outcomes Communicated to our stakeholders.

## Performance Management Reporting:

Masdars targets are managed through a Performance Management reporting scheme to continually monitor and provide updates for targets set by each Masdar unit. These targets are set at the beginning of the year through a scorecard system. The system makes it possible to assign scores to all units which show actual performance against the units' planned annual targets.

The compliance score is set at 10% of the overall Business unit score however the weighting of operational and financial scores varies with each business unit and support unit.



# Employee Performance Management at Masdar

For Masdar, performance management is the process of measuring the organisation's sustainability performance against its stated objectives.

The employee performance management system is the basis of Masdar's results-orientated performance-driven culture. The purpose of performance management is to:

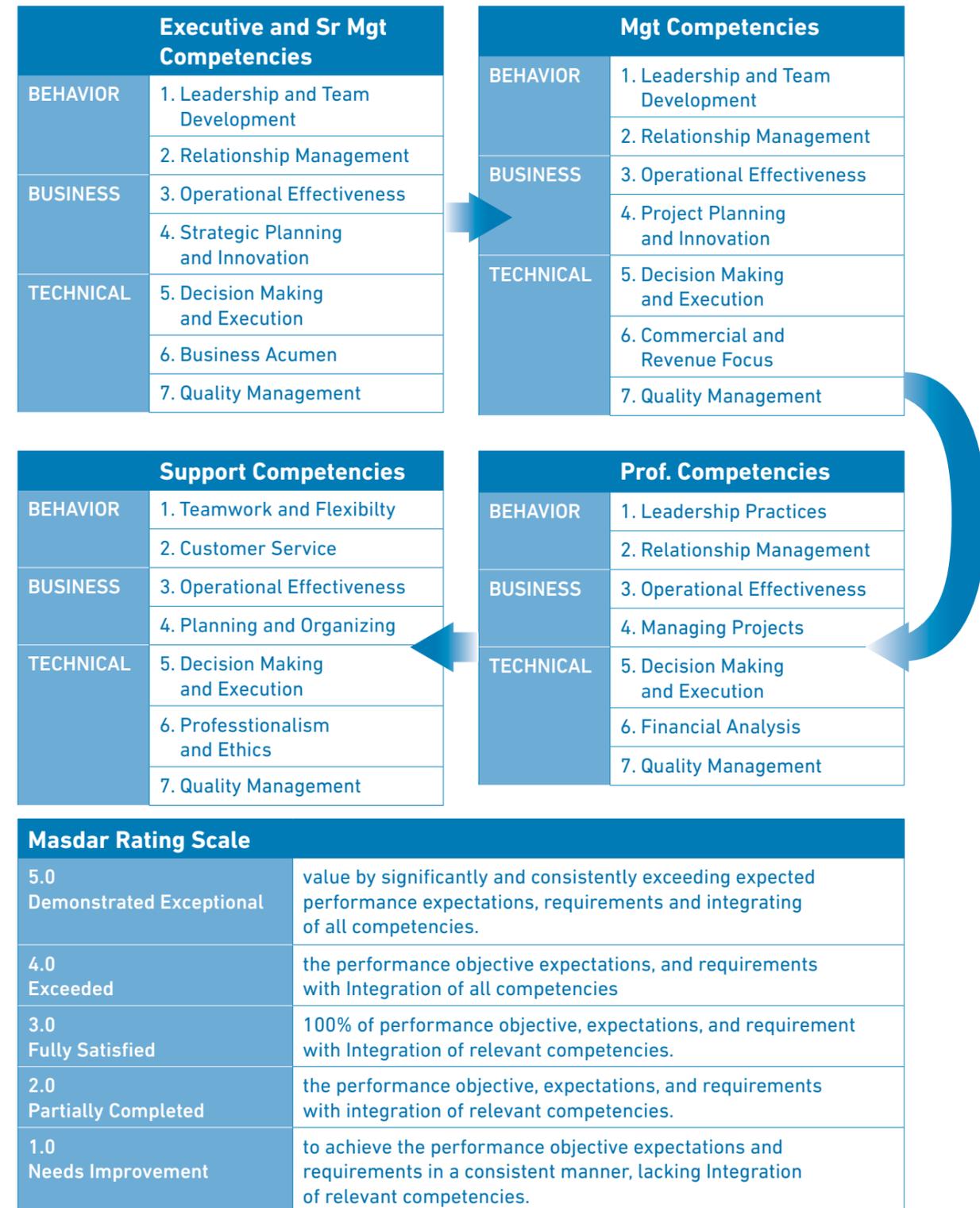
- Align employee goals with Masdar's business objectives and strategic plans.
- Use objective and quantifiable measurements when planning or evaluating employee performance.
- Monitor and provide feedback to employees on their performance during the performance cycle.
- Improve employee performance through structured development activities.
- Sustain the link between employee performance, career progression and reward.

The employee performance management system is comprised of two main functions:

- Setting organisational and employee objectives on a bi-annual basis.
- Setting a competency framework to be used for defining acceptable corporate behaviour.



Masdar's Employee Performance Cycle



# QHSE Performance Management

Masdar's QHSE team does its utmost to meet the company's established strategic goals by supporting Masdar in the implementation of QHSE policies.

## The department is responsible for:

- Initiating, developing and reviewing the required QHSE codes of practice and guidelines for implementation by Masdar;
- Analysing and monitoring QHSE performance of all departments and reporting findings to management and other concerned parties;
- Organising and conducting audits to ensure all departments comply with QHSE legislation, requirements and corporate expectations;
- Keeping abreast of the latest relevant QHSE developments and advising departments and contractors on QHSE issues;
- Providing Health, Safety and Environment (HSE) advice and assistance to ensure HSE requirements are being considered in all company projects;
- Maintaining professional relationships on behalf of Masdar's business units with federal and Abu Dhabi authorities to ensure relevant QHSE legislation is applied by the company's business units.



# Construction Environmental Management Plan (CEMP) at Masdar City

The CEMP is a compliance document that is issued under every construction contract with companies working within Masdar City. CEMP compliance is verified through a set of regular internal and third-party audits and inspections. In addition, the Environment Agency-Abu Dhabi (EAD) carries out random visits to the construction site. The table below shows the results of the most recently updated CEMP conducted in 2015.

The following criteria are used to assess the performance of projects within Masdar City against the CEMP:

- Training & Induction Procedure
- Environmental Complaints Procedure
- Environmental Auditing & Inspection Procedure
- Air-Quality Control Procedure
- Noise Control Procedure
- Water Management Procedure
- Materials Management Procedure
- Waste Management Procedure
- Energy Management Procedure
- Environmental Incident Procedure
- Environmental Monitoring Procedure

**6 Minor**  
Non-conformances

**1 Major**  
Non-conformance  
in the reporting  
period

# Management Tools and Systems



# Management Systems

**In 2015, Masdar continued with its efforts to update all QHSE Integrated Management Systems.**

**The purpose of the update is to provide a framework to ensure that:**

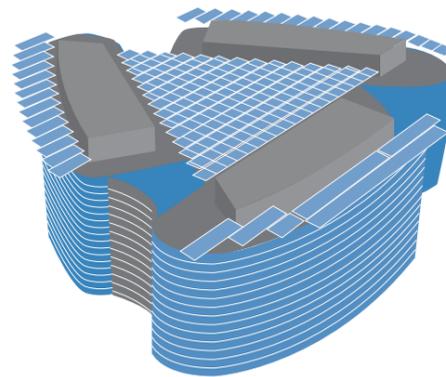
- Masdar's products and services are designed, delivered and operated to the highest quality standards, thereby meeting the expectations of customers, stakeholders and regulatory bodies.
- Masdar's activities are carried out in an environmentally responsible and protective manner, and continually meet the underlying environmental performance expectations of the Masdar initiative.
- Safe and healthy working conditions are assured to employees, contractors associated with Masdar's activities and visitors.
- QHSE requirements are considered throughout the project life cycle and during operations.
- Masdar's products, services, facilities and activities continue to meet regulatory requirements.
- The system provides dynamism for continuous improvement in all the aspects of QHSE with the flexibility to adapt to changing requirements.



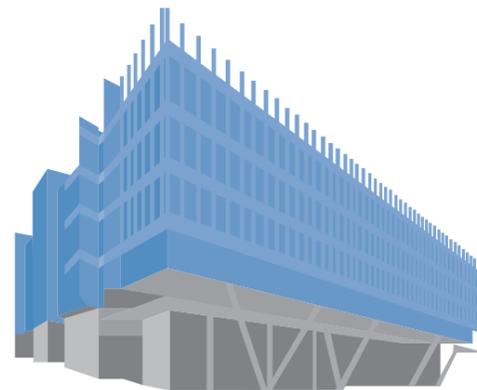
# Green Building Ratings Systems

Masdar City uses a number of green building rating systems to determine and verify the sustainability attributes of selected buildings. The Estidama Pearl rating system is a mandatory requirement for all new buildings designed and constructed in Abu Dhabi and is the green building rating system used in Masdar City.

**IRENA HQ**  
**ESTIDAMA 4 PEARL**



**SIEMENS BUILDING**  
**LEED PLATINUM**  
**ESTIDAMA 3 PEARL**



No.	Design Criteria	Mandatory Design Requirement	Reference Baseline / Remarks
1	Energy Consumption	<ul style="list-style-type: none"> <li>40% reduction from ASHRAE 90.1: 2007.</li> <li>Compliance with Masdar Energy Design Guidelines 3.0.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System – Improved Energy Performance.</li> </ul>
2	Renewable Energy Provision	<ul style="list-style-type: none"> <li>75% of hot water heated by solar energy.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System – Renewable Energy.</li> </ul>
3	Interior Water Use	<ul style="list-style-type: none"> <li>40% reduction of interior water demand.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System Water Calculator.</li> </ul>
4	Exterior Water Use For Landscaping	<ul style="list-style-type: none"> <li>Average landscape irrigation demand to be less than 2 litres/m<sup>2</sup>/day.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System Water Calculator.</li> </ul>
5	Construction Waste Management	<ul style="list-style-type: none"> <li>Not less than 70% of demolition and construction waste (by weight or volume) to be recycled or salvaged.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System – Improved Construction Waste Management.</li> </ul>
6	Operation Waste Management	<ul style="list-style-type: none"> <li>Not less than 60% of total operational waste (by weight or volume) to be diverted from landfills and incineration. This is reduced to 50% for Multi-Residential Buildings.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System – Improved Operational Waste Management.</li> </ul>
7	Embodied Carbon in Materials	<ul style="list-style-type: none"> <li>0% reduction in the overall construction for steel structured buildings.</li> <li>15% reduction in the overall construction for concrete structure buildings.</li> </ul>	<ul style="list-style-type: none"> <li>650Kg of CO<sub>2</sub>/m<sup>2</sup></li> </ul>
8	Sustainability Rating System	<ul style="list-style-type: none"> <li>Minimum 3 Pearl under Estidama Pearl Building Rating System.</li> <li>Minimum LEED Gold.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System.</li> <li>LEED Rating System.</li> </ul>
9	Building Performance Monitoring	<ul style="list-style-type: none"> <li>Design and implement monitoring strategy for major energy and water uses at building level and tenant level.</li> <li>All meters to be connected with Masdar's Central Monitoring System.</li> </ul>	<ul style="list-style-type: none"> <li>Estidama Pearl Building Rating System – Energy Monitoring and Reporting + Water Monitoring and Leak Detection.</li> <li>MEDG V3.0.</li> </ul>

# Utilised Softwares

Masdar has partnered with a number of providers of data collection and management tools that support the on-going capture, collection, tracking and analytics for the reporting of sustainability performance data.

## SoFi – Sustainability Management Tool

In the previous years Masdar had relied on SoFi solely as a carbon tracking tool. Now Masdar is working closely with PE International (SoFi developers) to develop and implement a company wide sustainability management solution consisting of 4 modules: Energy Management, HSE, Carbon Management and Sustainability Reporting.

## SafeQ – Print Management Tool

SafeQ delivers comprehensive management and administrative control of all printing, copying and scanning operations. It provides high levels of security for all documents, cost savings, conservation of environmental resources, and greater convenience for Masdar users.

## CAFM – Computer Aided Facilities Management Tool

This tool offers a single, holistic view of all facilities and maintenance activities, and tracks every location, asset and person. It can analyse the processes, costs and efforts required for optimal operations, and can help understand the impact of acquisitions, utilisation, maintenance, improvements, service provision and expenditures.

## EDMS – Enterprise-Wide Document Management System

EDMS is critical to helping any organisation manage its key asset by enabling knowledge and document management. This is central to sustaining growth and also to protecting the organisation by facilitating document retrieval and referencing.

## Oracle Fusion – Talent Management Tool

Oracle Fusion Talent Management Base's graphical organizational chart provides an integrated view of all information related to an employee with an extremely user-friendly interface.

## PDMS – Masdar Program Development Management System

The MASDAR Program Development Management System (PDMS) is our enterprise standard platform of processes, guidance and tools to be used to effectively – and consistently – manage development.

## Tejari

The Masdar e-Procurement Portal provides a suite of collaborative, web-based tools that enable Masdar's procurement professionals and suppliers to conduct sourcing and contract management activities.

## ESRI ArcGIS – Geographic Information System

Masdar uses ArcGIS for: creating and using maps; compiling geographic data, analyzing mapped information, sharing and discovering geographic information and managing geographic information in a database.

# Reporting and Communications



# Our Approach to Reporting & Communications

Masdar's reporting and communications are essential in ensuring that adequate information is made available to its stakeholders. This information is important in helping them to assess whether their material issues and concerns are being addressed and also to understand the progress that Masdar and its affiliates are making in the many activities relevant to them. During the reporting year, Masdar continued to act as a change agent across its various communication platforms, not only by discussing its activities and operations, but also by raising awareness to its stakeholders of the importance of sustainability. These included various platforms for both internal and external communications:

## Internal:

- Masdar Times
- The Source

## External:

- Press Releases
- Forums and Meetings
- Press conferences
- Op-eds
- Interviews

# External Reporting:

## CDP

Carbon Disclosure Project

## SCAD

Statistics Center Abu Dhabi

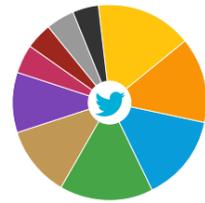
## EHSMS

Environmental Health and Safety Management System Reporting

# Social Media

In the reporting period, Masdar, Masdar Institute and the Zayed Future Energy Prize all had tremendous success with spreading their messages through social media and attracting growth in followers across key platforms. Masdar recognizes the importance of social media to communications and uses these mediums to spread knowledge and information about our activities.

## @ Users most mentioned

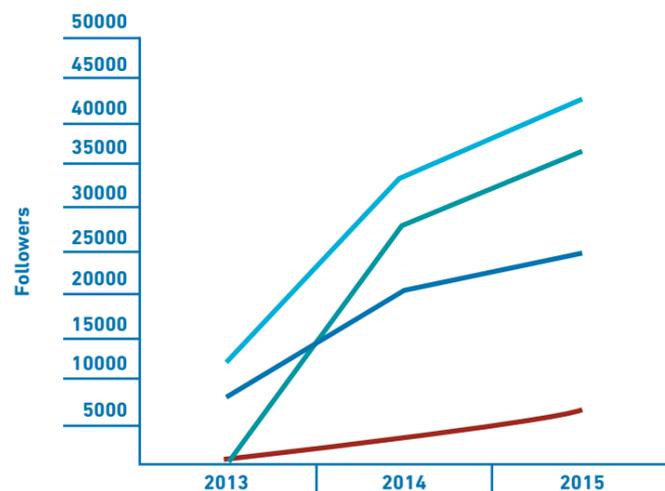


52	#solarpulse	47	@irena
36	@zfep	55	@masdarinst
32	@thenationaluae	30	@cleantechnica
13	@hasanrtw	12	@guardianeco
11	@energy	10	@business

## # Hashtags most used



79	#solar	61	#energy
56	#masdarcity	55	#أوظبي
54	#susty	54	#مدينةمصدر
53	#uae	51	#مصدر
51	#renewables	45	#abudhabi

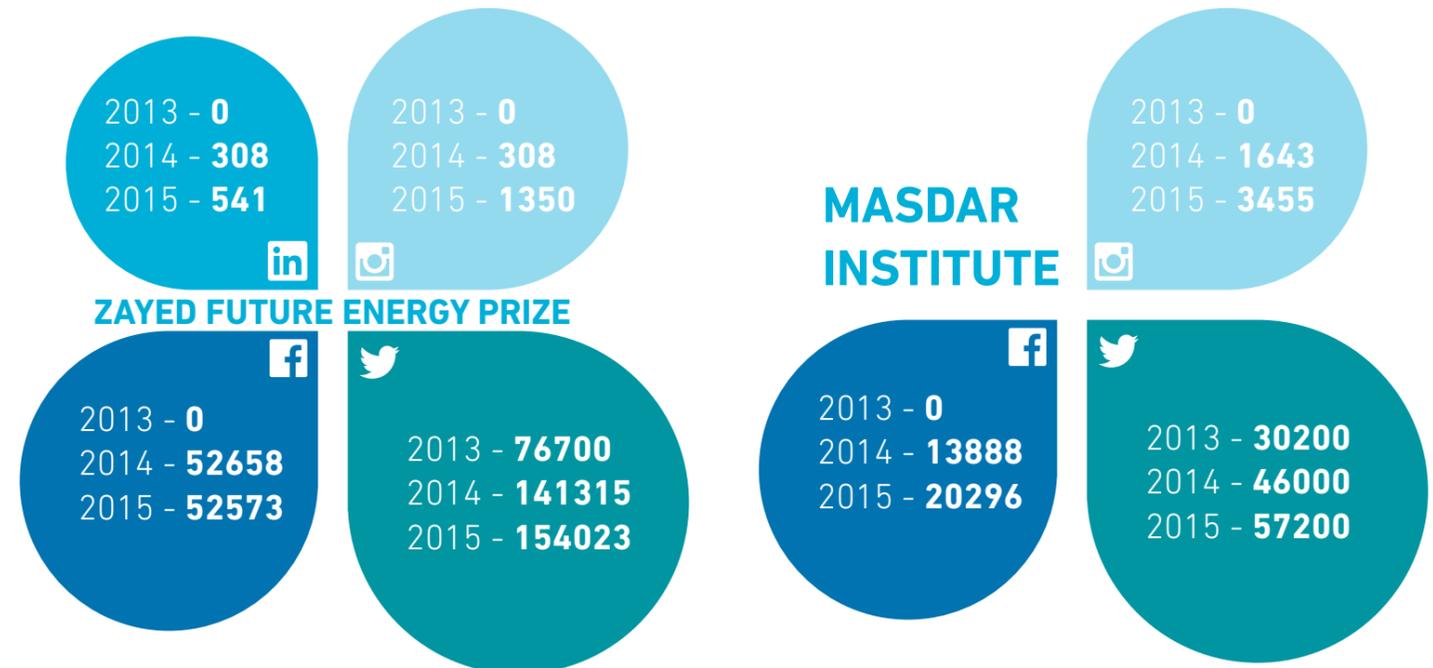
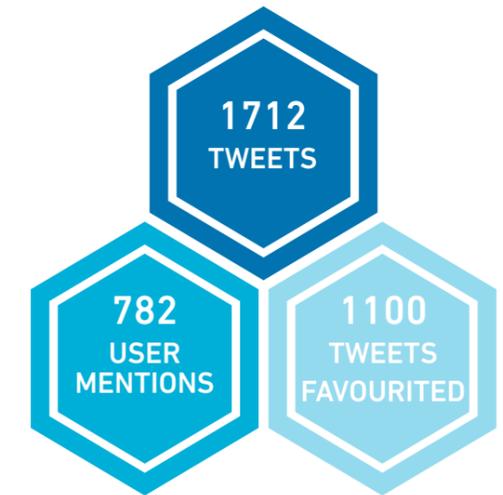


- Likes
- Followers
- Followers
- Followers

## Top Tweets



2015





# Workforce



# OVERVIEW OF WORKFORCE

Masdar remains committed to creating and maintaining a workforce that is well equipped to not only meet but exceed the expectations set out in the organization's objectives and business plans. Diversity is a key component to delivering innovation and excellence while upholding the commitment to continuously develop local talent.

## TOTAL MASDAR EMPLOYEES BY GENDER (%)

For Masdar, a balanced gender ratio is seen as a key indicator of the progress of providing opportunities and significant roles and responsibilities to women within the organisation. During the reporting period, 10% senior management and executive positions were held by women. Additionally, Masdar's head count reflects that one third of all employees in the reporting period were women.

	MASDAR		MASDAR INSTITUTE		SHAMS	
	Male	Female	Male	Female	Male	Female
Support and Professional Level	25.62%	26.11%	40.58%	26.09%	83.18%	4.67%
Management level	28.57%	5.42%	16.43%	9.66%	9.35%	0.00%
Senior Management and Executives	12.32%	1.97%	4.35%	2.90%	2.80%	0.00%

## TOTAL MASDAR EMPLOYEES BY AGE GROUP (%)

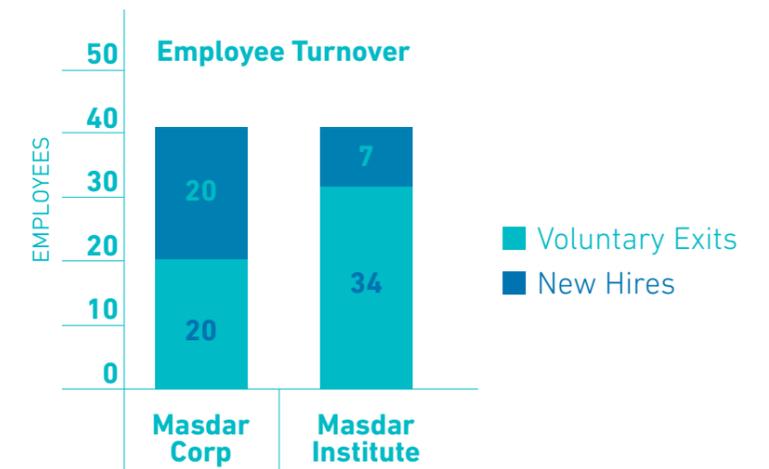
Within the renewable energy sector, it is important for the workforce to include a blend of seasoned staff with extensive experience and younger team members eager to learn and able to bring new ideas to projects. The need to develop talent, whilst remaining grounded through an experienced set of core personnel, is a key mandate within Masdar and the Mubadala Group.

	MASDAR			MASDAR INSTITUTE			SHAMS		
	Under 30	30-50	51 and above	Under 30	30-50	51 and above	Under 30	30-50	51 and above
Support and Professional Level	14.29%	35.96%	1.48%	50.72%	14.98%	0.97%	15.30%	51.80%	21.90%
Management level	0.99%	28.08%	4.93%	5.80%	20.29%	0.00%	0.70%	8.00%	0.00%
Senior Management and Executives	0.00%	11.82%	2.46%	0.97%	5.31%	0.97%	0.00%	1.50%	0.70%



## Turnover Rates

Masdar continues to maintain a similar turnover rate as 2014, while Masdar Institute continues to hire more new employees mainly due to the growth of the Institute. SHAMS had no new hires or voluntary exits during the reporting period.



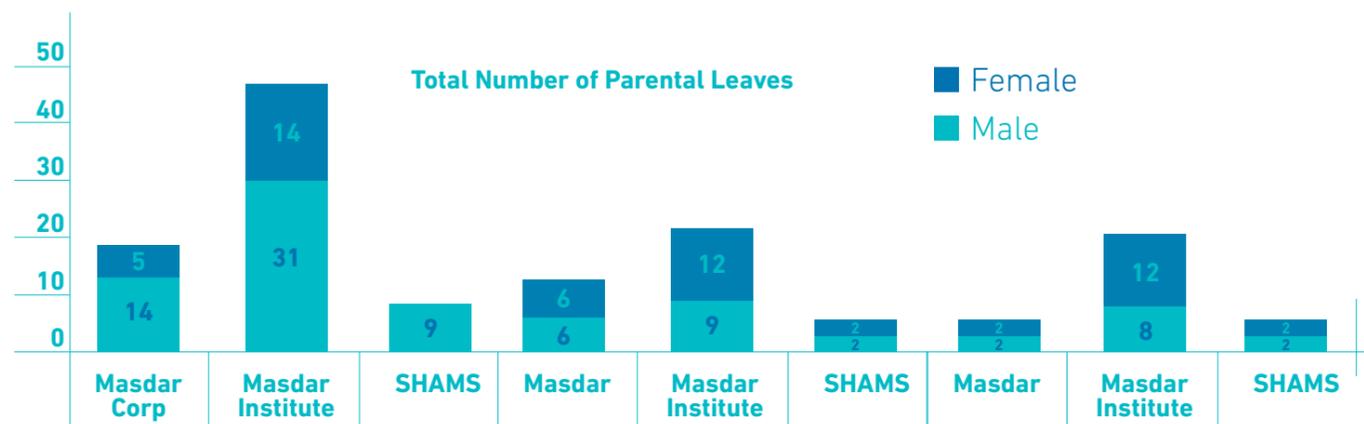
## Masdar Employee Origin

Masdar recognises the need to assemble an expert workforce from all parts of the globe in order to address and tackle today's energy and climate change challenges. Our employees' national origins can be seen on the right.

Total Masdar Employees by Origin:	Masdar	Masdar Institute	SHAMS
Middle East	54%	42.03%	19%
Europe	17%	10.14%	10%
Australasia	2%	0.97%	0%
Asia	15%	22.22%	65%
Africa	6%	3.86%	5%
The Americas	8%	24.64%	1%

# Masdar Benefits Plan Per Employee Type

The compensation and benefits structure at Masdar is designed to attract, motivate and retain employees who will help Masdar implement its strategies and achieve its objectives. Its policy is to pay fair, equitable and competitive salaries to employees. The below graphics outline employee benefits of Masdar, Masdar Institute and SHAMS Power Company.



## Full Time Employee Benefits:

- Salary
- Parental Leave
- Annual Leave
- Health Insurance
- Life Insurance
- Child Education Assistance
- Housing Allowance
- Furniture Allowance
- Vacation Travel Allowance
- Repatriation tickets for expats
- Visa/medical expenses for employee, spouse and children
- Tuition Fees

## Internship Benefits:

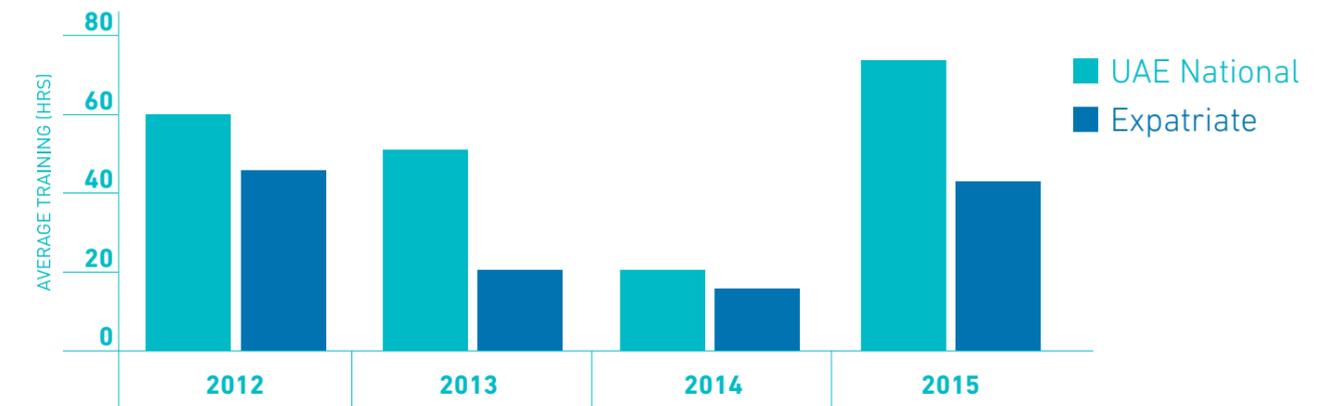
- Internship Salary for UAE Nationals only

## Temporary Employee Benefits:

- Salary
- Annual Leave
- Health Insurance
- Repatriation ticket
- Visa/medical expenses for employee only

# Training and Educational Programmes

A key strategy for delivering on the objectives outlined in Masdar's business plans is to ensure that all personnel are equipped for their roles, through training and education programmes. This reporting period saw a drastic increase in training of both UAE and expat employees from 16.4 hours per employee to 59 hours per employee. This was mainly due to the introduction of a new system on the Masdar intranet aimed at allowing employees to apply for various training programs as well as the large effort by the Human Capital team to identify and nominate individuals according to their specific career paths.



MASDAR TRAINING PROGRAMMES – OVERVIEW			
	In-House	Online	External
Masdar Corporate	<ol style="list-style-type: none"> <li>Project Management</li> <li>Finance</li> <li>Leadership</li> <li>Decision Making</li> </ol>	<ol style="list-style-type: none"> <li>Project Management (8 Modules)</li> <li>Finance for Non-Finance Professionals (6 Modules)</li> <li>Business English Writing (3 Modules)</li> <li>Mentoring (2 Modules)</li> </ol>	All areas of technical training: <ol style="list-style-type: none"> <li>ICT</li> <li>Energy</li> <li>Project Management</li> <li>Human Resources</li> <li>Marketing, Strategy</li> <li>Academic Training</li> <li>Executive Training</li> </ol>
Masdar Institute	<ol style="list-style-type: none"> <li>Emotional Intelligence</li> <li>PMP Preparation</li> <li>Highly Productive and Effective Administrator</li> </ol>	<ol style="list-style-type: none"> <li>Green Business Strategies (3 Modules)</li> <li>Introduction to Sustainability (1 Module)</li> </ol>	<ol style="list-style-type: none"> <li>Effective Brand Management</li> <li>Management Development Course</li> <li>Certified Brand Manager</li> <li>CIPD HR Practice</li> <li>Foundations of Leadership</li> <li>Category Management and Sourcing</li> <li>Problem Solving and Communication</li> <li>Building a University Brand</li> </ol>
Shams Power Co.	Specific Technical Training	–	Specific Technical Training

# Occupational Health and Safety Management

Masdar recognises its responsibility to provide a safe working environment, not only in the corporate setting but also across its projects. Masdar ensures that employees are well-educated in the procedures for issues related to health and safety through the use of fire drills, employee first aid and fire warden training throughout the organisation. During the reporting period, no lost time injuries were recorded throughout the company's activities. This is mainly due to the completion of various projects before and during the reporting period.

NUMBER OF LOST TIME INJURIES		
2013 (Actual)	2014 (Actual)	2015 (Actual)
<b>3</b>	<b>1</b>	<b>0</b>

## Proactive Health and Safety Initiatives at Masdar City

In an effort to manage the health and safety risks associated with construction activities, the health and safety team at Masdar carefully monitors the numbers of incidents as shown above and uses proactive measures to maximise the safety of the Masdar City construction workforce at all times.

### These proactive measures include:

#### Health and Safety Inspections and Audits:

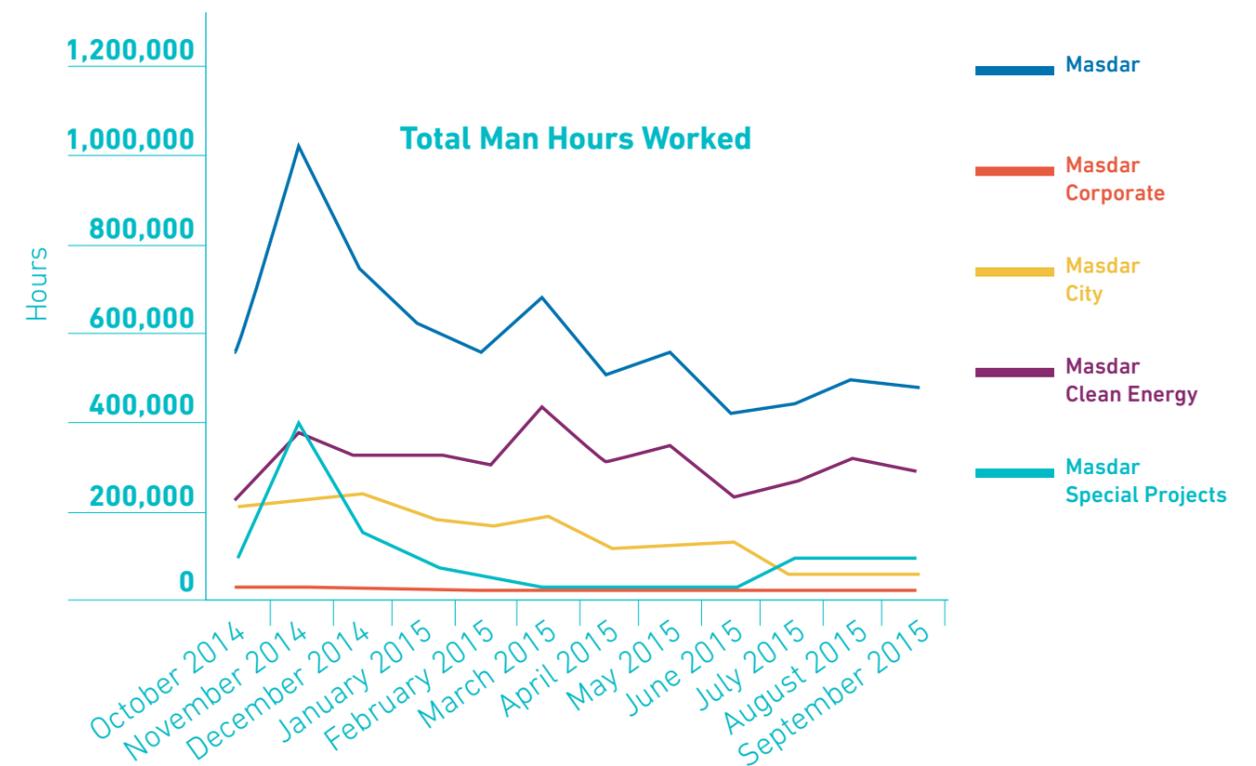
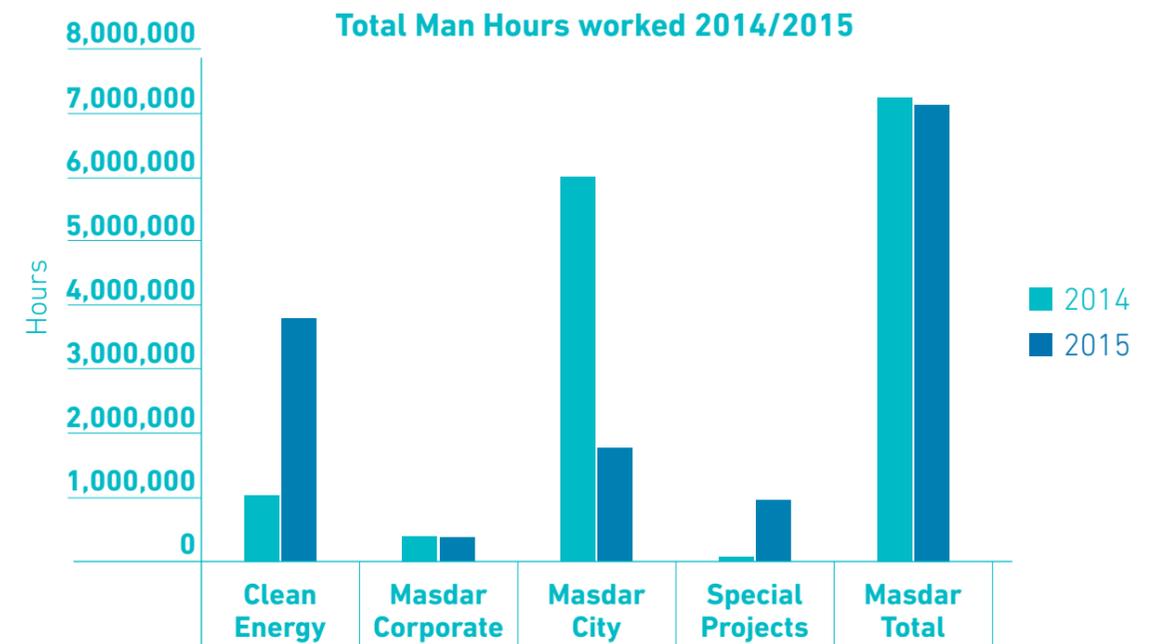
**726** Internal Audits conducted in the reporting period (247 fewer than 2014)

#### Health and Safety Trainings:

**5326** HS Training Inductions conducted

#### Toolbox Talks:

**1315** Toolbox Talks conducted (312 fewer than 2014)



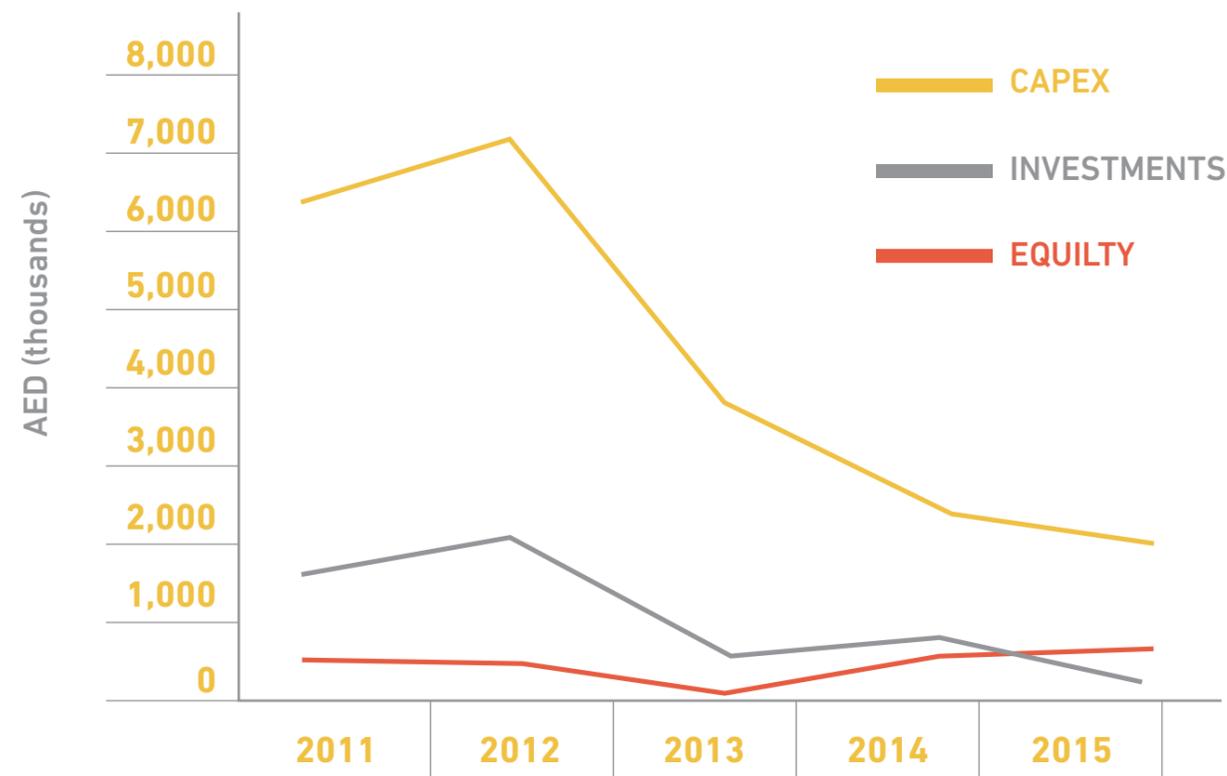
# Economic Development



# Masdar Financial Summary

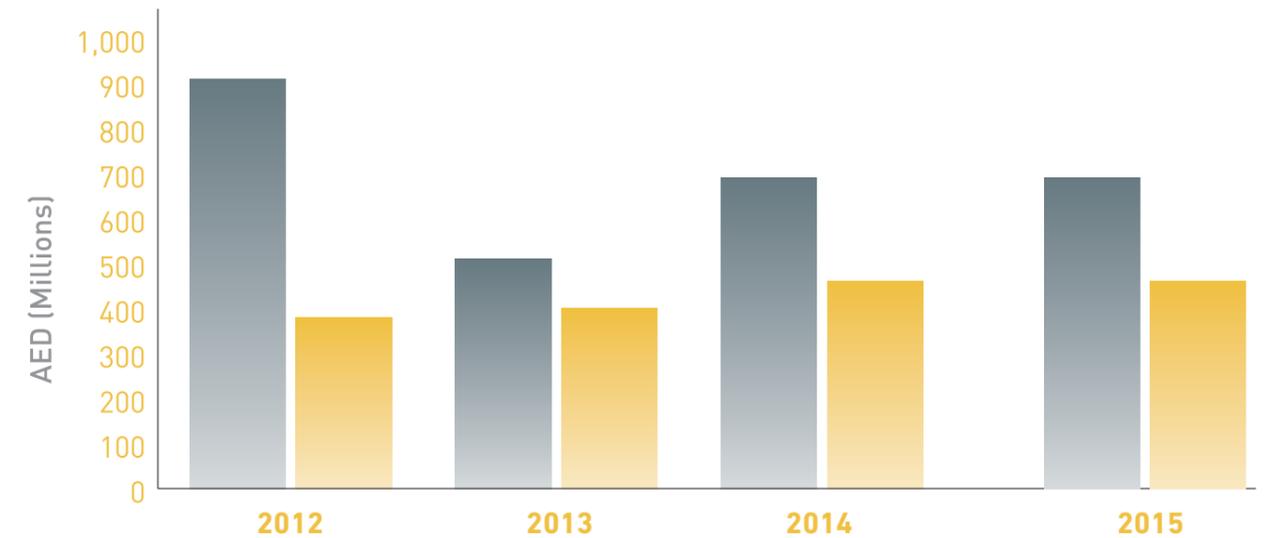
As a subsidiary of Mubadala Development Company, the organization's financial performance has been consolidated in Mubadala's annual reporting. However, in an effort to offer transparency to our stakeholders, Masdar is able to continue to report on key financial parameters for the reporting period.

As in the 2014 report Masdar continued completion on a number of projects leading to a reduction in capital expenditure and investment value. However Masdar has managed to increase its value in both these aspects with the announcement of new projects this past year.



## Supporting the Advancement of the Local Economy

In an effort to support the growth of Abu Dhabi and the UAE, Masdar remains committed to supporting local businesses and enterprises.



## Enhancing Opportunities for the Local Workforce

The importance of a talented local workforce cannot be overstated and is a major focus of the UAE leadership. Masdar acknowledges this and is proud to have in place a comprehensive emiratization program that encourages talented Emiratis to excel in the field of renewable energy and sustainability. In this period, Masdar and Masdar Institute increased their emiratization rates.

Masdar

**44%**

Emiratization rate (+3%)

Masdar Institute

**42%**

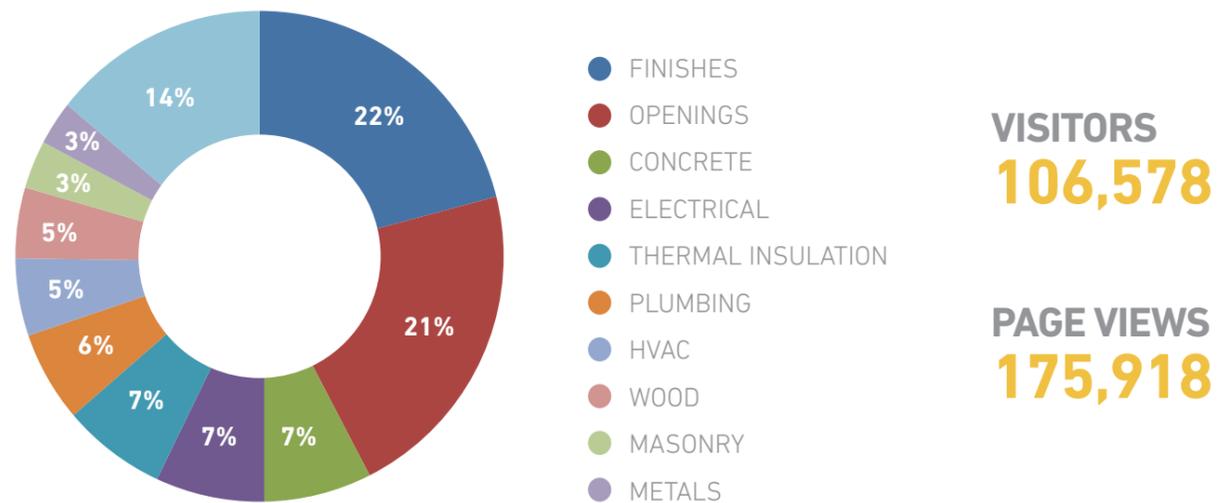
Emiratization rate (+6%)

# Impacts on Economic Development

## Stimulating and Promoting New Markets

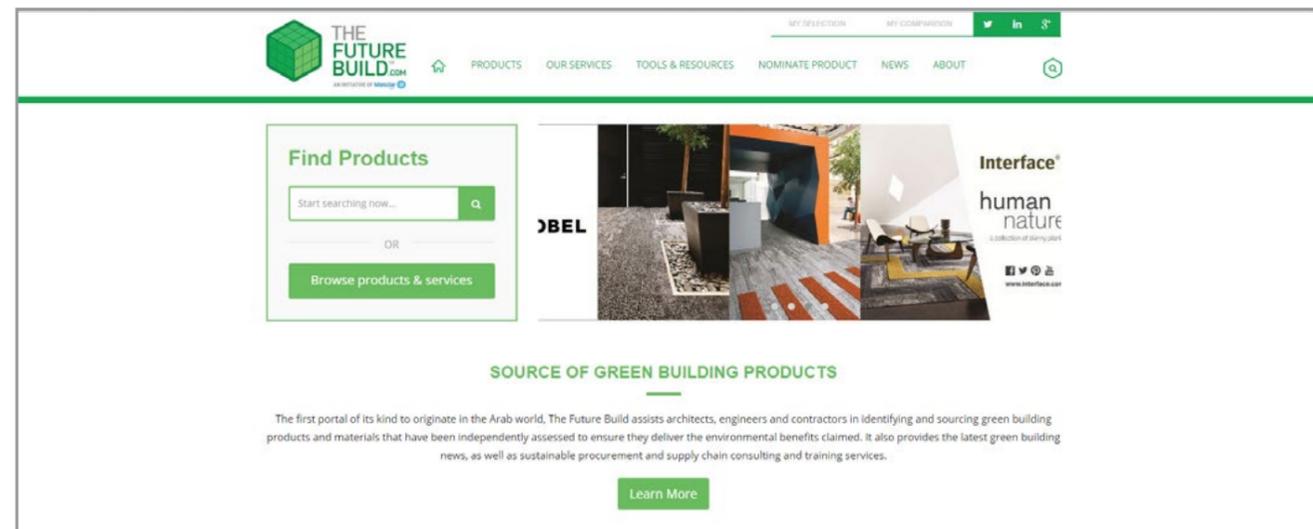
The Future Build is the first portal of its kind to originate in the Arab world, The Future Build assists architects, engineers and contractors in identifying and sourcing building products and materials that have been independently assessed to ensure they deliver the environmental benefits claimed.

The portal reflects the vital need of Masdar City – as with any project that seeks to accurately manage its environmental footprint – to understand and manage the embodied carbon and other environmental implications of products and materials used to construct and operate the city. The strength of the Futurebuild’s assessments and user-focused design make it a valuable tool for industry professionals worldwide. This can be seen below.



**VISITORS**  
**106,578**

**PAGE VIEWS**  
**175,918**



## Providing Opportunities for New Businesses in Abu Dhabi

While Masdar City is widely recognised as one of the world’s most progressive eco-developments, it is also a free zone located in close proximity to Abu Dhabi International Airport and 17km from downtown Abu Dhabi. Masdar City offers clients an exceptional value proposition. Potential clients, developers and investors have a number of lease options:

- Land
- Design-Construct-Lease (DCL)
- Business Centre
- Office / Retail Space (Core & Shell)

Masdar City Freezone’s continued excellence led to the consistent expansion, during the reporting period, of registered companies. It recorded an increase from 188 companies in 2014 to 310 by September 2015, highlighting the increasing value companies are placing on Abu Dhabi and Masdar City.

Companies In Masdar City Free Zone	Total Company Type Breakdown			
	2012	2013	2014	2015
Companies Legal Framework				
Limited Liability Framework (LLC)	47	65	142	262
Branch (Foreign Company)	20	20	27	31
Branch (UAE Company)	1	2	8	8
Branch (Retail)	9	11	11	9
<b>Total</b>	<b>77</b>	<b>98</b>	<b>188</b>	<b>310</b>

Total number of employment visas processed

**627**  
(reduction of 3 visas from 2014)

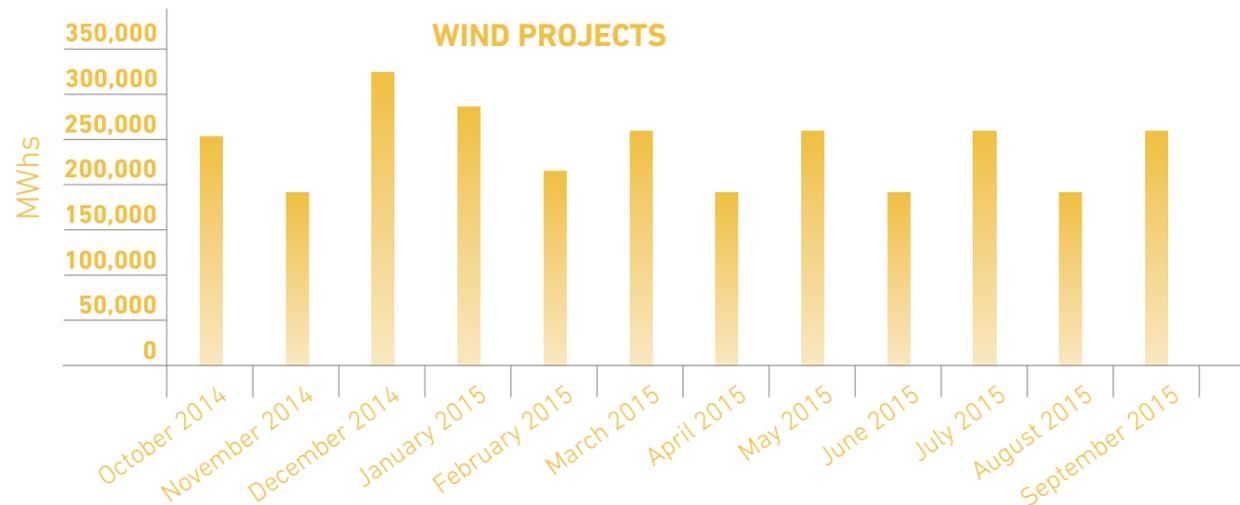
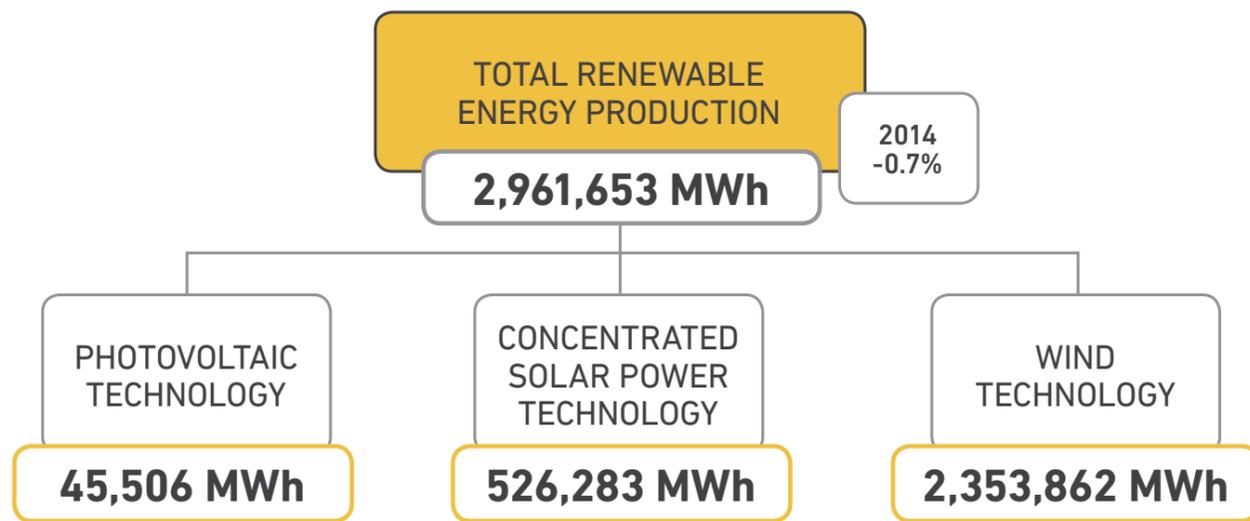
Australia	07
Asia	24
Africa	19
Middle East	128
Europe	102
The Americas	30

# Renewable Energy Generation

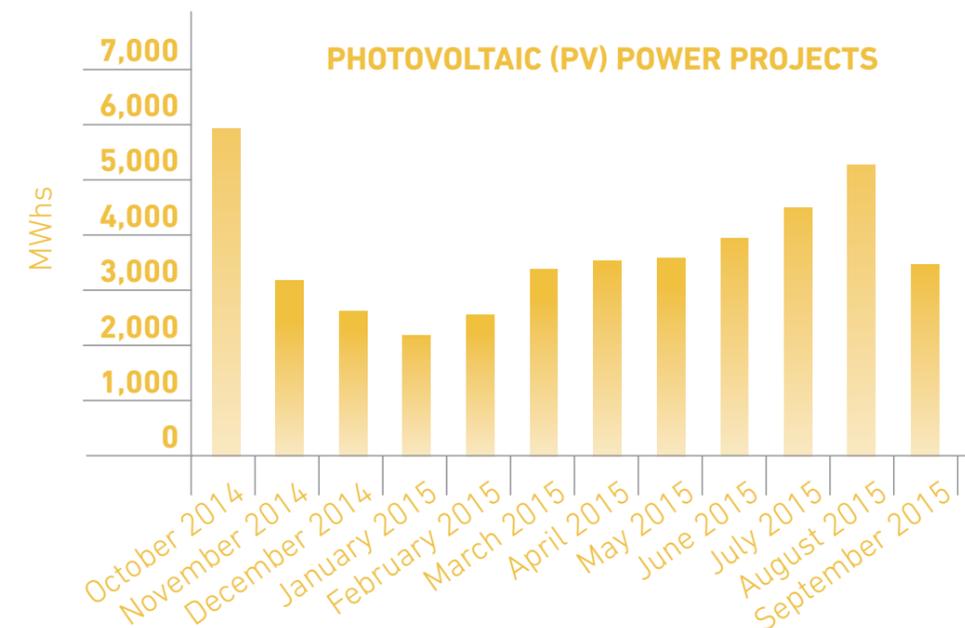
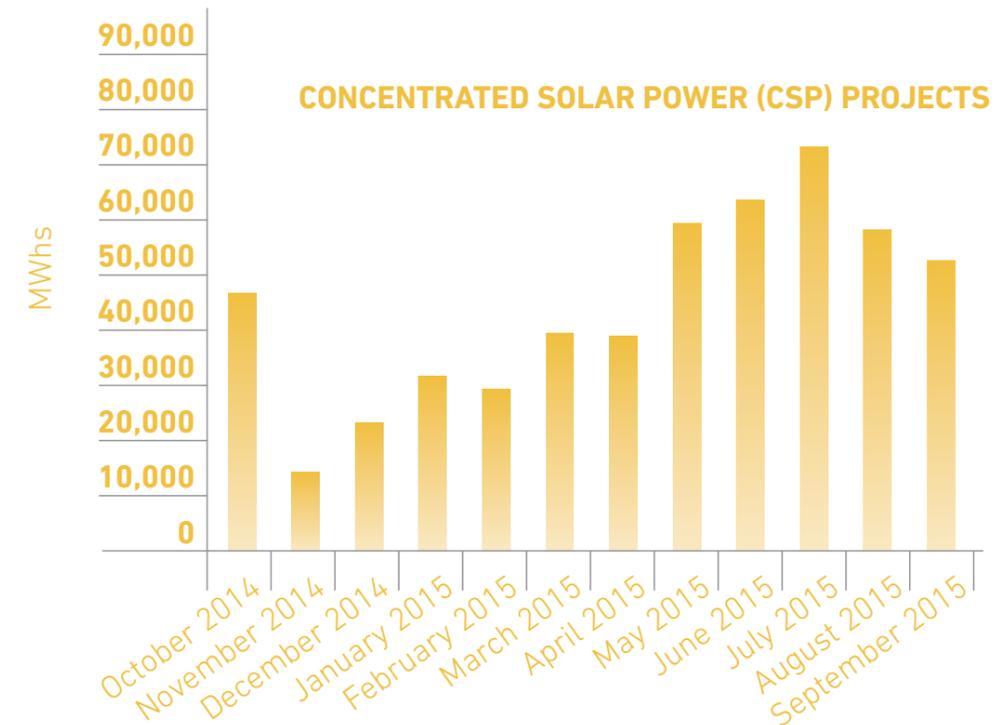
In working towards the renewable energy target of 7% as set out in the Abu Dhabi Economic Vision 2030, Masdar has the objective of establishing Abu Dhabi and the UAE as global leaders in the deployment of renewable energy capacity.

During the reporting period, Masdar was proud to have contributed significantly to the global renewable energy production through the successful operation of all its new and old assets.

The diagram to the right provides an overview of the total renewable energy generation of Masdar's assets locally and abroad during the reporting period.



For its 4th annual Sustainability Report, Masdar has approved the disclosure of some renewable energy projects, a result of a concentrated effort at further transparency in the organisation. The graphs below show Masdar's Renewable Energy Production performance over the reporting period.





# Masdar's Products and Services

# Advancing a Knowledge Based Economy

Masdar understands the importance of nurturing highly skilled human and intellectual capital in the Emirate of Abu Dhabi. For this reason Masdar Institute of Science and Technology was established by the government of Abu Dhabi as an independent, non-profit, research-driven graduate university dedicated to higher education and research in advanced energy and sustainable technologies. Its collaboration with the Massachusetts Institute of Technology allows for qualified students to pursue graduate studies and research in critical areas such as renewable energy, sustainability, environment, water resources, engineering systems, management and advanced materials, among others.



**iEnergy** contributes to Abu Dhabi reaching its goals of 7% of electricity production capacity from renewable sources by 2020 and seeks to provide impact across the power generation, industry, transportation and buildings sectors.



**iInnovation** has worked actively to strengthen the Institute's technology translation programs and the UAE's innovation ecosystem. It supports the transition of technology research into innovative commercial products, services and processes.



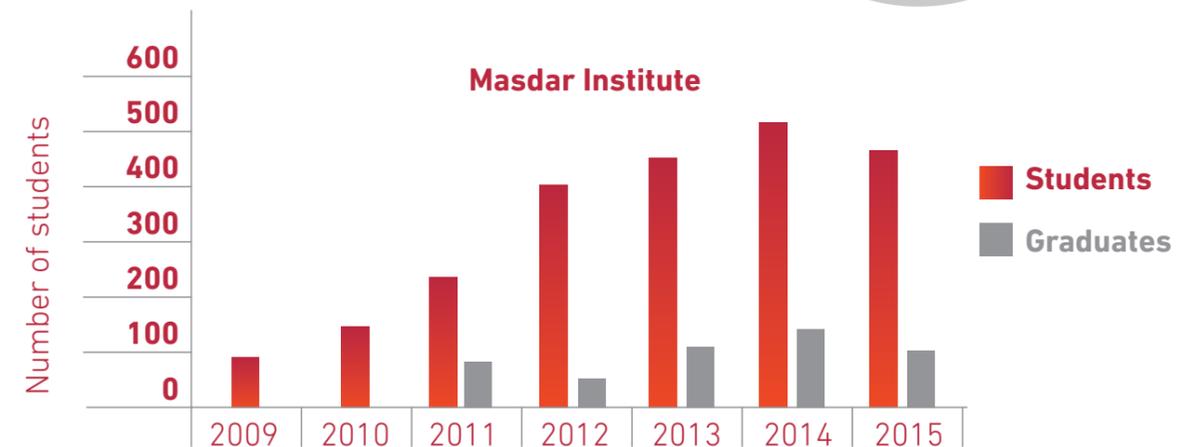
**iMicro** serves Masdar Institute's faculty, students and stakeholders by supporting a collaborative environment for cutting edge microsystems research aligned with Abu Dhabi's economic diversification plans into the semiconductor industry.



**iSmart** contributes to turning the UAE into a global leader in engineering systems methods and applications by providing strategic and operational direction to research in these areas. It covers topics under energy & water policy, transportation and logistics, smart cities planning operations and building design, as well as industrial management, supply chains, and sustainability assessments.



**iWater** is consolidating its research activities in existing areas such as desalination processes; water management, use of wastewater; environmental monitoring and assessment; remote sensing; hydrologic analysis; hydro-climate modelling; climate change assessment; and food security.



# Innovation through Knowledge

## Solar Hub

The Masdar Solar Hub is a state-of-the-art solar testing and R&D hub for photovoltaic and solar thermal technology. The hub is located within Masdar City, and is jointly managed by Masdar and the Masdar Institute of Science and Technology. Launched in January 2015, the Masdar Solar Hub aims to become a globally recognized centre of excellence in the areas of photovoltaic and solar thermal energy technologies.

The Masdar Solar Hub integrates infrastructure and expertise available at Masdar and Masdar Institute in the area of solar R&D and testing.

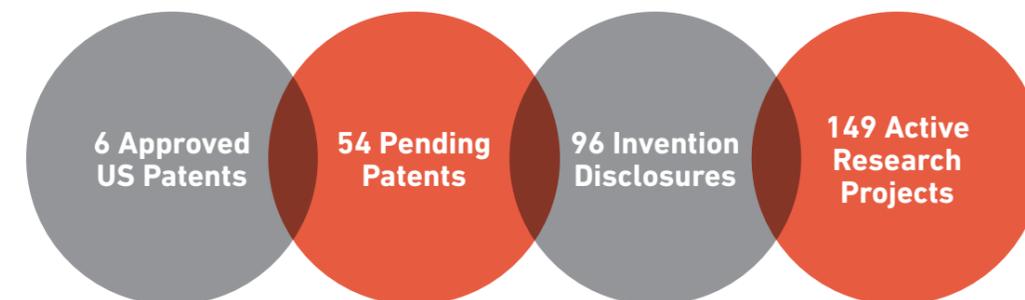
### The Solar Hub focuses on the following technologies:

- Photovoltaic (PV) module testing
- Concentrated photovoltaic (CPV) module testing
- Concentrated solar power (CSP)
- Thermal energy storage (TES)

It also allows Masdar, Masdar Institute and the solar industry to collaborate on R&D and equipment testing and brings together stakeholders from different sectors for development of new commercially driven projects



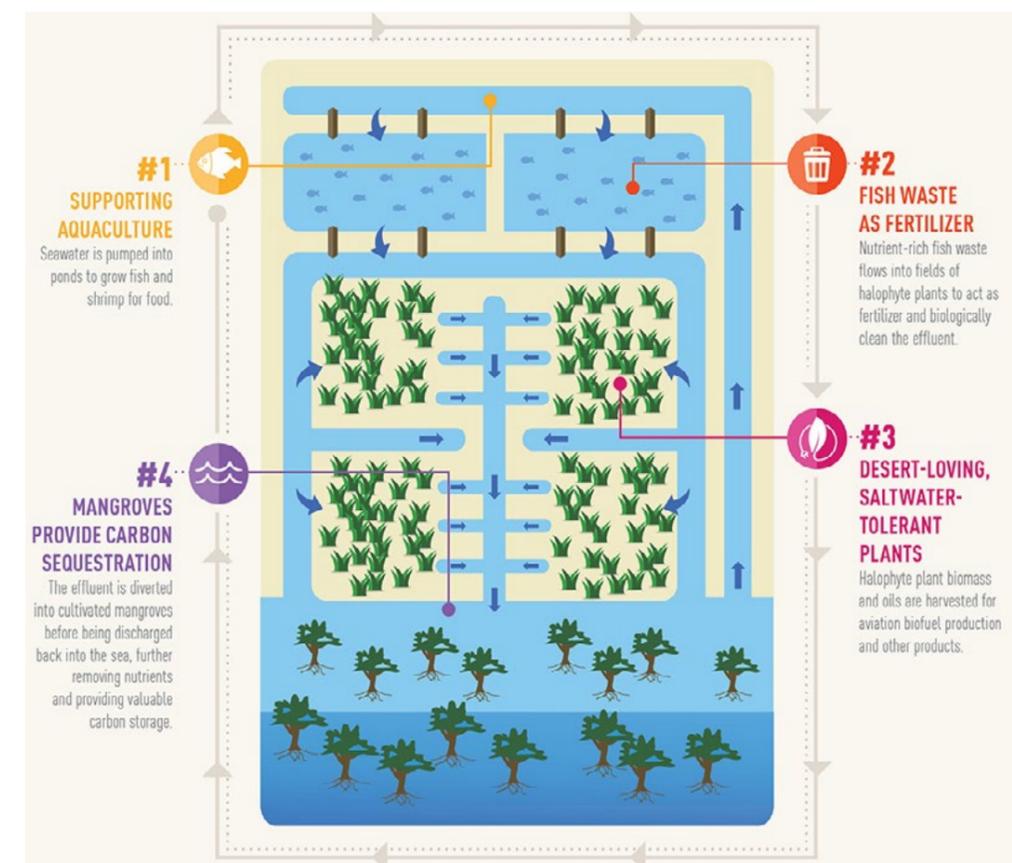
## Masdar Institute achievements to date



**Ranked # 1 in university research citations in the Arab Region by US News and World Report 2015**

### Sustainable Biofuels Research Consortium

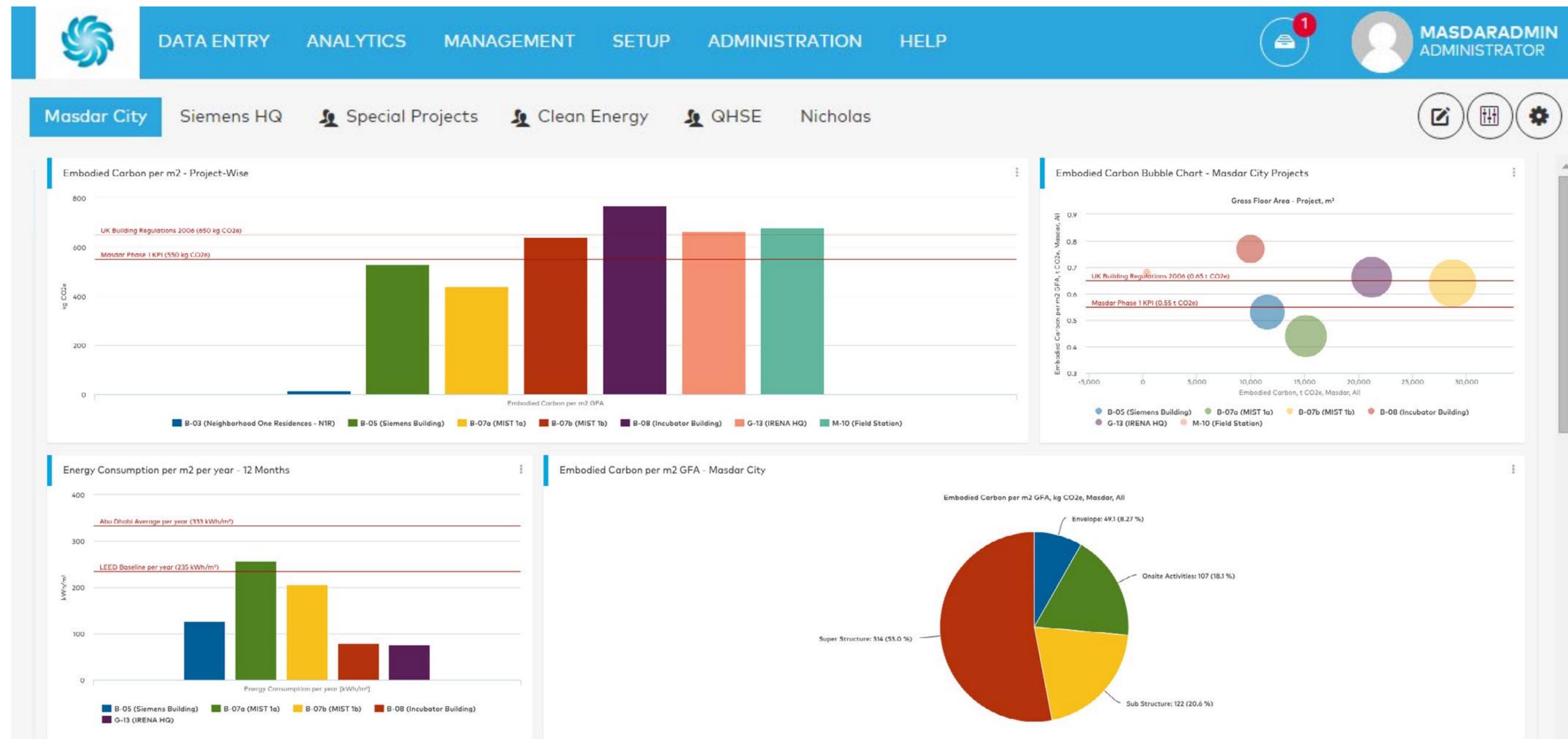
The SBRC is a non-profit consortium, with Boeing, Etihad and UOP Honeywell as founding members. SBRC is focused on the advancement of sustainable aviation biofuels and has initiated a large-scale research program on alternative fuels derived from halophytic (saltwater tolerant) plants. This project is planned to be conducted in Masdar City in collaboration with the Masdar Institute of Technology.



# Enhancement of Knowledge Transfer

## Integrated Sustainability Management Software: SOFI

During this reporting period, Masdar integrated all environmental and sustainability reporting into one web-based tool which serves to enhance reporting and analysis of various material issues to the company. This software was implemented by Masdar's sustainability team to assist all business units in their ongoing efforts to deliver concise and detailed data to our senior level executives in order to assist them in making the decisions that advance of vision and mission.



# Investing in Future Technologies

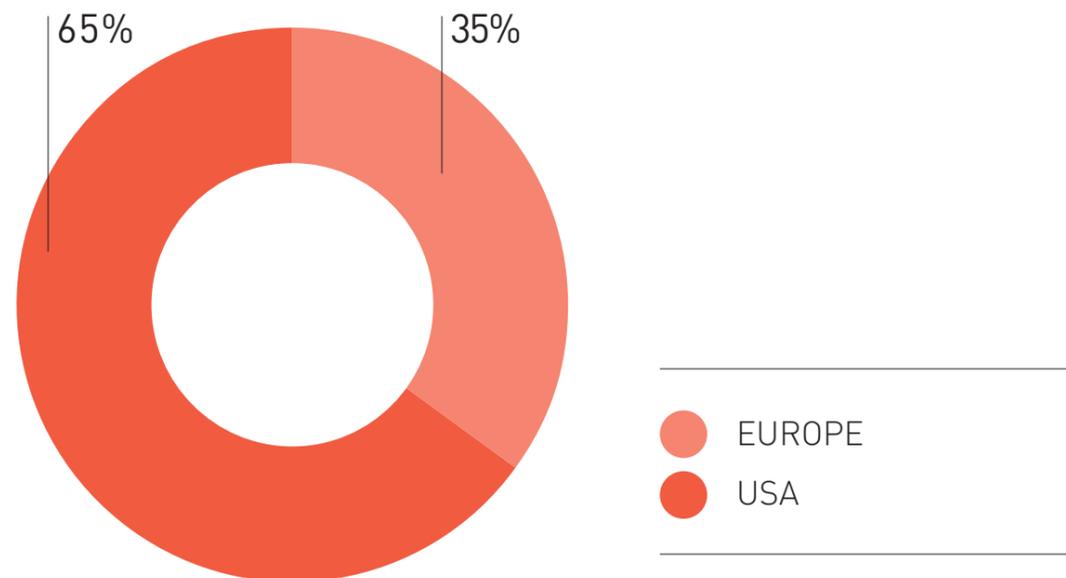
This fully deployed \$250 million fund has invested \$45 million in three cleantech funds and the remaining \$205 million in nine direct investments in companies, as lead or co-lead investor.

## Masdar Clean Tech Fund – USD \$250m

- A fully deployed \$250 million fund
- Launched in 2006.
- Launched in conjunction with partners Credit Suisse and Siemens AG
- Masdar Clean Tech Fund Investments.

## Masdar Clean Tech Fund Investments:

- 65% in USA
- 35% in Europe



## DB Masdar Clean Tech Fund – USD \$290m

- Launched in 2009
- Co-managed with Deutsche Bank Climate Change Advisors (DBCCA)
- Investor group includes Siemens, Japan Bank for International Cooperation (JBIC), Inpex Corp. / Japan Oil Development Co. Ltd., JX Nippon Oil & Energy Corporation, Development Bank of Japan (DBJ), Mitsubishi Heavy Industries (MHI) and GE.



# Progressing Sustainable Urban Development

## Masdar City, Abu Dhabi

Located in Abu Dhabi, the capital of the United Arab Emirates, Masdar City is a sustainable urban development and economic free zone. The city provides a 'green print' for cities of the future, with traditional Arabic architecture blending seamlessly with state of the art modern technology to maximize energy efficiency.

As one of the world's most sustainable communities for technology, Masdar City is an emerging global hub for knowledge, business, research and development. Masdar City is a modern Arabian city that, like its forerunners, is in tune with its surroundings. A high density, pedestrian-friendly, sustainable development, Masdar City not only embodies Abu Dhabi's commitment to a sustainable future but it is also pioneering best practices in sustainable urban planning, design, development and operation.

## Anchor Tenants



SUNPOWER®

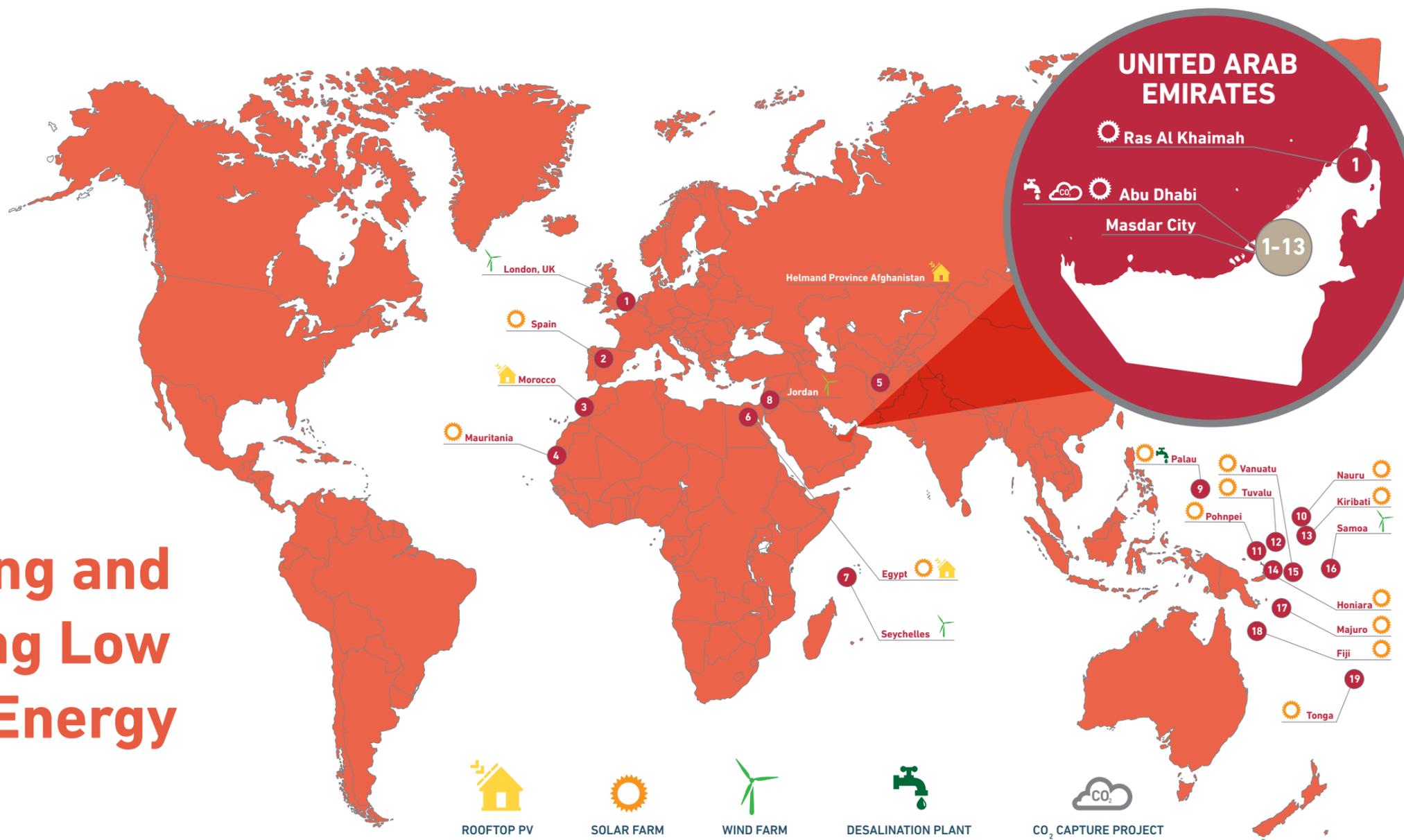


SIEMENS





# Delivering and Operating Low Carbon Energy Projects



## INTERNATIONAL

- 1 London, UK**  
London Array and Dudgeon Wind Farms
- 2 Spain**  
Torresol Energy
- 3 Morocco**  
Solar Home Systems
- 4 Mauritania**  
Sheikh Zayed Solar Plant
- 5 Helmand Province Afghanistan**  
Solar Home System, Rooftop PV
- 6 Egypt**  
PV Plants and Solar Homes
- 7 Seychelles**  
Port Victoria Wind Farm

- 8 Jordan**  
Tafila Wind Farm
- 9 Palau**  
Palau Solar and Desalination
- 10 Nauru**  
Nauru Solar Plant
- 11 Phonpei**  
Federated States of Micronesia
- 12 Tuvalu**  
Tuvalu Solar Plant
- 13 Kiribati**  
Kiribati Solar Plant
- 14 Honiara**  
Solomon Islands Solar Plant

- 15 Vanuatu**  
Vanuatu Solar Plant
- 16 Samoa**  
Samoa Wind Turbines
- 17 Majuro**  
Marshall Islands Solar Plant
- 18 Fiji**  
Fiji Solar Plant
- 19 Tonga**  
Tonga Solar Plant

## ABU DHABI, UAE

- 1** Masdar City
- 2** Solar Roof Programme
- 3** Um al Zumool Farm Project
- 4** Murwah Island Project
- 5** Al Wathba Stables Project
- 6** Sea Palace
- 7** UAE Island – PV & Desalination

## RAS AL KHAIMAH

- 1** Rashid Abdullah Omran Hospital
- 8** Desalination Pilot Plant
- 9** Al Reyadah-CCUS Project
- 10** Shams 1
- 11** Al Ain Dewan
- 12** Masdar City PV Plant
- 13** Al Jarnain Island, PV Plant

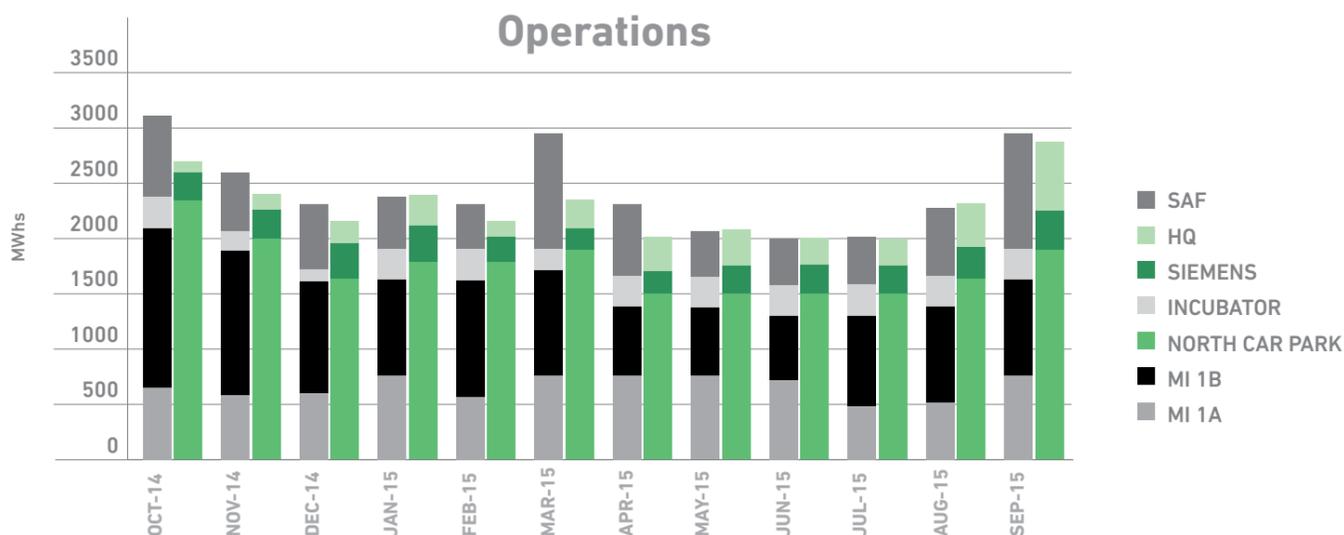
# Environmental Performance



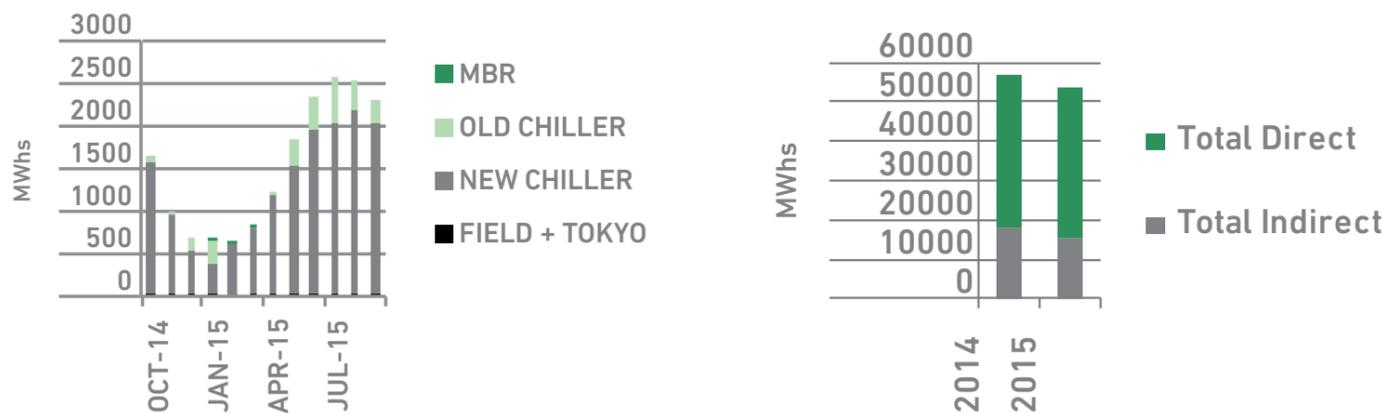
# Energy Management

Masdar, and in particular Masdar City, has made considerable efforts in demand-side energy management during the construction, design and operation of buildings within Masdar City. In 2015 a number of projects within Masdar City continued their transition from the construction to the operational phase.

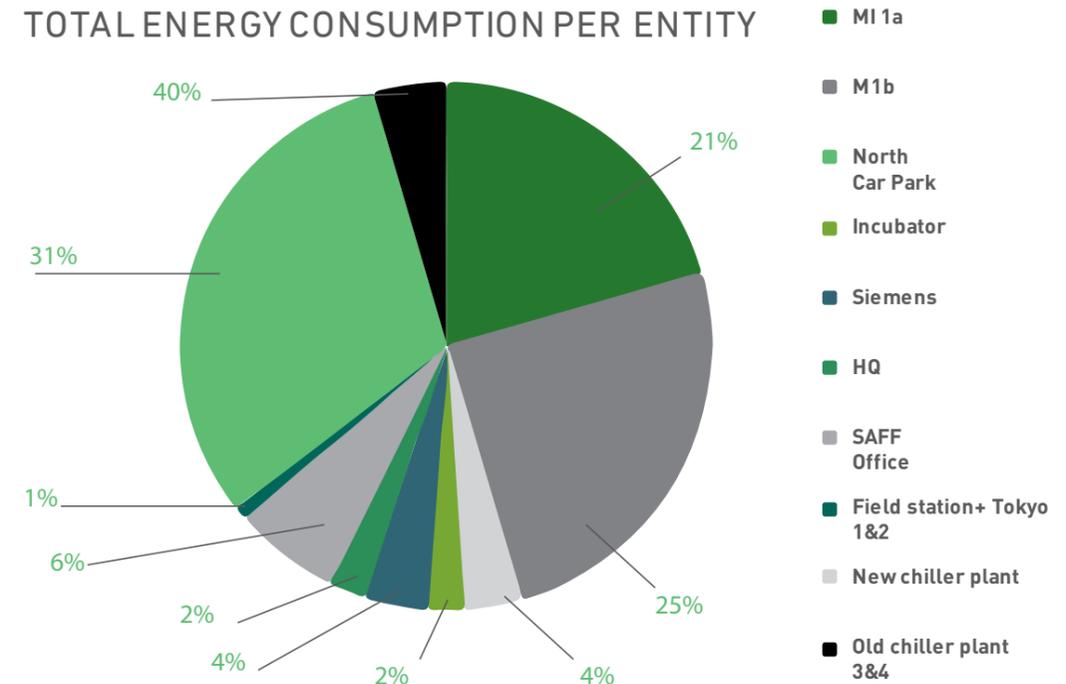
This transition is the reason for the significant increases in operational energy usage. However, the total energy use of Masdar City has decreased. Furthermore, specific buildings such as the IRENA headquarters, the Siemens Middle East headquarters and the Incubator building have seen a continued influx of tenants in 2015, giving valuable data on the energy performance of Masdar City buildings. The energy intensity of Masdar City's operational buildings can be seen in the table below.



\* The incubator building data does not reflect the total building consumption



TOTAL ENERGY CONSUMPTION PER ENTITY



	ACTUAL	ACTUAL	ACTUAL	ACTUAL
BUILDING ENERGY INTENSITY (KWh/M <sup>2</sup> )**	2012	2013	2014	2015
Masdar Institute 1A & North Car Park	284.84	294.66	299.6	309.29
Masdar Institute 1B	N/A	N/A	325.96	224.50
Siemens HQ	N/A	N/A	70.57	109.56
Incubator	N/A	N/A	98.87	115.05
SAF Offices	173.39	186.08	191.01	98.99
IRENA HQ	-	-	-	70.27

In 2015 energy intensity rose in Masdar Institute 1A, Siemens and the Incubator building. This was due to an increase in the number of individuals working in the buildings.

Siemens building welcomed new etihad staff into one of the buildings blocks while Masdar Institute 1A became the new home of the Masdar Corporate offices. The decreases in the Masdar Institute Buildings are due to the enhancement of Energy Management in the buildings. Temperature set points and cooling optimization are examples of efforts taken to achieve these results.

**31% decrease in energy consumption in Masdar Institute 1B**

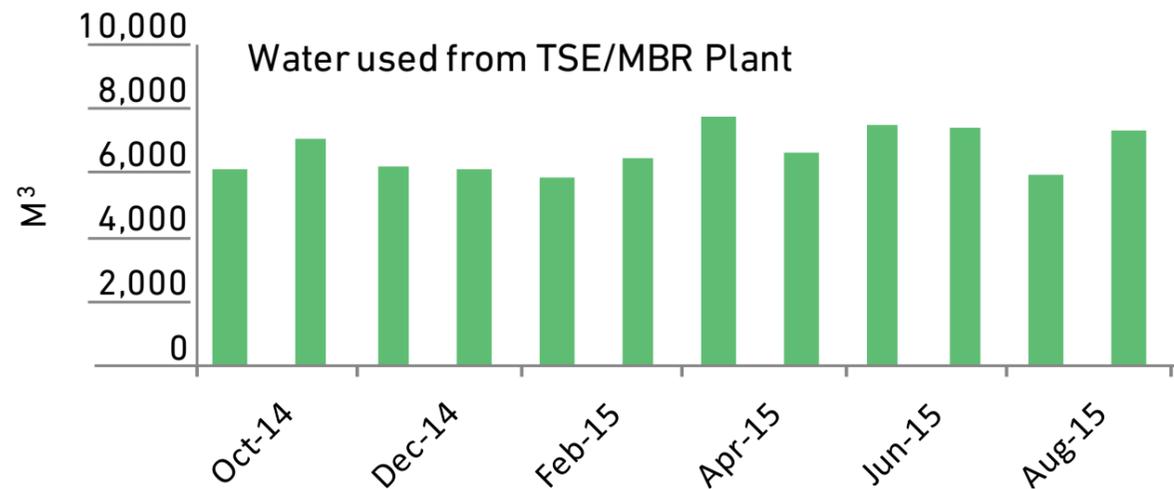
**46,513 Mwh of total energy usage**

**5% decrease in energy consumption in Masdar Institute 1A**

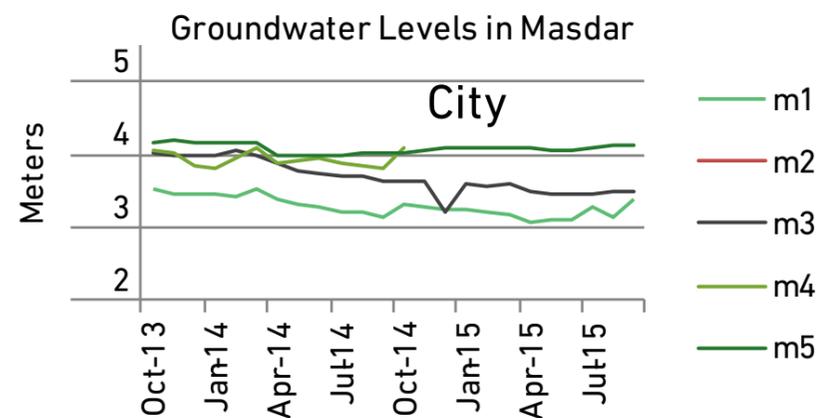
# Water Management

The second key area of water management, aside from construction and operational water efficiency, is wastewater recycling. In 2010, Masdar identified the need to manage wastewater recycling by constructing and operating an MBR plant to reuse wastewater onsite.

In January 2013, Masdar handed over management of the Masdar City plant to Abu Dhabi Sewerage Service Company (ADSSC) to allow ADSSC to incorporate the MBR plant into the Emirate-wide network of wastewater recycling plants. Masdar has established a reporting mechanism to track its consumption of water from the MBR plant.



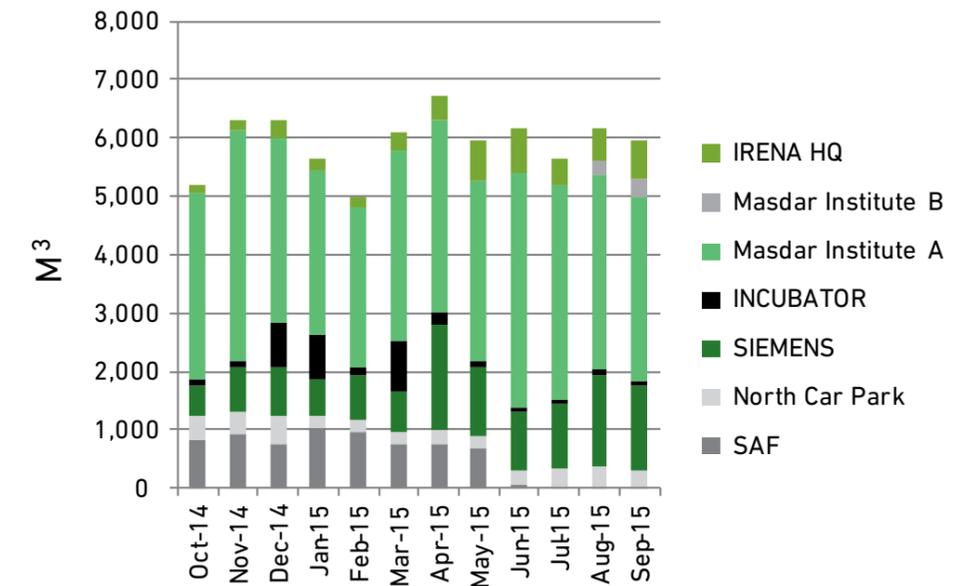
In addition to wastewater and potable water management, Masdar has started monitoring ground water levels. With its location in a desert climate, Masdar recognizes the importance of groundwater management in order to understand the long term sustainability of groundwater in Abu Dhabi. This information can help decision-makers create advanced policy changes to help conserve water in arid regions.



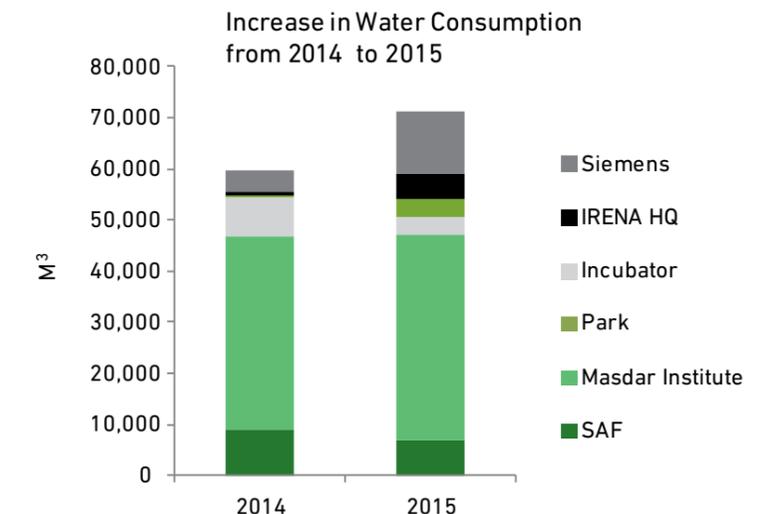
# 773 m<sup>3</sup>

of potable Water used in construction activities (**99% decrease** from 2014)

Masdar's focus on water conservation and management is increasingly on par with that of energy management. For Masdar, located in the arid Middle East where water is an even more valuable commodity than in other parts of world, the importance of preserving and reusing water is well understood.



During this reporting period, increased occupation of various buildings in Masdar City led to a rise in water consumption across the board. This was also a result of Masdar employees' relocation into Masdar City and out of the SAF buildings. The drastic decrease in water use from construction (-99%) is mainly due to the fact that the only construction in the 2015 reporting period occurred at the end of the reporting period and no other significant construction operations occurred in 2015.



# Waste Management

## Operational Waste

For Masdar, operational waste management is a blend of raising awareness and providing facilities and technologies that are both suitable and adequate for showcasing best practices in sustainability in the workplace. Data is now being acquired for all buildings in Masdar City, including the newly inaugurated IRENA HQ. Masdar is planning to enhance its operational recycling through various exercises specifically targeting collection and awareness topics.

## Masdar Composting Initiative

Masdar has a one tonne composting bin on-site used to dispose of various types of bio-degradable waste. Due to the relocation of Masdar staff to their new offices, the composting bin will not be used until it is moved to a new location closer to Masdar's offices.

## Construction Waste Management

Masdar City continues to work towards minimising waste during the construction process by reusing and recycling all waste steel, concrete and wood. In order to achieve this, the majority of Masdar City construction waste is taken by contractors to the onsite Material Recycling Centre (MRC), where it is then separated. Wood is stockpiled for reuse or processed in a wood chipper to benefit the landscaped areas. Steel, other metals and plastics are collected and sent offsite for recycling. Concrete waste is ground using a crusher for reuse in construction. During this reporting period, only one project was within its construction phase.

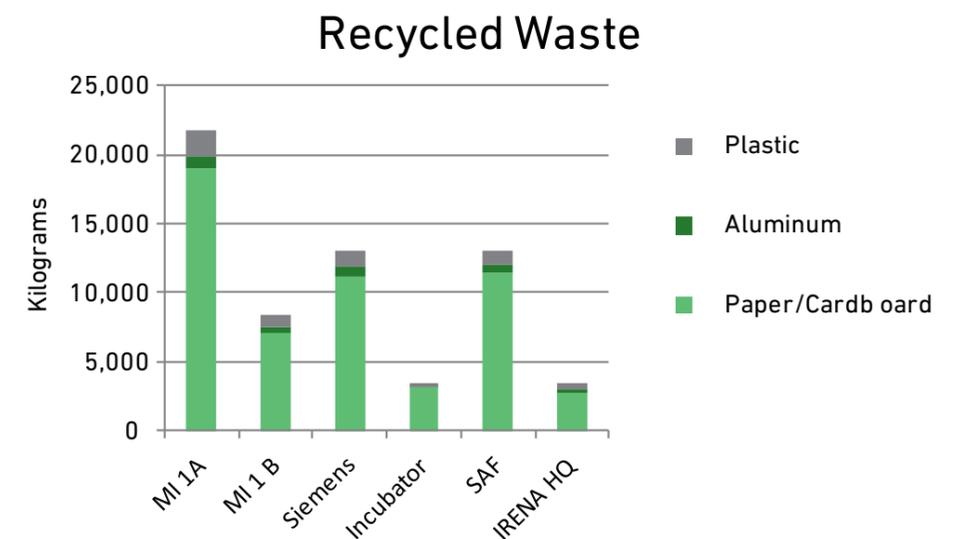
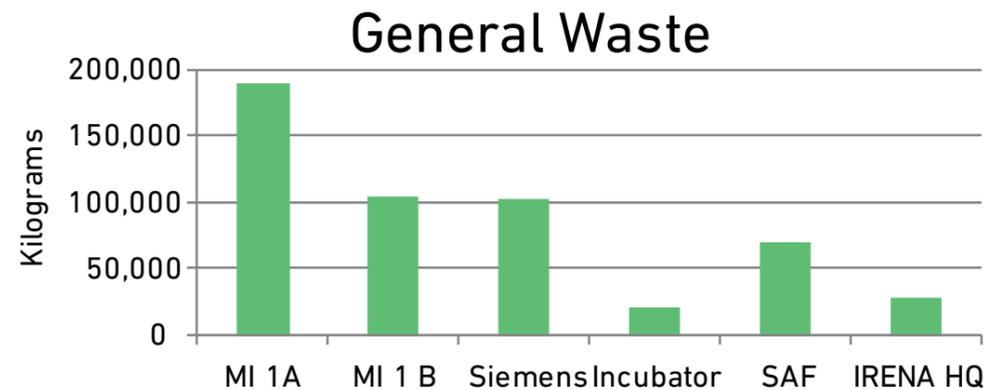
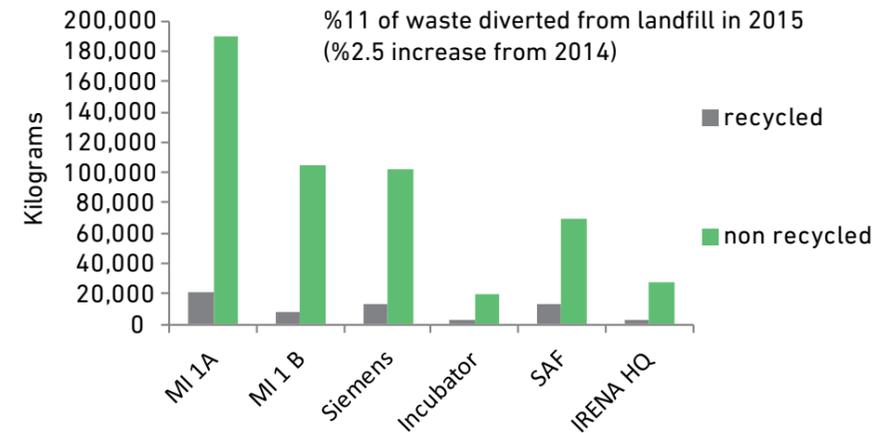
## Hazardous Waste Disposal

In compliance with the requirements of UAE Federal Law 21 of 2005, Masdar ensures that all hazardous waste, both in operations and construction, is both transported and disposed of by a waste-disposal company licensed by the Center of Waste Management-Abu Dhabi (CWM). The below table indicates the quantity of hazardous waste produced and disposed of during the reporting period.

## Waste Disposal

BUILD		2014			2015								
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Operational Hazardous Waste	kg	200	-	-	300	-	300	500	-	400	400	-	400
Construction Hazardous Waste	m <sup>3</sup>	-	-	-	-	-	-	-	-	-	-	-	-

**Construction Waste**  
**75% of 287m<sup>3</sup>**  
 was recycled in the 2015 reporting period



# Environmental Impacts

**Environmental impact mitigation is a key focus area throughout Masdar’s core functions. The organization endeavours to monitor and control the environmental impact through efficient and effective asset delivery and optimal management.**

## Biodiversity in Masdar

The Masdar City site is primarily a brown-field development site that was once a municipality tree nursery site. The nursery had been created by importing ‘sweet sand to infill an area that was formerly ‘sabkha’ (salt flats).

As part of Masdar’s environmental impact assessment conducted in 2009, the habitats observed on site were assessed in terms of their quality and potential value to species. Specific species identified on site were reviewed to determine their rarity or threat by reviewing their status on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species (IUCN, 2008). The surveys indicated there were no threatened species present on Masdar City site, and development would have no impact on the marine environment. A biodiversity action plan was developed to maintain levels of habitat through the construction phases. The map to the right highlights areas that have been identified as biodiversity protection areas for Phase 1 construction. These areas have been preserved to provide habitat that will not be significantly impacted by construction activities.

Masdar has identified ways to increase populations for indigenous species such as artificial dens for Arabian Foxes, and nesting foxes for the Common Kestrel and Barn Owls. Potentially located offsite.

Masdar City will also host large “green” areas linked throughout the city that can serve as valuable sites for public environmental education while also helping these species thrive.

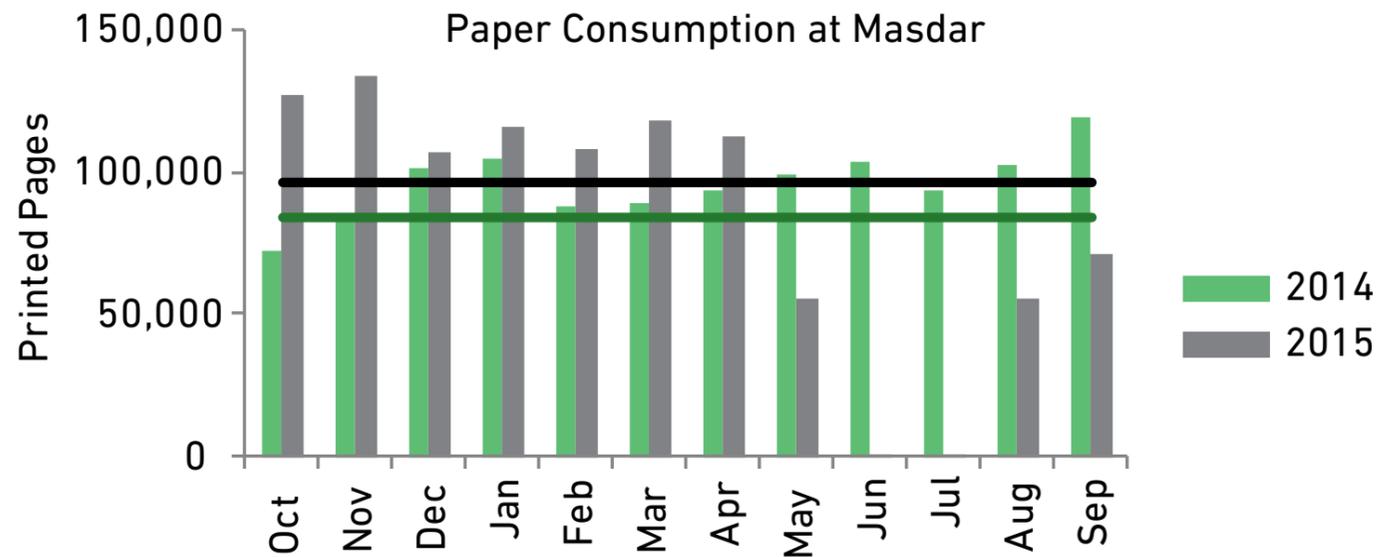


Green = Biodiversity Areas  
 Light Green = Masdar Construction Projects & Operational Buildings  
 Turquoise = dewatering Ponds

# Paper Consumption at Masdar

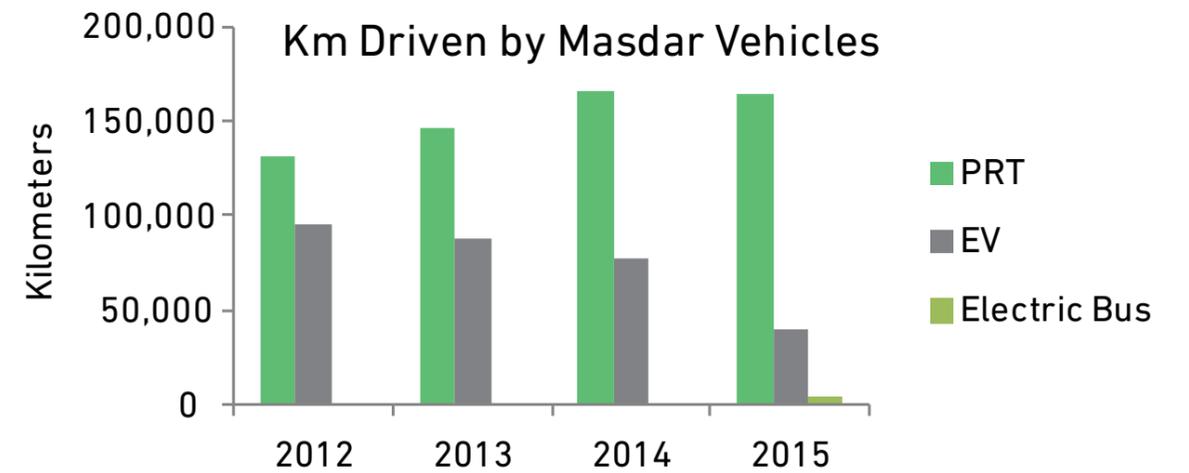
During the reporting period, Masdar witnessed a decrease of 144,799 pages printed, compared with the previous period. This represented a monthly average decrease of 14%.

The below graph shows a comparison of print activities between the 2014 and 2015 reporting periods. During the months of June and July, Masdar staff were moving to new offices located in Masdar City, resulting in low printer use.



# Transportation at Masdar

In the reporting period, Masdar acquired a new fleet of electric vehicles including two Chevy Volts and one Nissan Leaf. Masdar also put into use a new electric bus for transport around the city. The reduced number of kilometers driven were due to the new fleet being brought in during February in the reporting period. Therefore there was no EV activity from October 2014 to February 2015.



**1723** Electric Bus Passengers in 2015

Average of **32844** PRT passengers per month (14.8% increase from 2014)

**653** Electric Vehicle Passengers in 2015

# GHG Emissions

Masdar’s GHG calculations continue to follow the World Resources Institute’s (WRI) proposed methodology. However, instead of using the IPCC emission factors for purchased electricity, Masdar has continued to use the emission factors put forward by Masdar Institute members (Dr Scott Kennedy, Dr Sgouris Sgouridis, Pei-Yun Lin, Arslan Khalid). The emission factors used are listed below for grid electricity consumption, potable water and diesel. Masdar has included the GHG emissions related to corporate business (air) travel to further expand detail of the company’s key activities and impacts. The embodied carbon of construction materials used in Masdar City construction activities is addressed in the supply chain section of this report.

In this reporting period, Masdar’s carbon footprint was lower mainly due to the lack of construction projects in the reporting period. Masdar’s carbon emissions are expected to increase in the next reporting period.

Scope 1	
Diesel Usage (3)	809.37 tco <sub>2</sub>
Scope 2	
Water Usage (1)	1645.27 tco <sub>2</sub>
Electricity Usage(6)	19353.46 tco <sub>2</sub>
Scope 3	
Business Flights (2)	665 tco <sub>2</sub>
Embodied Carbon	134.2 tco <sub>2</sub>
Waste Generation(4)	181.33 tco <sub>2</sub>

	Total 2015	% difference from 2014
Scope 1	809.38	-42.34%
Scope 2	21315	-0.57%
Scope 3	846.33	-64.57%
<b>Total</b>	<b>22970.71</b>	<b>-8.96%</b>

**9%** reduction in carbon Emissions from 2014

Over **1,000,000** tonnes of CO<sub>2</sub> displaced by Masdar’s Wind Energy projects in 2015.

**2259** tonnes CO<sub>2</sub> saved compared to 2014

## Emission Factors Overview

- Grid Electricity – 0.42 tCO<sub>2</sub>/MWh
- Water (potable) – 0.02288 tCO<sub>2</sub>/m<sup>3</sup>
- Diesel [3] – 2.60 tCO<sub>2</sub>/m<sup>3</sup>
- Waste [4] – 0.29 tCO<sub>2</sub>/ton[5]

[1] Does not include site-wide water use (100% recycled received from the MBR plant)

[2] Calculations from International Civil Aviation Organization (ICAO): <http://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx>

[3] [http://www.carbontrust.com/media/18223/ctl153\\_conversion\\_factors.pdf](http://www.carbontrust.com/media/18223/ctl153_conversion_factors.pdf)

[4] 1m<sup>3</sup> Un-compacted General Waste = 0.131 ton Source: R. Birdsey (2001) NSW Environment Protection Authority WRAPP Program.

[5] 2011 guidelines to Defra/DECC’s greenhouse gas conversion factors for company reporting

[6] Only includes the GHG emissions for purchased electricity for Masdar City and does not include electricity being supplied from internal PV production and usage.

# Sustainable Supply Chain



# Supply Chain Management

During this reporting period, Masdar continued to chair the Abu Dhabi Sustainability Procurement Group, which is tasked with developing sustainable procurement practices throughout the Emirate of Abu Dhabi. Masdar aligned its procurement processes with that of the Mubadala Group through the use of spend analytics. Mubadala Corporate Support Services issued an approved spend hierarchy to be used for the categorisation of all asset indirect spend data.

The benefits of these spend analytics include:

- Greater visibility and control over indirect spend
- Structure of supply chain mapped
- Profiling of spend to detect patterns
- Opportunities identified to reduce costs / improve quality
- Identification of risk in relation to categorised spend areas
- Targeted approach to supply chain development

MASDAR SPEND CATEGORIES				
Direct Costs – Goods and services required for the business and linked to production or service delivery.				
Indirect Costs – Goods and services required for the business and linked to production or service delivery.				
Professional Services	Travel	Construction	Logistics	Consulting
Non-Sourceable (Staff Payroll)	Facilities	HR Services	IT and Telecom	Communications

## Tejari

In 2014, Masdar introduced Tejari, Masdar’s e-Procurement Portal that provides a suite of collaborative, web-based tools enabling Madar’s procurement professionals and suppliers to conduct sourcing and contract management activities with greater efficiency.

### Tejari helps Masdar organise parts of the procurement process through:

#### Spend Analysis

- Enriched Supplier Data
- Comprehensive Spend Analysis

#### Supplier and Performance Management

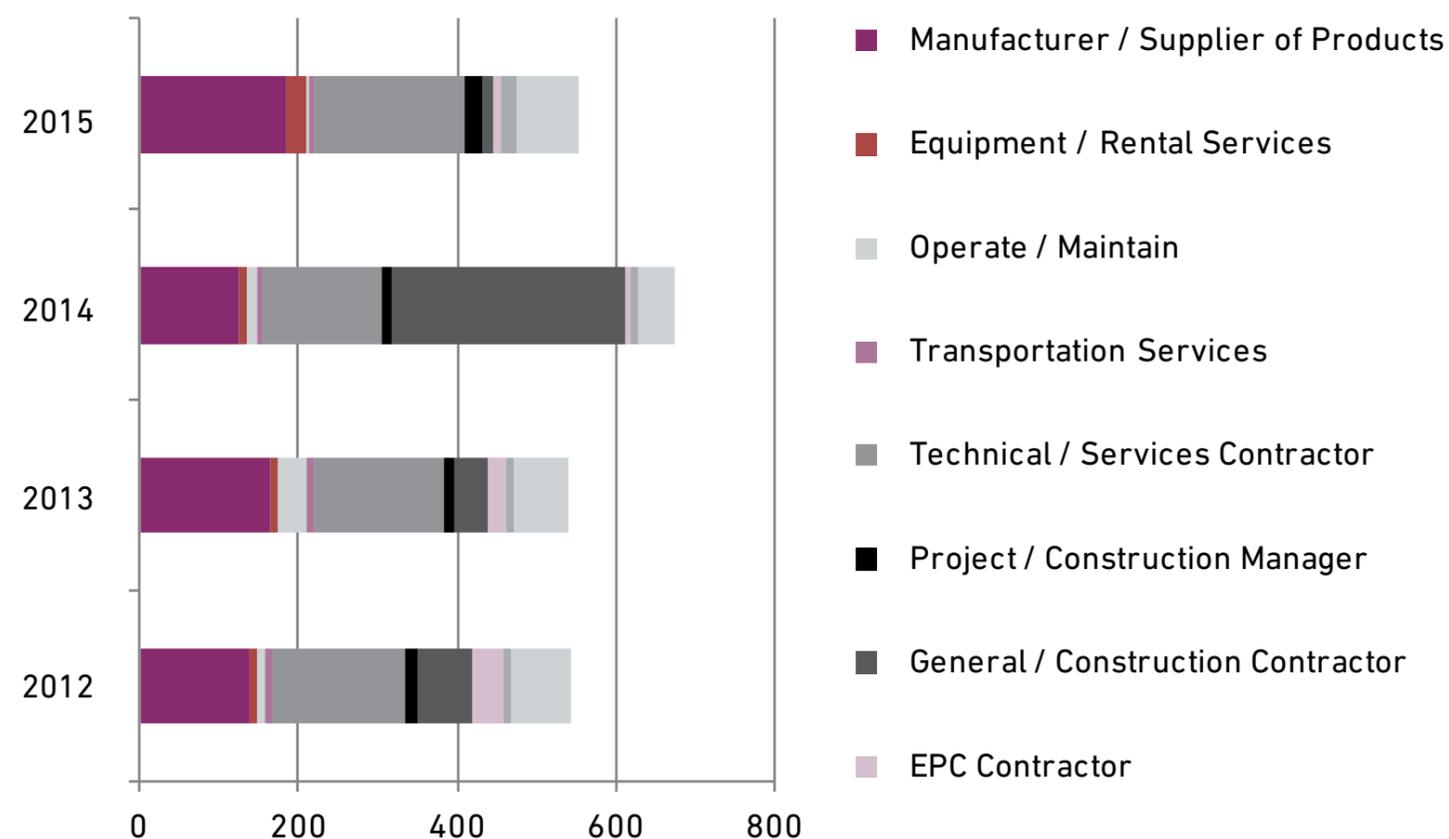
Tejari’s SPM solution enables Masdar to develop optimal relationships with strategic sourcing partners and gain visibility into the compliance and performance of the supply base. This visibility can help to advise compliance and risk mitigation programs, improve supplier relationships, and execute sourcing strategies.

**114 RFP's**  
issued in the reporting period through the Tejari System

# Supply Chain Management



## Prequalified Companies



Each company that wishes to work with Masdar is required to acknowledge these prerequisites and is subject to review and audits periodically or in the event of suspect information or behaviour.

## Ethical Supply Chain at Masdar

In addition to strategic procurement practices introduced this reporting year, Masdar continues to adopt best practices in sustainable and ethical supply chain management through the Masdar procurement portal. The portal is designed to screen all potential companies that wish to provide products and services to Masdar.

The screening process not only looks at the financial stability and business security attributes but is also used as an assessment point to gauge the company's ability to meet Masdar environmental and social criteria. In order to enter into purchasing agreements with Masdar, each organisation must adhere to all elements that are part of the Masdar Sustainability Supply Chain Code of Conduct highlighted below:

- The supplier must comply with all relevant local and national laws and regulations with regard to employment practices, benefits, health and safety, and anti-discrimination.
- The supplier must not use child, forced or involuntary labour in any form.
- The supplier must comply with all relevant local and national laws and regulations with regard to occupational health and safety, and the provision of health-related benefits to employees.
- The supplier must comply with all relevant local and national laws and regulations with regard to land and water management, waste and recycling, the handling and disposal of toxic substances, discharges and emissions, noise, transportation of products, and waste.
- The supplier must strictly comply with all laws and regulations on bribery, corruption and prohibited business practices.

# Sustainable Supply Chain

## Embodied Carbon

A major attribute of Masdar’s award-winning sustainable supply chain management practices is the continuous monitoring and analysis of the environmental impact of buildings during the design and construction phase. As a building’s operational efficiency in terms of energy and water consumption increases, a greater focus must be placed on the embodied carbon impact of the building itself.

MATERIALS TYPE	BUSINESS AS USUAL	MASDAR USED	EMBODIED CARBON REF**
Concrete	299KG CO <sub>2</sub> /M <sup>3</sup> 432KG CO <sub>2</sub> /M <sup>3</sup>	168KG CO <sub>2</sub> /M <sup>3</sup> 4260KG CO <sub>2</sub> /M <sup>3</sup>	EPD in accordance to ISO 14025
Rebar	1.724 tCO <sub>2</sub> /ton	0.517 tCO <sub>2</sub> /ton	ICE*
Steel Selction	1.78 - 2.78 tCO <sub>2</sub> /ton	0.44 - 2.78 tCO <sub>2</sub> /ton	ICE*
Aluminium	18.903 tCO <sub>2</sub> /ton	1.736 tCO <sub>2</sub> /ton	LCA in accordance to ISO 14040

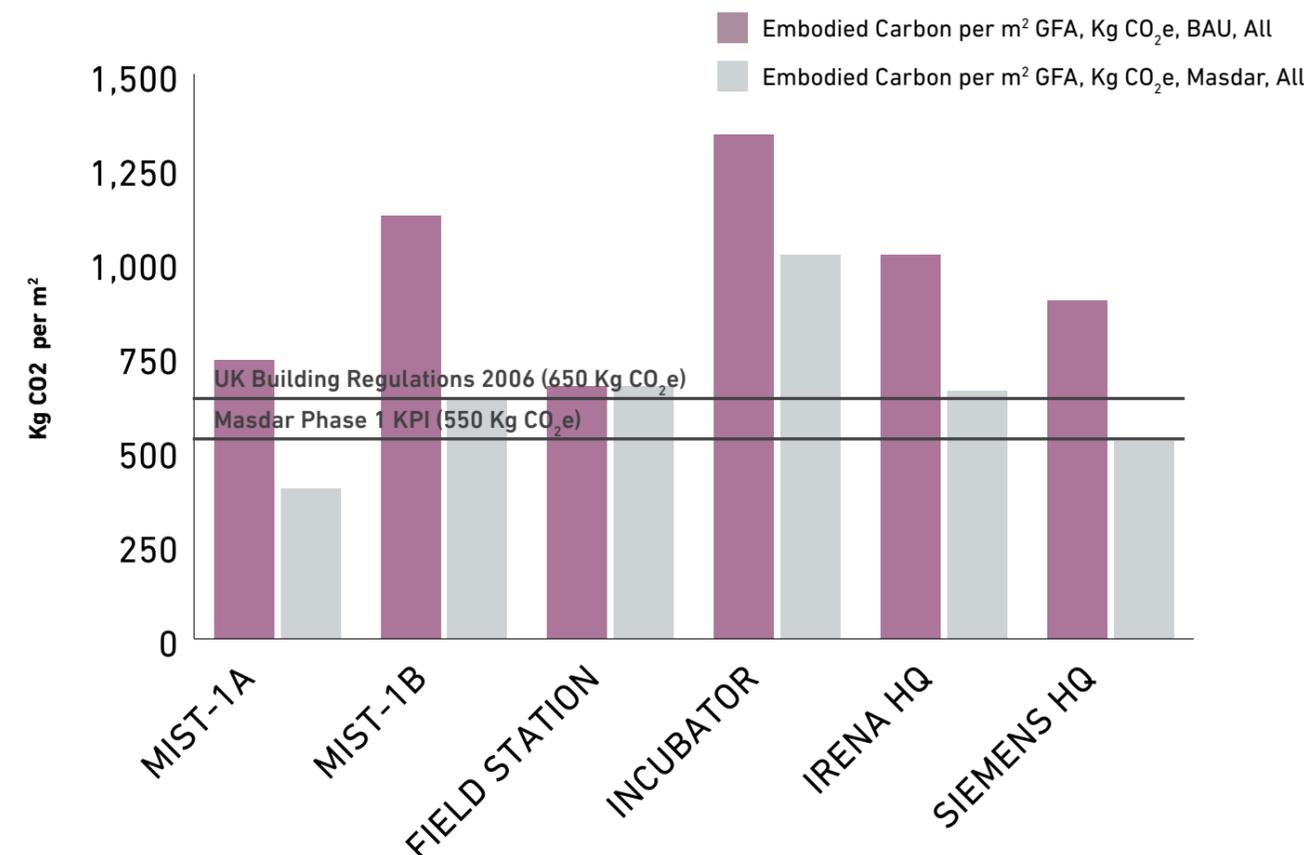
REPORTING PERIOD	
Total embodied carbon in construction materials (Masdar)	134.2 tCO <sub>2</sub>
Total embodied carbon in construction materials (BAU)	304 tCO <sub>2</sub>
TOTAL SAVINGS	
169.8 tCO <sub>2</sub>	
Embodied carbon in concrete (Masdar)	69.1 tCO <sub>2</sub>
Embodied carbon in concrete (BAU)	87 tCO <sub>2</sub>
Embodied carbon in steel (Masdar)	65.1 tCO <sub>2</sub>
Embodied carbon in steel (BAU)	217 tCO <sub>2</sub>
TO DATE	
Total Masdar Embodied Carbon to Date	71,433 tCO <sub>2</sub>
Total Masdar Savings in Embodied Carbon to Date	55,188 tCO <sub>2</sub>

Masdar has taken a leadership role in encouraging manufacturers and suppliers to shrink the life-cycle of their products, consequently reducing their environmental impact. Within the Masdar City design team, there is an increased drive to source green building products that optimise raw material usage through process improvements, implement energy-efficient technologies, and promote recycling and other energy-conservation practices. In addition, Masdar has taken a leadership role in encouraging manufacturers and suppliers to shrink the life-cycle environmental impact of their products.

## The figures below show all materials used at Masdar’s upcoming Residential Complex:

	Steel	Concrete	Total
Total QTY	229	1242	1471 tons
Recycled content	226.71	43	269.71 tons
% recycled	99%	3.46%	18.34%

**Total of 55,188 tonnes CO<sub>2</sub>** of embodied carbon saved.



# Community Involvement



# Engaging the Global Sustainability Community

As a key player in the renewable energy and sustainable development sector, Masdar remains an active participant in the discussions on advancing the sustainability agenda both locally and on a global platform.

During the reporting period, Masdar hosted the third Abu Dhabi Sustainability Week in January 2015. As a host, Masdar is tasked with enhance dialogue between nations and the private sector on the ever-increasing concerns surrounding climate change and to help facilitate actions to address these concerns as well as further establishing Abu Dhabi as a hub for renewable energy and clean technology. Add the new ADSW logo which we can take from the english supplement you did.



## International Renewable Energy Agency General Assembly

With a mandate from countries around the world, IRENA aims to encourage governments to adopt enabling policies for renewable energy investments and provides practical tools and policy advice to accelerate renewable energy deployment with a goal to provide clean, sustainable energy for the world's growing population. The Assembly, which convenes annually, is IRENA's ultimate decision-making authority and is made up of one representative from each member.



## Zayed Future Energy Prize Awards Ceremony

The Zayed Future Energy Prize represents the vision of the Late Founding Father and President of the UAE, Sheikh Zayed bin Sultan Al Nahyan, who championed environmental stewardship. This annual award celebrates achievements that reflect impact, innovation, long-term vision and leadership in renewable energy and sustainability.



## World Future Energy Summit and Exhibition

The World Future Energy Summit (WFES) is the foremost annual global event committed to advancing future energy and clean technology. As the centrepiece of Abu Dhabi Sustainability Week, it engages political, business, finance and academic leaders to stimulate dialogue, innovation, and commercial and investment opportunities to drive the development of sustainable energy worldwide.



## International Water Summit and Exhibition

The International Water Summit (IWS) is a global platform for promoting water sustainability in arid regions. Based in Abu Dhabi, a global hub for water innovation, IWS is at the heart of the water-energy nexus; the only place where the world's water and energy experts come together.



## EcoWaste Exhibition

EcoWASTE is a leading international platform for advancing sustainable waste management and recycling across MENA and beyond. Seeing waste as a valuable economic resource, EcoWASTE brings together leading local and international experts and providers with key buyers and decision makers.

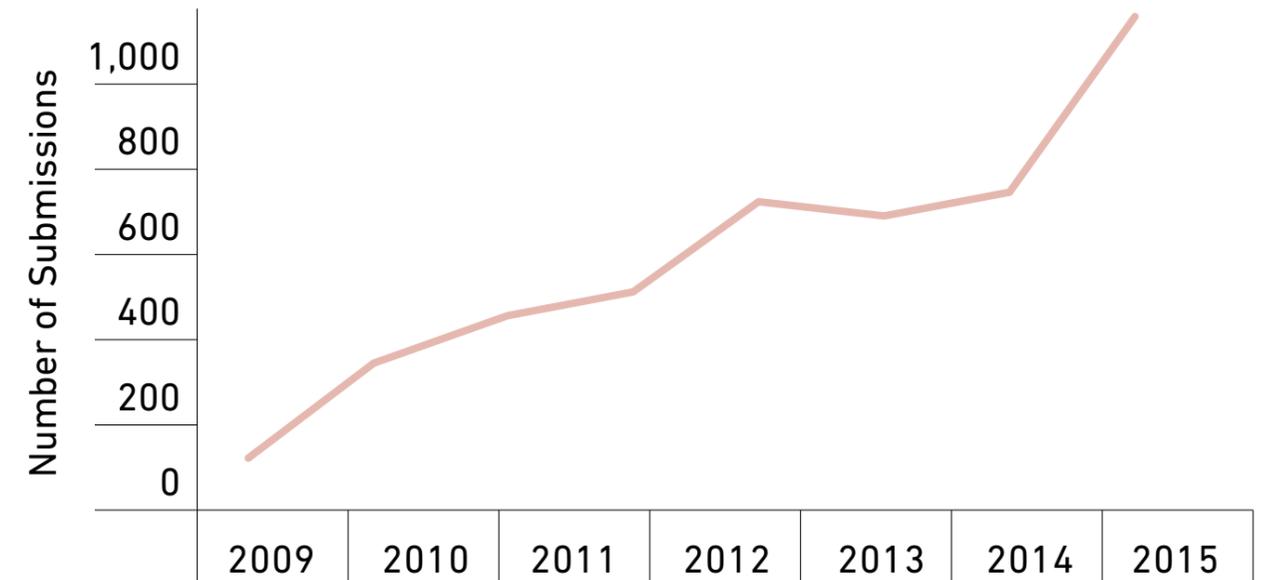
## ADSW 2015 in Numbers

- **850** exhibiting companies from 42 countries
- **101** official delegations
- **170** countries represented
- **33,500** attendees
- **3,700** opening ceremony delegates and more than 250 high level speakers
- **500** press registrations from 36 countries

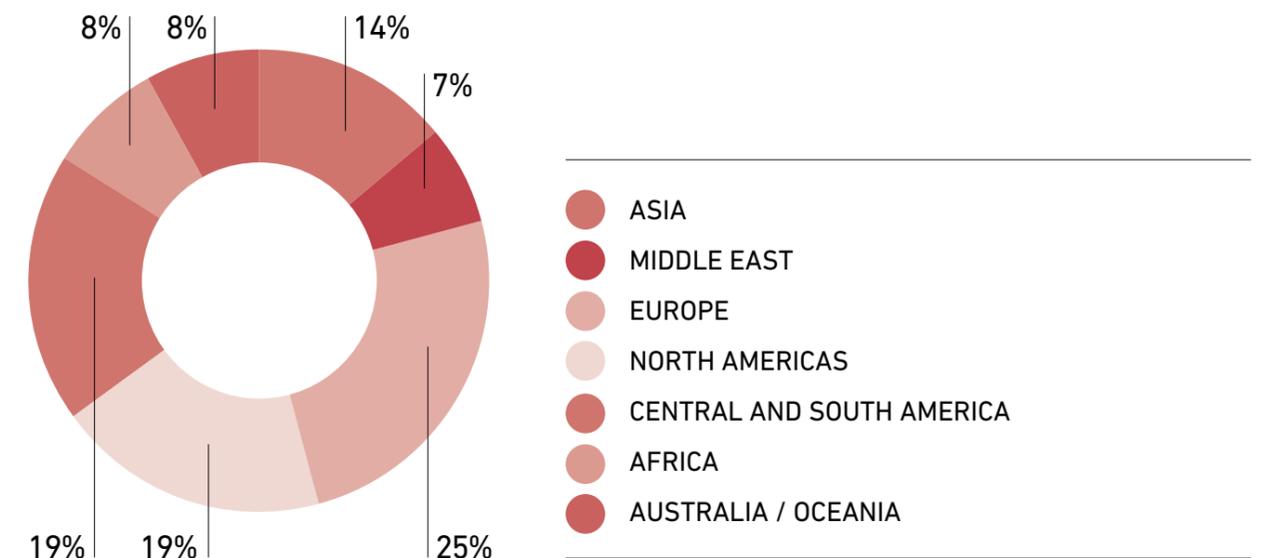
# Zayed Future Energy Prize - Awarding Innovation

The Zayed Future Energy Prize represents the vision of the Founding Father of the United Arab Emirates, the late Sheikh Zayed bin Sultan Al Nahyan, who championed sustainability and environmental stewardship. The prize categories (Large Corporation, SME, NGO, Lifetime Achievement and Global High Schools Prize) focus on supporting innovative ideas to solve our greatest energy and sustainability challenges. Each of these categories is evaluated based on the four core criteria of the prize:

- Leadership
- Long-Term Vision
- Innovation
- Impact



## 2015 ZFEP Winners



888

Submissions for the 2016 prize

# SOLARIMPULSE

## AROUND THE WORLD IN A SOLAR AIRPLANE

Solar Impulse 2 is the only airplane of perpetual endurance, able to fly day and night on solar power, without a drop of fuel.

Solar Impulse 2 attempted the first around-the-world solar flight in 2015, beginning in Abu Dhabi. Masdar was a natural partner for Solar Impulse, as both entities are committed to advancing clean technology and encouraging innovation to ensure a sustainable, cleaner future.



### The Women in Sustainability, Environment & Renewable Energy (WiSER) Initiative



Founded by Masdar, Abu Dhabi's renewable energy company, and the Zayed Future Energy Prize, WiSER endeavours to mentor, empower and inspire women to be catalysts of innovation, industry leaders and drivers of commercial solutions. The action-orientated initiative aims to expand and secure access to energy, water and food while mitigating climate change. The platform promotes the role women play in industries related to science, technology, engineering and mathematics (STEM). At its core, WiSER exists to encourage greater female participation in STEM fields and share knowledge with young women through mentorships and industry opportunities.

# Partnerships



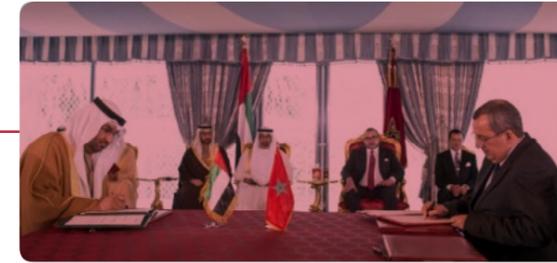
## Abu Dhabi, UAE – 18 October, 2014

Masdar, Abu Dhabi's renewable energy company, will collaborate with Etisalat, the region's leading telecommunication service provider, to help it integrate sustainable, energy solutions into its operations.



## Sharm El-Sheikh, Egypt - March 14, 2015

Masdar, ACWA Power and the Egyptian Electricity Holding Company (EEHC) have concluded a Memorandum of Understanding (MoU) to explore developing up to 4 Gigawatts of renewable and natural gas power generation projects in Egypt.



## Casablanca, Morocco - March 18, 2015

Masdar and Morocco's Office National de l'Electricité et de l'Eau Potable (ONEE) signed a partnership to design, supply and install 17,670 solar home systems across 940 villages in the Kingdom of Morocco. When complete, 99 percent of rural Morocco will have access to energy.



## Abu Dhabi, UAE – 21 January, 2015

Masdar signed a contract with Mauritania's Ministry of Petroleum, Energy, and Mines to deliver seven solar photovoltaic (PV) projects, with a total capacity of 12 megawatts, providing access to clean and reliable energy to seven towns across the country. Completion of all the projects is expected by the first quarter of 2016.



## Abu Dhabi, UAE – 17 January, 2015

The United Arab Emirates (UAE) signed partnership agreements with four new Pacific island countries to deploy renewable energy projects under the US\$50 million UAE-Pacific Partnership Fund with Masdar helping to manage the projects.



## Abu Dhabi, UAE - December, 2014

Total unveiled a collaboration to map the complex behavior of the region's carbonate reserves. The 'Digital Rock Physics' (DRP) project will pool the technical resources and expertise of the Masdar Institute, and Abu Dhabi's Petroleum Institute.

# Community Outreach

## The Festival at Masdar City

As part of Abu Dhabi Sustainability Week (ADSW) Masdar had hosted a 2 day sustainability festival geared toward including all Abu Dhabi residents to spend a fun, educational weekend in one of the world's most sustainable cities. The Festival will include a series of workshops and activities such as:

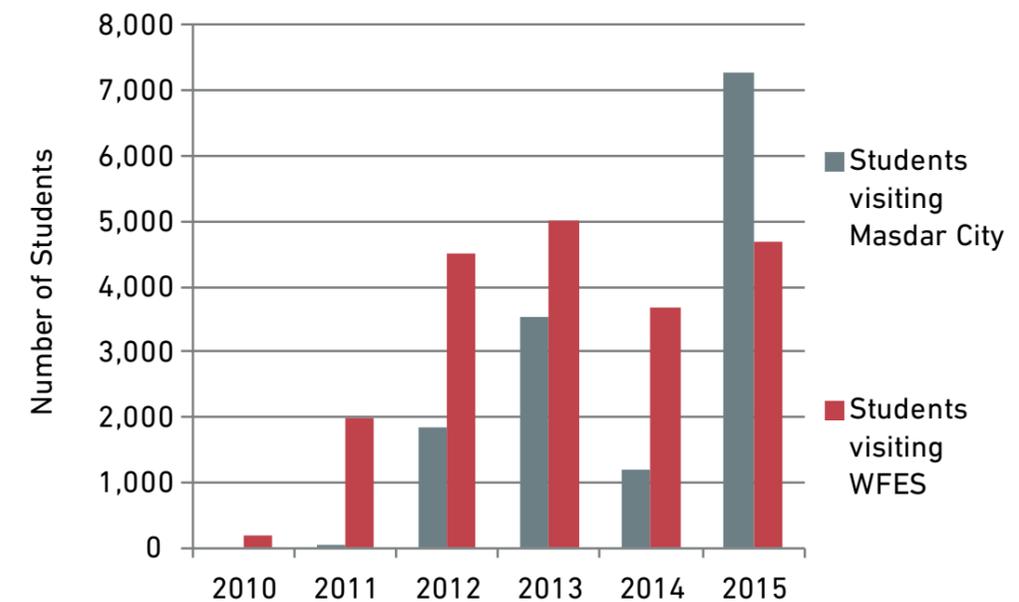
- Little Inventors
- Environmental Awareness
- Ecosystems Exploration
- Planting Flowers
- Make a Windmill
- Fun Eco-crafts



## Youth Outreach at Masdar

The Young Future Energy Leaders (YFEL) programme is a key element of the annual World Future Energy Summit (WFES). The program focuses on raising the awareness of students and young professionals in the fields of renewable energy and sustainability.

Masdar also strives to raise youth awareness throughout the year with tours of Masdar city available anytime students wish to visit. These visits allow us to spread knowledge and initiative in our future generations so that they learn the importance of sustainability and renewable energy. In the reporting period over 7000 students visited Masdar City, an increase of over 6000 individuals from 2014.



## Masdar's 2015 Blogging Contents

In the build up to ADSW, Masdar completed the second annual blogging contest under the theme "Describe Your City in 2030". Each story was supported by a voting system (1-5 stars) and social media assets, giving voters the ability to 'share', 'tweet', and 'like' each story.

The 2015 contest received over 100 entries from 40 countries and motivated thousands of readers to share their ideas about sustainability. The winning post, entitled "Western New York 2030," was submitted by RP Siegel, an author and inventor who shines a powerful light on environmental and technological topics from Rochester, New York.

For more information,



# Appendix

## USING THE PRINCIPLES TO DEFINE THE REPORTING CONTENT

This report has used the most current Global Reporting Initiative Guidelines. The GRI G4 requirements have been used as the assessment criteria to enrich the integrity of the Masdar Sustainability Report 2015.

## MATERIALITY

In accordance with the GRI G4 guidelines, Masdar has developed the report to ensure that only those aspects deemed material to Masdar stakeholders have been incorporated in the 2015 sustainability report. This has been elaborated on in the materiality section of this report.

## COMPLETENESS

Masdar has designed this report to ensure that complete and concise data is provided to allow for stakeholder evaluation and to help inform the decision-making process. The report also offers justifications for areas in the report where data is incomplete and remedial action plans are in place for this data's inclusion in future reports.

## STAKEHOLDER INCLUSIVENESS

As part of this reporting exercise, we feel we have successfully acknowledged all keys stakeholders and their specific issues related to Masdar's activities. The elements focused on in this report are in response to the communications with these stakeholders.

## SUSTAINABILITY CONTEXT

We at Masdar feel that this report highlights and includes the major sustainability related impacts that affect the defined operations and activities. The report addresses the identified economic, environmental and social issues with reference to their regional and global significance.

## USING THE REPORTING PRINCIPLES FOR DEFINING QUALITY BALANCE

In developing this report, we feel we have highlighted both positive and less positive performances in the selected activities outlined. The report is balanced in its content to provide a true account of Masdar's operations.

## COMPARABILITY

Where applicable, Masdar's 2015 report has been able to offer a comparison against the performance of material aspects set out in previous reports and will continue to highlight trends and performance to assist our stakeholders in making their assessments. We have followed the same reporting period of October to September, in this case October 2014 to September 2015.

## ACCURACY

We believe that both the quantitative and qualitative data is accurate and auditable. Any limitations and estimations have been clearly identified.

## TIMELINESS

This report is inclusive of the most up-to-date information and allows for a relevant assessment of the organisations current economic, environmental and social status of operations and activities.

## CLARITY

This report has been designed and worded to ensure that the reader is able to understand and comprehend the messages and information provided in a clear and concise manner.

## RELIABILITY

The report has been designed and subjected to a rigorous review internally. We have used various tools to ensure that the calculations and information are reliable, and we have utilised recognised methodologies that allow for the verification of data. Masdar has also taken the necessary action to have this report externally assured, both for the quality of data and for meeting the necessary requirements for 'in accordance' with GRI G4 guidelines' core option.

# External Assurance Letter

December 09<sup>th</sup> 2015



PO Box 46112  
Al Ghaith Tower, Suite 1202  
Hamdan bin Mohamed St  
Abu Dhabi  
United Arab Emirates  
Telephone: +971 (0)2 627 3400  
Fax: +971 (0)2 627 5764  
[www.rsk.co.uk](http://www.rsk.co.uk)

## Assurance Statement

### Background

Abu Dhabi Future Energy Company (MASDAR) has contracted RSK Environment LLC (RSK) to conduct an independent assurance of MASDAR's Corporate Sustainability Report 2014-15 (the Report) in its printed format, which was prepared in accordance with Core option of the G4 Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI).

This independent assurance statement is issued solely to MASDAR based on the terms of RSK's agreed scope of work.

This assurance statement provides the Report readers with an independent opinion on the reliability of information, based on RSK's assessment of the Report and underlying systems and evidence. The statement is intended both for the general readers and for stakeholders who have an interest in MASDAR's sustainability performance and challenges. The assurance engagement is based on the assumption that the data and information provided to RSK is complete and true. RSK explicitly repudiates any liability or co-responsibility for any decision a person or entity would make based on this assurance statement.

### Responsibility

MASDAR were responsible for preparing the Report and the information and statements within it. They were responsible for identification of material issues and stakeholders, for defining objectives with respect to sustainability performance, and for establishing and maintaining appropriate performance management and internal control systems from which the reported information is derived.

MASDAR's role in this verification process has been to provide the necessary data and evidence to support their assertions.

RSK's responsibility was to express our conclusions in relation to the assurance scope.



RSK Environment llc  
[www.rsk.co.uk](http://www.rsk.co.uk)



### Scope of Assurance

RSK's assurance included the verification of data management processes and reported information. This was carried out in the context of MASDAR's sustainability strategy, management processes and performance in the 12 month period ending on 30 September 2015.

The scope of work agreed upon with MASDAR included the following elements:

- Assess the robustness of the data management system, information flow and controls;
- Undertake an audit trail on selected claims and data streams to determine the level of accuracy in collection, recording and accumulation;
- Examine and review documents and data made available to RSK by MASDAR;
- Visit MASDAR head-office;
- Review MASDAR's approach to materiality analysis;
- Perform sample-based audits of the mechanisms for implementing MASDAR's own sustainability-related policies, as described in the Report; and
- Perform sample-based audits of the processes for generating, gathering and managing the quantitative and qualitative data included in the Report.

The assurance was made at a moderate level of assurance.

### Limitations

Inherent limitations affect the conversion of electricity, water, waste and fuel used to calculate carbon emissions. Conversion to carbon emissions is based upon information and factors derived by independent third parties. RSK's assurance work has not included examination of the derivation of those factors and other third-party information. RSK's assurance work has not included challenging the scientific work undertaken by independent third parties when calculating these emissions factors.

### RSK Independence

RSK did not provide any services to MASDAR during 2014-15 that could compromise the independence or impartiality of the findings, conclusions or recommendations in this statement. RSK was not involved in the preparation of any statements or data included in the Report, except for this assurance statement.



## Methodology

RSK planned and performed the work to obtain all the evidence, information and explanations that were considered necessary in relation to the above scope.

Verification of the full Report was based on GRI Guidelines. Throughout the assurance process, RSK concentrated on the issues that are believed to be most material for both MASDAR and its stakeholders.

As part of the verification RSK has:

- Challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, information flow and controls;
- Executed the audit trail on selected items and data streams to determine the level of accuracy in collection, and recoding;
- Examined and reviewed documents, data and other information made available to RSK by MASDAR;
- Undertaken a visit to MASDAR head-office;
- Conducted interviews with information owners (four people);
- Reviewed and challenged MASDAR's approach to materiality analysis;
- Performed sample-based audits of the mechanisms for implementing MASDAR's own sustainability-related policies, as described in the Report;
- Performed sample-based audits of the processes for generating, gathering and managing the quantitative and qualitative data included in the Report; and
- Provided recommendations to MASDAR for future reporting.

An initial readiness assessment allowed MASDAR to provide documentation for review by RSK and implement corrective actions for discrepancies detected during both quantitative and qualitative reviews.



## Conclusions

In RSK's opinion, information presented in the Report provides a material and complete representation of MASDAR performance in the context of sustainable development. The verification process confirmed that the Report was prepared based on factual statements and that the data contained within the Report are accurate. It is a fair representation of initiatives, targets, progress and performance on MASDAR's sustainable development achievements.

The Report provides an adequate and fair account of MASDAR's sustainability performance on material aspects and demonstrates satisfactory disclosures of the Core option of the GRI's G4 sustainability Reporting guidelines. RSK confirms that the GRI requirements for Application 'in accordance criteria' have been met.

- **Materiality:** MASDAR has identified material issues by conducting internal assessments of risks and opportunities, and the stakeholders mapping. MASDAR materiality assessment results have been adequately used as a basis for the preparation of the Report, guiding the identification of issues and ensuring that the emphasis given to assertions and information on various topics is proportionate to their relative materiality.
- **Completeness:** Based on RSK's review and within the reporting boundary defined by MASDAR, RSK noted progress had been made in presenting information in a format which facilitates understanding and the comparison of performance with previous years, highlighting the key efforts and achievements over the last four years. Within the scope of work, RSK was not able to establish whether changes in reported performance are the result of changes in actual performance, or due to changes in activities and operations.  
RSK is not aware that the Report omits relevant information that would significantly influence stakeholder assessments or decisions or that reflect significant economic, environmental and social impacts.
- **Accuracy:** The data measurement techniques and bases for calculations have been adequately described to RSK. Although no systematic errors have been detected RSK identified some manual errors which have subsequently been corrected. MASDAR is committed to continually improving the quality of data and is in the process of adopting a more structured data management system. In the final form of the Report, RSK has not found material inaccuracies in the data verified or instances where data is presented in a way which significantly affects the comparability of data.
- **Neutrality:** RSK considers the information contained in the Report to generally provide a fair and balanced representation of MASDAR's CSR and Sustainability management approach, performance and challenges in 2015, both in terms of content, tone and emphasis.
- **Comparability:** The information in the Report is presented in a format that allows users to see positive and negative trends in performance.
- **Responsiveness:** MASDAR stakeholder's mapping demonstrates a commitment to dialogue with its stakeholders.



### Recommendations

The following is a summary of the observations and opportunities reported back to MASDAR. However, these do not affect RSK's conclusions on the Report, and they are consistent with MASDAR's objectives.

- The outcomes of the stakeholders mapping exercise that took place in 2014 needs to be assessed with regards to how beneficial it was in understanding the stakeholders and the manner by which they were engaged.
- The figures reported in 2015 pertaining to energy and waste need to be further examined, with a view to assess current practices and identification of areas of improvement.
- A more structured approach to measuring and reporting performance on the following aspects should be developed: contribution to global renewable energy; and sustainability performance of MASDAR City in light of more third party owners coming on board products.
- Definition of boundaries of reporting on the different aspects would benefit from a more structured approach.

A handwritten signature in blue ink, appearing to read 'Ruba Farkh'.

**Ruba Farkh**  
Associate Director

A handwritten signature in blue ink, appearing to read 'Fergus A Collie'.

**Fergus A Collie**  
Managing Director



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## MATERIAL ASPECT: HUMAN RIGHTS GRIEVANCE MECHANISMS

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## SUB-CATEGORY: SOCIETY

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## MATERIAL ASPECT: ANTI-COMPETITIVE BEHAVIOR

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