



Technology in FM: Really a silver bullet?

The FM industry in the GCC is evolving towards the international productivity-driven business model; the trend is led by the UAE but only nascent in KSA

In the past 3 years, FM clients across the GCC have started to embrace two international trends:

- A trend towards longer contracts with their FM providers, now typically 3 - 5 years
- The inclusion of more output-based targets in the contract (i.e. targets directly related to the service delivered) replacing the traditional requirement for specified headcount

These trends are most pronounced in Dubai, accelerating in Abu Dhabi (and also Qatar), but are currently only nascent in KSA.

Technology has been a key enabler of these changes, through its impact on:

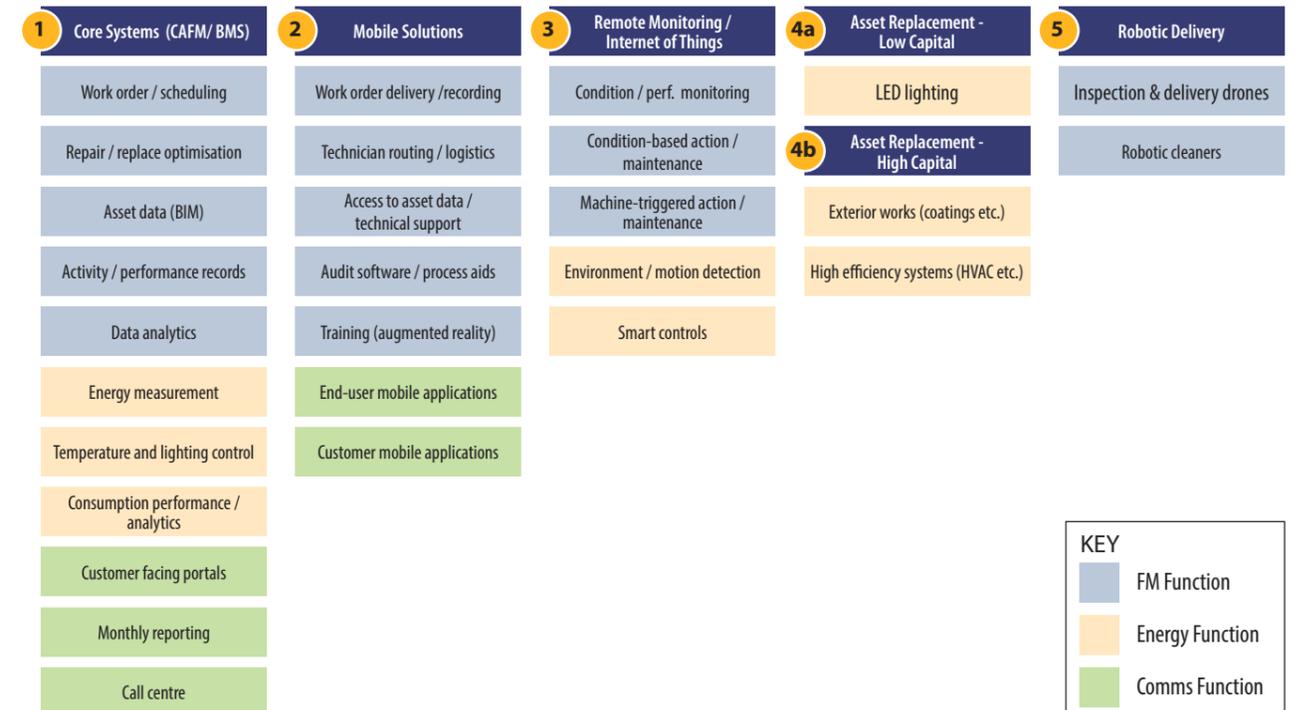
- Productivity – enabling more efficient and effective delivery of FM services
- Service quality - ensuring consistent service delivery processes and standards
- Transparency – allowing customers to observe directly and in real-time the performance of FM providers.

As contracts become more output-driven, the axis of competition moves increasingly to service quality and productivity. Improved transparency has given clients the confidence to move to output-driven contracts and release the potential for productivity improvements.

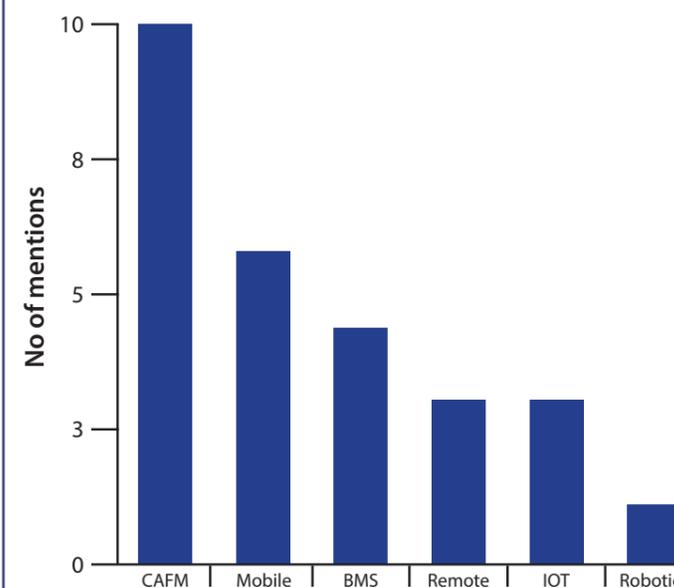


Technology is a key enabler of this trend with CAFM, BMS, mobile solutions and remote monitoring considered to have the greatest impact on service delivery

The technology landscape, illustrated below, is well established and is being followed in the GCC. In a programme of interviews conducted in the summer of 2016 with FM providers in UAE and KSA, most interviewees agreed that the potential benefits in the region are similar to those achieved internationally. Interviewees also considered that core systems (CAFM, BMS) still offered the greatest upside potential, particularly when enhanced with mobile and remote monitoring technologies.



Which FM technologies do you see as the most beneficial?



"There is no doubt that CAFM, BMS and mobile communications generate the greatest benefits. IoT and sensors come next"
UAE FM Provider

"CAFM (with an audit module) and handhelds are the key technologies, driving reductions in the volume of work, and increases in technician and helpdesk efficiency"
International FM Provider (UAE)

"A basic CAFM is no longer sufficient – the key component is now mobility. We use smartphones for work orders and SOP information"
UAE FM Provider

"In the past 3 years we have seen a huge growth in the use of mobile technologies – all of our proposals now include mobile"
International FM Provider (UAE)

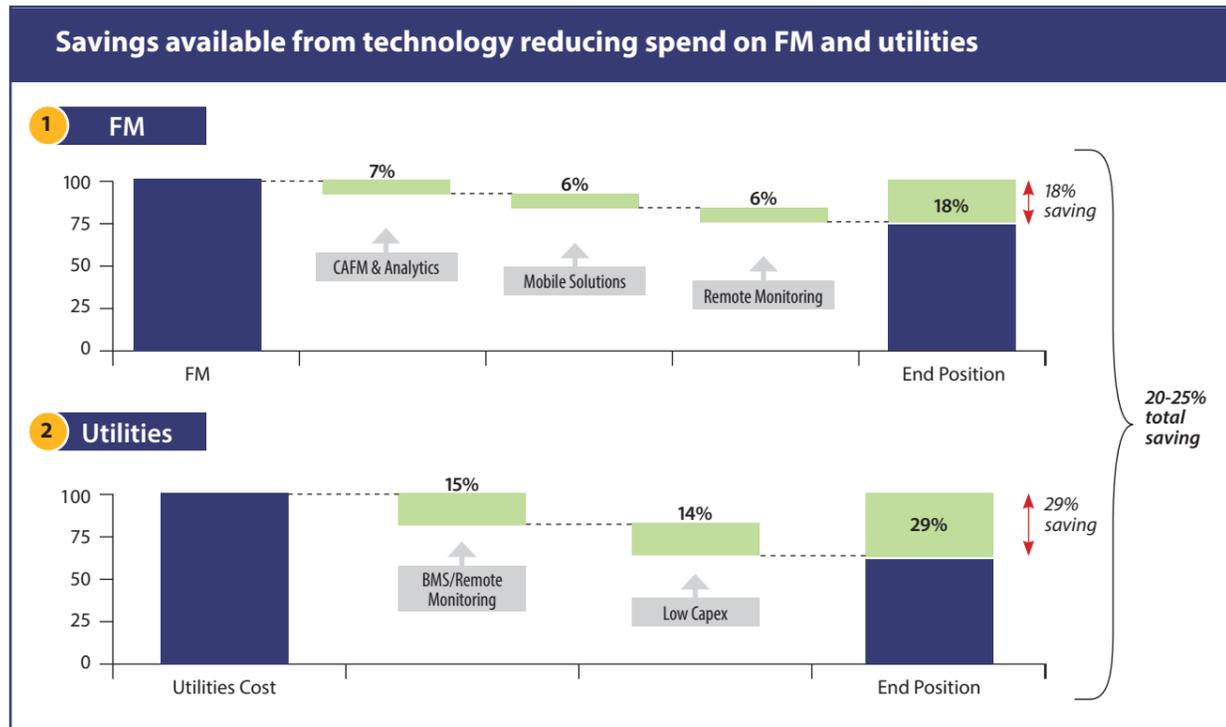
"Remote monitoring can make substantial savings as it saves time on regular inspections. Although labour cost is lower here the economics still stack up"
International FM Provider (UAE)

"Most BMS systems are underused. Merely commissioning them can make a big difference to energy usage"
UAE FM Provider

Source: Credo interviews with GCC FM providers, June – September 2016

We calculate that there is potential to save 20 – 25% building operating costs (FM and utilities) through effective application of existing technologies

As well as savings on operating cost, technology can bring significant benefits to customer experience



Technology impact on customer experience

Who gains?	Benefits
End user	<ul style="list-style-type: none"> Improved service levels Unobtrusive maintenance <ul style="list-style-type: none"> Improvements in work force management and predictive analytics enable reduced failure rates Reduced asset failure has positive impact on occupants' quality of life Where faults do occur, occupants can register these more easily, and a better managed workforce is more responsive to address them
Procuring customer	<ul style="list-style-type: none"> Transparency Management information <ul style="list-style-type: none"> Improved management information enables transparency Clients know that work has been completed, building trust between FM and client Clients can leverage data for more efficient planning, budgeting and procurement
	<ul style="list-style-type: none"> Reduced costs Shared benefits <ul style="list-style-type: none"> A more efficient maintenance programme brings cost savings to the client (where contract structures enable this, e.g. gain sharing)

We calculate the total potential saving in building operating costs from the application of technology as 20 - 25%, comprising a 15 – 20% reduction in FM cost and a 25 – 30% reduction in energy cost. This is illustrated in the figure above.

These benefits come from the application of CAFM, BMS, mobile solutions, remote monitoring and low capex energy saving retrofits.

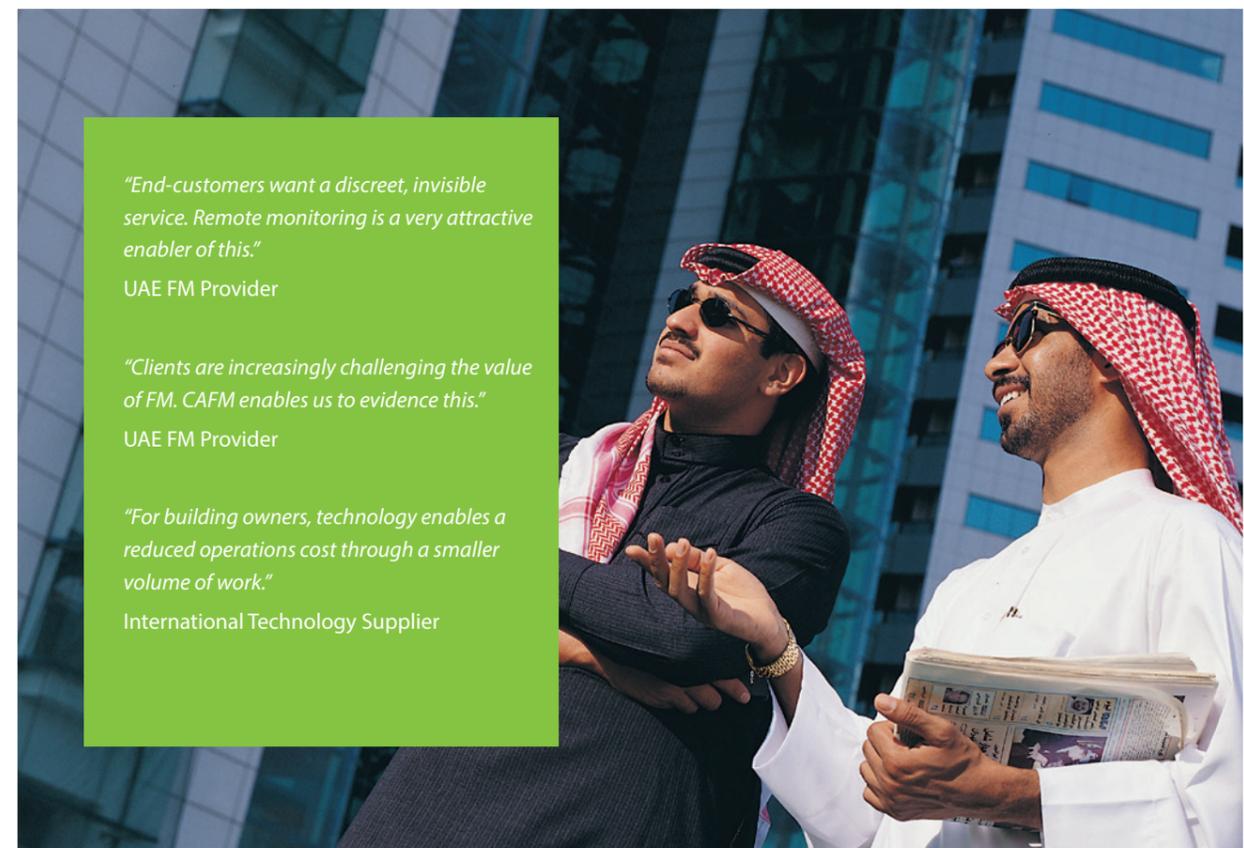
The calculation is based on a model 20 - 40 story tower in the UAE, built between 5 and 10 years ago. Our starting point is typical current energy consumption and current technician efficiencies for major hard and soft services.

FM and energy consumption make up by far the bulk of building operating costs.

- **FM accounts for approximately 44% of cost, of which 70% is labour**
- **Energy accounts for 56% cost, of which 60% is chilling**

The analysis considers the impact of the various technologies on the KPIs for maintenance volume, technician efficiency, and energy efficiency, illustrated in the table to the right.

Technology		Volume efficiency <i>Reduced volume of work</i>			Technician efficiency <i>More work per technician</i>	
		Failure rate	Rework	First time fix	Maintenance time	Wrench time
CAFM	Work order/scheduling					
	Repair/replace					
	Performance records					
Mobile Solutions	Work orders					
	Routing/logistics					
	Data/process aids					
Remote monitoring	Condition monitoring					
	Action initiation					
Robotics	Drones					
	Robotic service delivery					



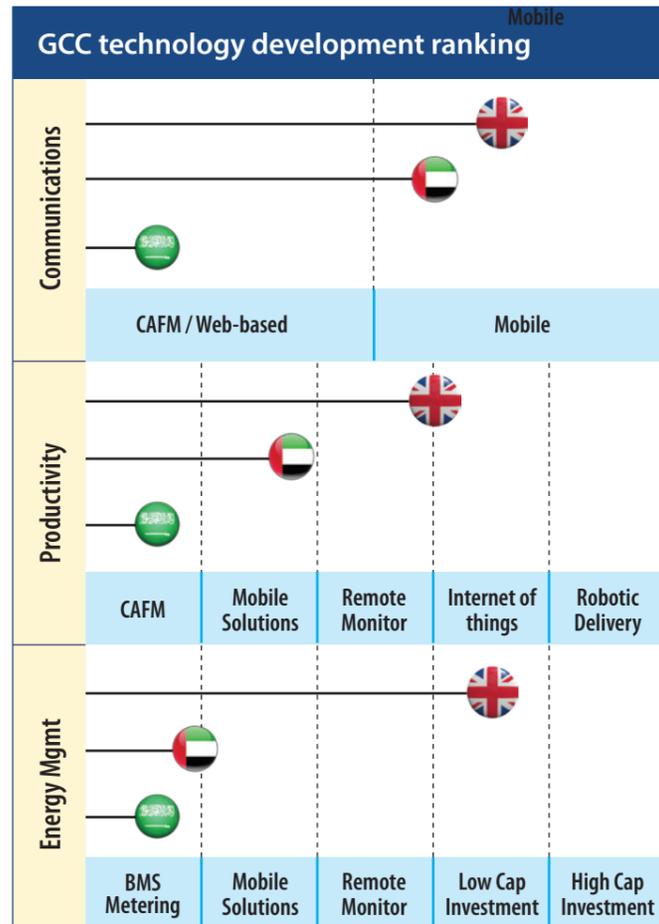
"End-customers want a discreet, invisible service. Remote monitoring is a very attractive enabler of this."
UAE FM Provider

"Clients are increasingly challenging the value of FM. CAFM enables us to evidence this."
UAE FM Provider

"For building owners, technology enables a reduced operations cost through a smaller volume of work."
International Technology Supplier

GCC countries are at different stages of technology development, with the UAE clear leader in the region

Firms in the region are taking a variety of approaches to technology implementation, with the most effective concentrating on integration and training



United Arab Emirates
 The UAE is moving rapidly along the technology roadmap in FM productivity and communications, with the leading companies (particularly in Dubai) now offering technologies as advanced as seen in Europe or the US.
"In the past 3 years we have seen a huge growth in the use of mobile technologies – all of our proposals now include mobile"
 International FM provider (UAE)

Key to that development has been the adoption by customers of longer term (3 – 5 years) output-based contracts.
 UAE remains well behind the West in energy management, with customers still proving unwilling to invest in energy saving technologies, even where a business case can be established.
"Although energy efficiency has a high profile in the UAE at the moment, there is still a lot of scepticism among customers. ESCO accreditation is helping to bring much needed transparency and trust to the market"
 International FM provider (UAE)

Kingdom of Saudi Arabia
 Technology in KSA remains in general at a fairly basic level
"Many of our sites don't even have asset registers, although we do use a basic CAFM to help manage the work"
 International FM provider (KSA)

The preponderance of input-driven contracts provides little incentive to invest. Our interviews suggest that there remains a lack of trust between customers and suppliers, and in the Government sector, regulatory barriers.

"Our biggest challenge is poor quality contractors and labour, exacerbated by Government procurement laws which force us down the path of lowest cost regardless of quality"
 KSA Government Agency

A drive towards greater transparency of performance data, aligned with the introduction of some output driven elements in contracts could start to shift this.

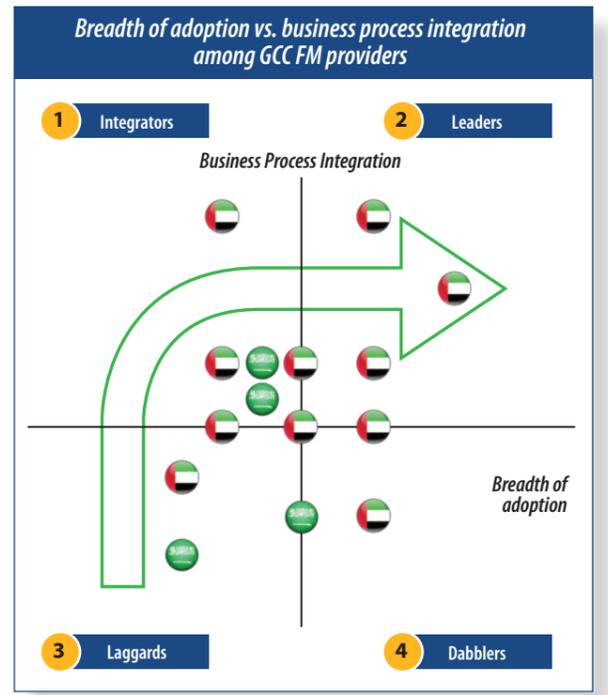


Our interviews suggest that firms in the region are exhibiting one of four approaches to technology adoption:

- Integrators** are actively integrating technologies into their business processes and incorporating the benefits across all contracts
- Leaders** show a strong integration profile across a variety of technologies
- Dabblers** are including technology investments and their benefits as options for the customer to select
- Laggards** are offering technologies only where specified by the client in the contract

Technology will only add value if integrated into the firm's business processes. Where technology is transformational there may be major process and capability changes required, involving substantial training if they are to be effective.

"Labour on the ground is not necessarily that skilled with IT systems. Making things work requires a lot of training which needs to be factored into the time and cost"
 UAE FM Provider



Firms that fail to integrate technology into their core business processes and training will not be able to deliver the service and productivity potential. As the axis of competition shifts from factor cost to productivity they will struggle to remain competitive.

As the axis of competition shifts towards productivity, technology investment will become essential for success

- The FM industry in the GCC is evolving towards the international productivity-driven business model, with longer contracts and output-driven contract terms. These trends are most pronounced in Dubai, accelerating in Abu Dhabi (and also Qatar), but are currently only nascent in KSA
- The greater transparency afforded through technology has been a key enabler of these changes, and the enhanced productivity possible through its application will make technology investment a key source of competitive advantage within the industry
- Today industry participants are in broad agreement that the greatest benefit comes from investment in CAFM, mobile solutions (field and customer) and remote monitoring
- Total potential savings of 20 – 25% building operating costs should be possible with the application of productivity and energy management technologies
- To be effective, technology investment must be accompanied by substantial process reengineering and training. To maximise advantage, suppliers need to be selective in the technologies they invest in and ensure that they are fully integrated into their business processes.
- Within an appropriate contract structure, technology can be the enabler of substantial improvements in productivity and quality. Recent developments in mobile, sensor and cloud technologies, together with future developments in IoT and data analytics will likely continue to drive that potential. In this respect technology really is a silver bullet
- However, evidence from western markets is that while technology creates competitive advantage to companies that adopt it effectively, much of the long-term benefit accrues to the customer. Good for the country and its infrastructure, but perhaps a double edged sword for the FM Industry