

# ***Morocco and Italy for the Transition to Clean Energy towards Africa***

Italian Energy Efficiency Platform



eFM  
Integrated Energy Service  
Management

*Rabat, 9 March 2016*

**eFM**

## Introduction

## Sustain Engaging Places for a Better Life

eFM is an **Engineering Company** focussed on **real estate**, **facilities management** and **smart buildings**: our business wants to transform people's lives by delivering a better environment and improving building lifecycles.



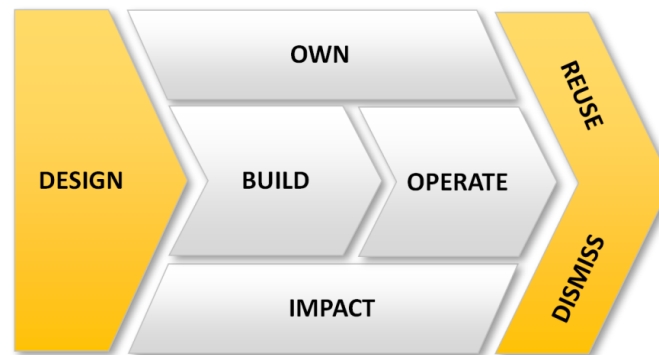
CONSULTANCY



ENGINEERING SERVICES



INFORMATION SYSTEMS



more than 250 experts

- 85% graduates, mostly engineers and architects
- 90% retention rate

eFM offers integrated Real Estate solutions to all players in the sector: **Constructors, Designers, Owners, Users and Suppliers**



### SUSTAIN

We sustain people, planet and portfolio through our Platform



### ENGAGING

Attractive and enjoyable settings make people happier, inspired and trustworthy



### PLACES

A usable place is the convergence of real and virtual: we design places with the digital realism in mind

# eFM WW Presence

**GLOBAL SOLUTIONS WITH  
LOCAL DELIVERY**



Corporate Real Estate Advisors



## CREA offices

- Argentina
- Austria
- Brazil
- Chile
- Colombia
- Germany
- Italy
- Nigeria
- Panama
- Peru
- Portugal
- Spain
- UK

## CREA partners

- Angola
- Bulgaria
- Croatia
- Czech Republic
- France
- Hungary
- Mexico
- Poland
- Norway
- Romania
- Russia
- Slovenia
- United Arab Emira
- Turkey
- USA



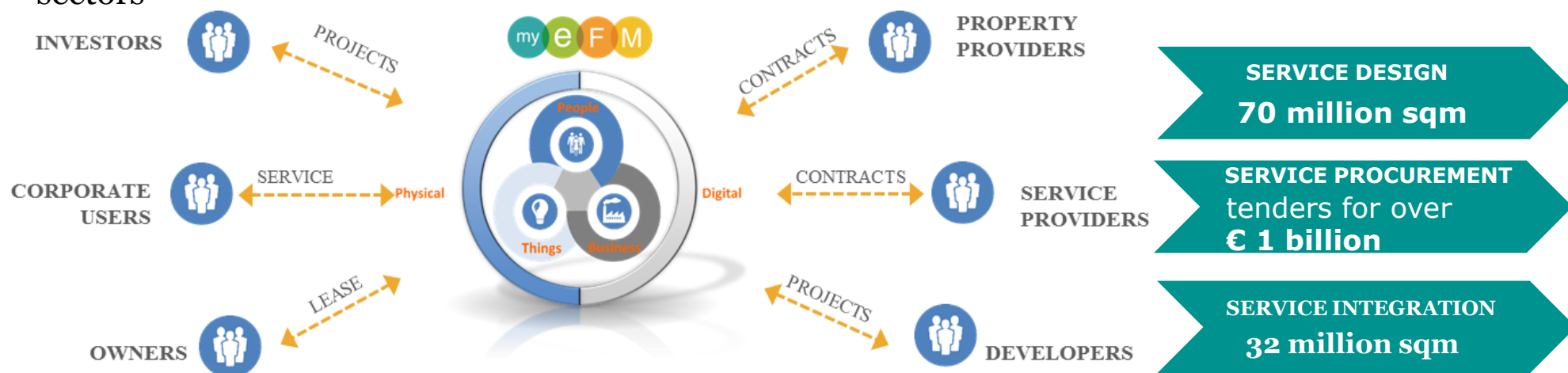
BUSINESS FACILITIES

<b>INDUSTRIAL CORPORATE USERS</b> 	<b>FINANCIAL INSTITUTIONS</b> 	<b>UTILITIES &amp; MEDIA</b> 
<b>TRANSPORTATION &amp; LOGISTICS</b> 	<b>SERVICE PROVIDERS</b> 	<b>DEVELOPERS</b> 
<b>PUBBLIC ADMINISTRATION</b> 	<b>OWNERS</b> 	<b>RETAILERS</b> 

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## Service Transactions

Knowledge and Platform at the heart of our integrated and holistic approach, across different sectors



### CORPORATE



**16 mln** sqm managed

### HEALTH



**4,5 mln** sqm managed

### RETAIL



**3 mln** sqm managed

### AIRPORTS



**81 mln** travelers/year

### HOUSING



**6 mln** sqm managed

### EDUCATION



**9,2 mln** sqm managed

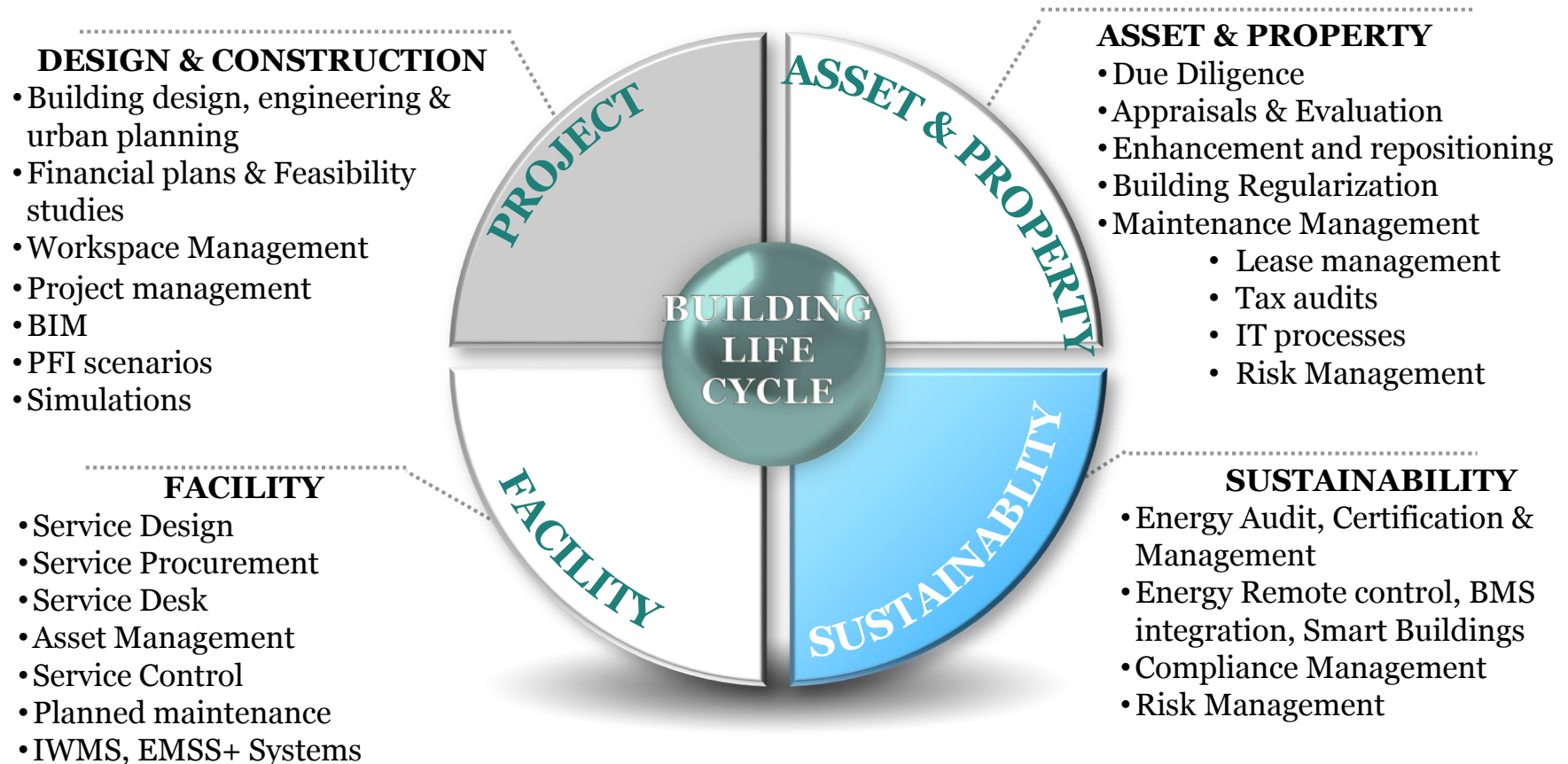
### BANKS



**5 mln** sqm managed

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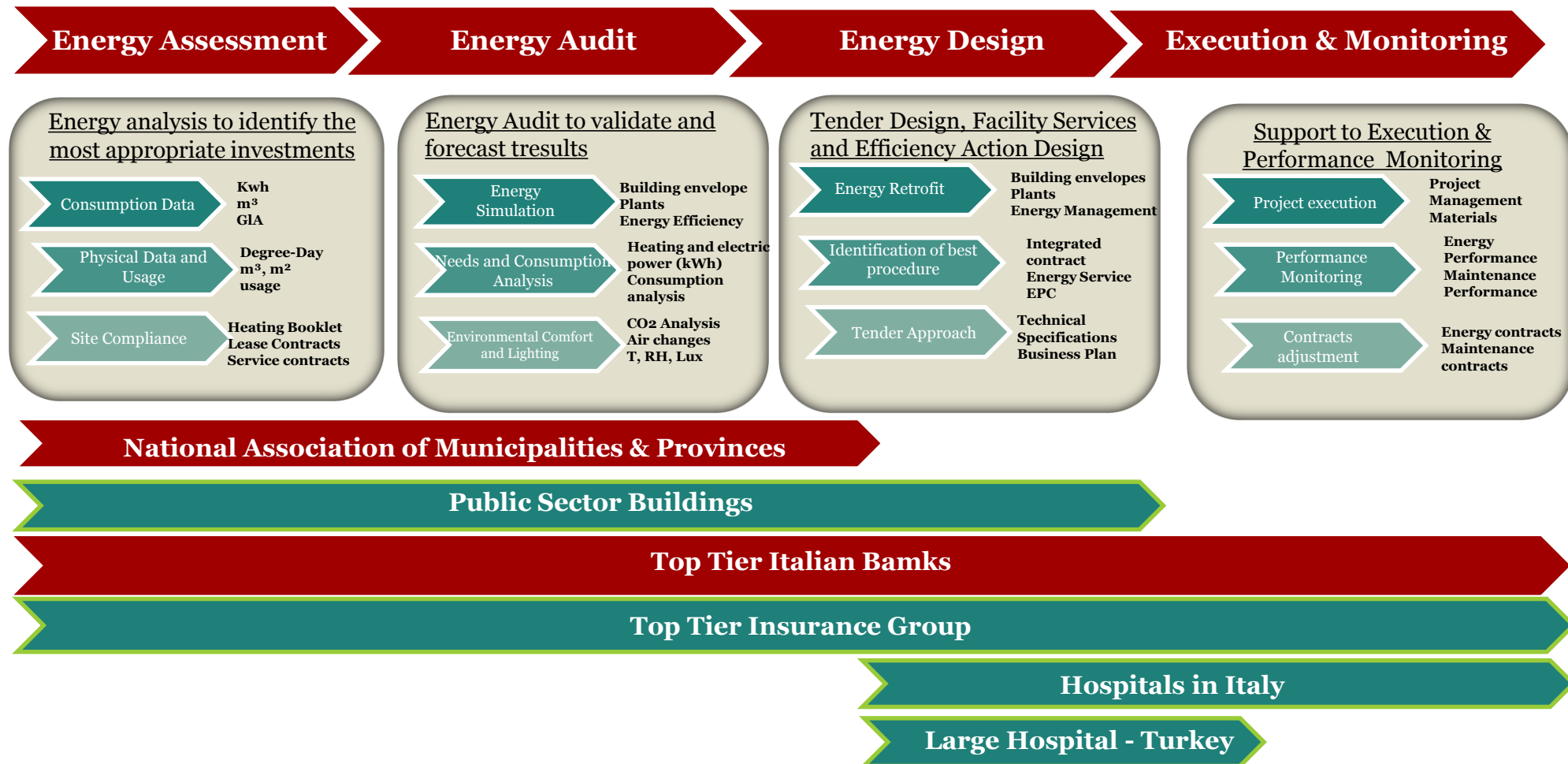
## Main Areas of Activities



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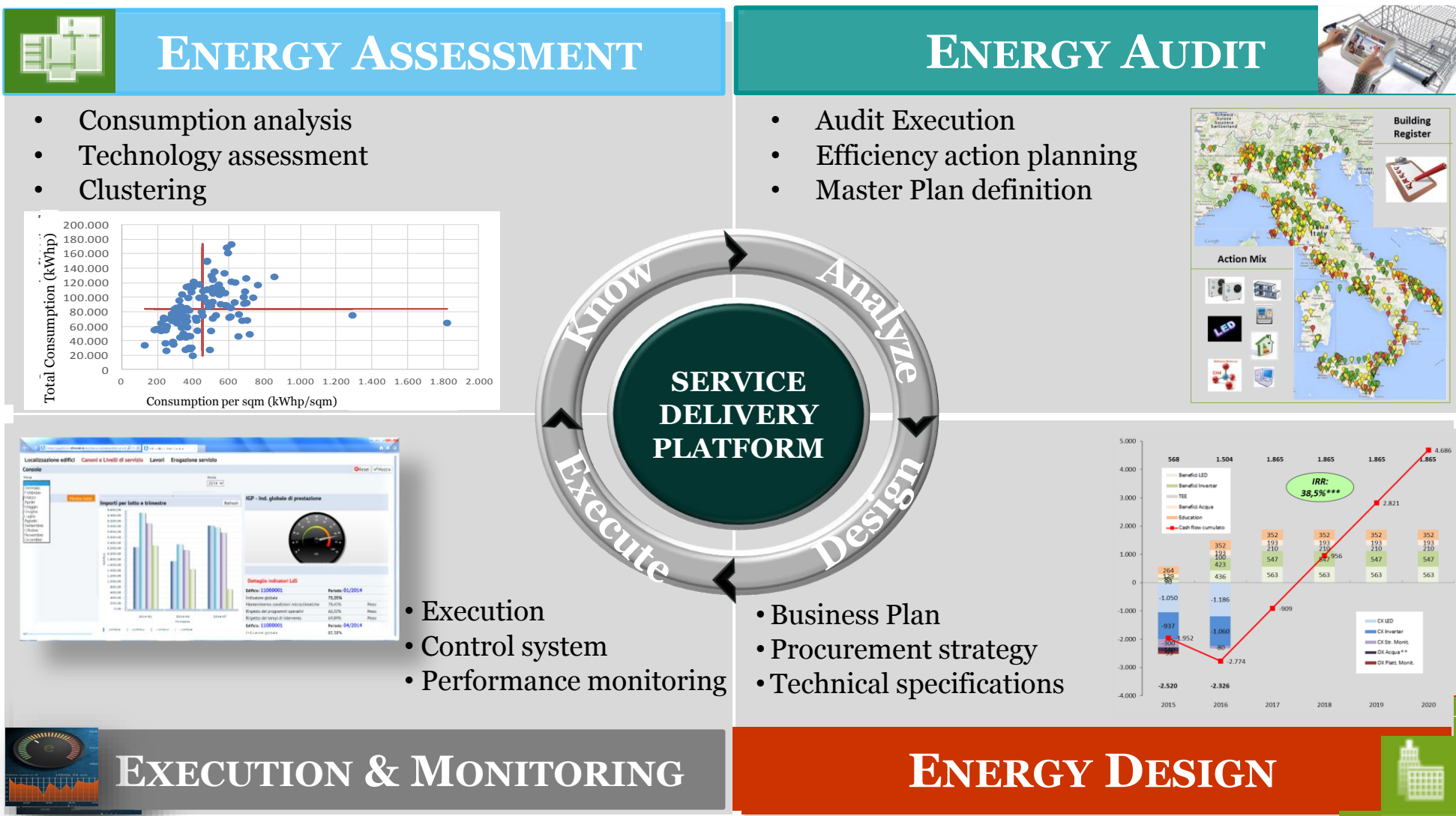
# Energy Management Solutions – Experiences and approaches

Path for efficiency programs and integrated management of the energy value chain



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# Case history: Top Tier Banks – Energy Efficiency Management





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# Case history: Top Tier Insurance Company – Trigeneration Plant

eFM built in the North of Italy a **1,5 MW trigeneration plant**. A second machine is under construction, ready in June, same power.

Savings on primary energy **25%**

Savings on **CO<sub>2</sub>** : **2.662 t/yr**

- 1 **Plant Feasibility Study**
- 2 **Main contractor** for both **construction** (including project management, *operations accounting, managing suppliers and subcontractors*) and **technology plants**
- 3 **E.S.Co.** (Energy Service Company)

VAN **8.077.740** €

### TECHNICAL INFO

### FINANCIAL INFO

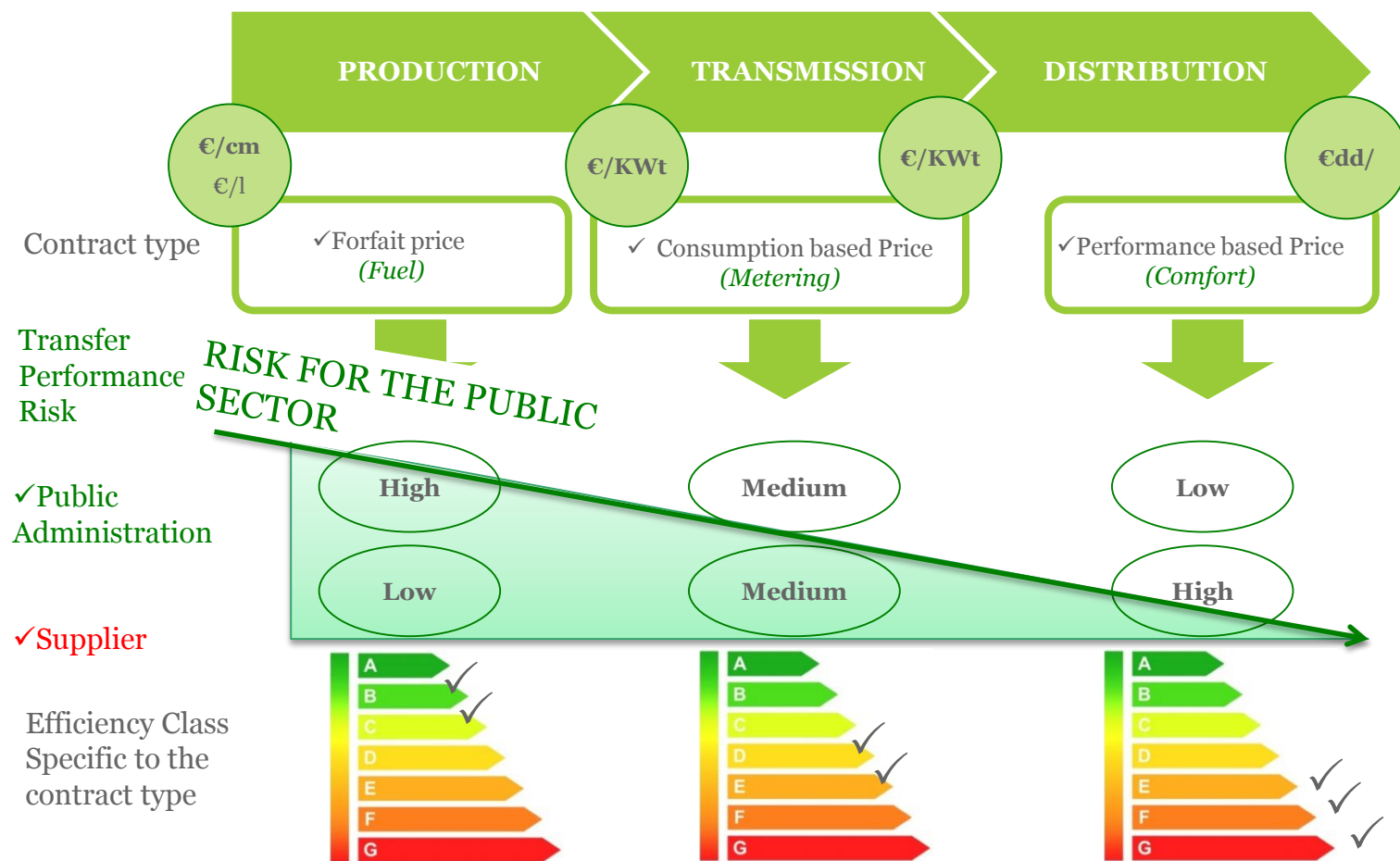
COGENERATOR	Electrical Power	1,560 MW	IRR	34%
	Thermal output (8%)	1,671 MW	VAN	€ 8.077.740
	Electrical Efficiency	41,00%	TEE/YEAR	899
	Thermal Efficiency	43,80%	PBP	4,5 years
	Total Efficiency	87,10%		
ABSORPTION CHILLER	Chilling Power	2,300 MW		
	COP	73%		





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# Case history: Public Sector Buildings– Managing Risk, the EPC Contract



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## Case history: Public Sector Buildings– Expected EPC Savings

Maximum Yearly Expense	€ 31.118.871
Investment for energy retrofit	€ 64.324.475
Control System	€ 10.474.500
Public Admin. Yearly savings	€ 4.290.681
IRR - Internal Rate of Return	37,20 %
ROE - Return on Equity	47,48%
<b>925 Schools</b>	

Operation	Operation value €	Retrofitted Buildings	Energy Savings
LED	34.768.260	875	28,50%
Thermal Plants	17.229.437	670	11,00%
Solar Thermal Plants	1.496.000	68	0,33%
Photovoltaic	1.500.000	38	1,31%
Building Envelope	3.678.313	14	0,13%
Doors, windows	2.834.295	18	0,24%
Insulating Coating	2.818.168	15	0,08%

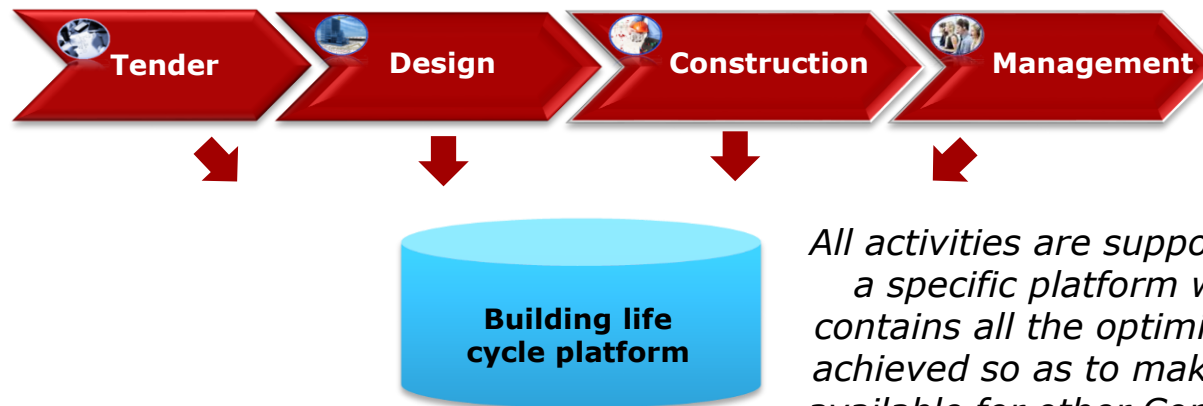
Savings on Heating 11,78 %	Savings on Electricity 29,81%
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## **eFM**

### Concessions and Project Financing Initiatives

eFM proposal includes different solutions that cover all phases related to PFI initiatives:

- **Tender** phase: ensure the alignment of technical project with administration requirements
- **Design** phase: identify the **best** way to provide services for the specific building
- **Construction** phase: monitor the **building realization** and reduce **construction cost** and **time** (reducing gap between construction and design phases)
- **Management** phase: ensure that **provided** service quality **meets** the **designed one**



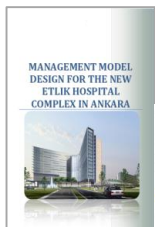
*All activities are supported by a specific platform which contains all the optimizations achieved so as to make them available for other Concession and PFI Initiatives*

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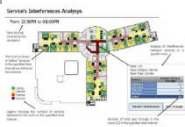
## Concessions and Project Financing Initiatives

### Design phase for the new HOSPITAL in Turkey

*eFM has provided our Client with the design of the O&M Company Governance Model, the specifications for the 19 no-core services, supporting the Hospital Structure Design with the simulation of logistic flows designed for four services.*



Design of the **O&M Organizational Structure** for Services Governance



Check **services logistic flows** and the **building space sizing**

Definition of **technical specifications** for 19 no core services



- **Governance Model** aimed at minimizing operational risks and management costs
- **19 Technical Service Specifications** in compliance with the MoH requirements / structure needs, ensuring high quality services, cost compliance with the delivered quality and discussed with **Mott MacDonald**
- **Simulation activities** aimed at **4 services logistic optimization** (catering, linen, waste, portering)

→ **€ 2.369.913,22**

Annual savings for catering, linen and waste logistics

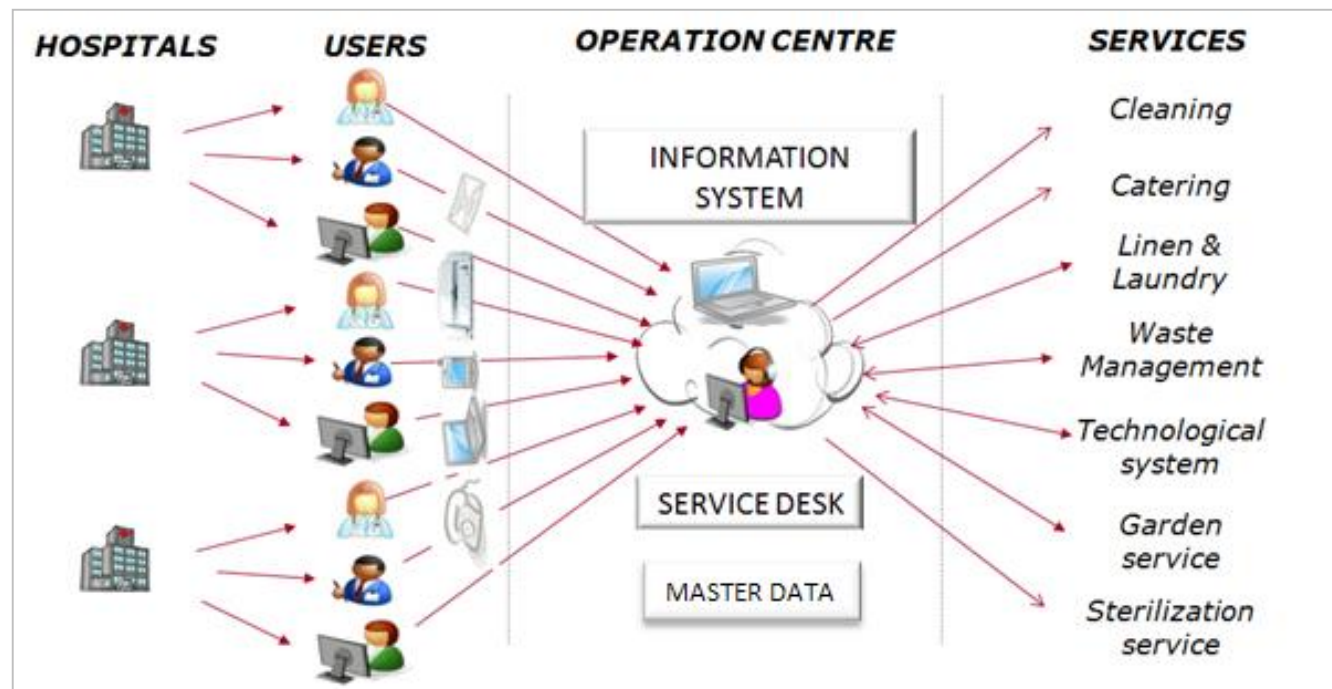
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## Concessions and Project Financing Initiatives

### Service Integrator for the Italian Hospitals

*eFM is providing the Client with the Service Integrator Activity for managing all no-core services delivered in the four hospital structures, ensuring the optimization of the entire building life-cycle and the continuity of the services provisioning*

#### SERVICE INTEGRATOR ACTIVITY



#### MANAGED VOLUMES

**4**

Number of  
Hospitals  
managed

**110.000**

Internal Sqm  
managed

**6.000**

Total work  
requests  
received

**321.000**

Transactions  
for Catering  
service

**106.000**

Transactions  
for Sterilization  
service

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## Concessions and Project Financing Initiatives: the Smart Box

