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RICS Strategic Facilities Management

Case Studies

Authored by:



rics.org/facilitiesmanagement

The background of the entire page is a blurred, grayscale photograph of a modern building's interior. It shows several people in business attire walking through a large, brightly lit space with high ceilings and large windows. The motion blur gives a sense of activity and flow.

RICS Strategic Facilities Management

Case Studies

Report for Royal Institution of Chartered Surveyors

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Contents

Foreword	5
1.0 Critical FM: Delivering strategic FM services at a major events venue.....	6
2.0 Critical FM: Facilitating business and pleasure at the world's busiest airport	14
3.0 Critical FM: How introducing smart working practices has helped National Grid create a sustainable legacy	20
4.0 Critical FM: Procurement via partnership – FM in health and social care	26
5.0 Critical FM: Providing specialist Facilities Management consultancy services in the United Arab Emirates.....	35
6.0 Critical FM: Working to deliver FM services at the largest dedicated rugby union venue in the world.....	41

Foreword



FM is all pervading and touches everyone, whether they realise it or not. Through study, work, leisure, travel, health and social care we are all users of facilities and facilities services delivered by the profession that is Facilities Management. In an increasingly competitive, global business environment, FM has a critical strategic role to play in the experience of the end user of buildings and facilities, and ultimately the success of the organisations operating from them.

This third edition of RICS case studies builds on the first two editions to further illustrate the strategic role FM plays in a range of different businesses, and the significant contribution FM can make to the performance and success of an organisation.

Whether delivered in-house or outsourced, or through a combination of both, for FM to be strategic, there needs to be a real understanding of the core business being supported so that there is clear alignment of FM strategy with the business vision and strategy.

Whilst FM encompasses a diverse range of technical skills and expertise with a focus on what is *done*, increasingly critical to successful delivery of FM services is the *way* things are done – and this draws significantly on the human element of FM. Fundamentally, this is about good communication and positive relationships.

The case studies illustrate different stages of FM globally. Common across FM however is the drive to innovate and change and there are remarkable examples of how this is being delivered through people and technology.

Innovation and change is also a feature of collaboration and partnership in FM. The axiom that two heads are better than one really is true. By thinking, planning, and working together, organisations can achieve continuous improvement and innovation and in some cases make major step changes that impact positively on the performance of the organisation.

FM has a major part to play in the design, construction and maintenance of an organisation's built assets, which can all have an impact on end user experience and satisfaction and business continuity. They also have a strategic role to play in delivering and supporting the sustainability agenda.

Returning to end user experience and customer satisfaction, this is another clear message common to the case studies. For FM providers this is about really understanding the needs and expectations of the client and the end user and meeting or exceeding these. This aligns with going beyond simply delivering the products and services of FM, and developing positive relationships with the customer and delivering a positive customer experience, which in turn impacts positively on the bottom line.

Tim Davidson-Hague MRICS

Head of Executive Education and Corporate Programmes,
Sheffield Business School, Sheffield Hallam University,
Board member of RICS Professional Group for FM

1.0 Critical FM: Delivering strategic FM services at a major events venue



Image source: Ververidis Vasilis / Shutterstock.com

The issues

Customer service is central to the health and sustainability of any economy, and organisations that deliver customer satisfaction are more likely to enjoy high levels of customer retention, recommendation and repeat business.

However, recent research¹ has shown that achieving excellence in customer service is becoming more difficult, with the July 2014 UK Customer Satisfaction Index (UKCSI) by the Institute of Customer Service (ICS) revealing a third consecutive fall in levels of customer satisfaction in the UK.

The reason for this fall, according to the ICS, is not because service standards have slipped, but because customers' expectations of service are rising. Today's customers are better informed and often have greater choice. They have become less tolerant and more demanding of the organisations they deal with, and are highly selective about where, and if, they buy. Most tellingly for any services-led organisation, when customers are dissatisfied they are increasingly likely to express or escalate it through social media.

Although Facilities Management has always been perceived as a service industry, there is a growing emphasis on customer service in FM², with a rise in new initiatives that

monitor customer satisfaction (meaning both the service-buying client and the end 'consumer' of the services), with the results now figuring in contract performance reviews.

Customer service is a paramount measurement of competency within the Facilities Management sector, where the customer's satisfaction score is now the second most important key performance benchmark³ for Facilities Management (after contracted / service agreements).

Strategic approach

Research carried out in 2014 by RICS on the benefits of maximising customer feedback⁴ has shown that it is often a challenge to identify the 'customer' of FM – be they the occupants or visitors of an office building, or customers at a retail, leisure or events venue. It is not always clear how these two seemingly disparate groups' needs can be aligned. Taking the example of an events venue (which this case study will focus on), the FM requirement has to meet the needs of both the staff working within the venue, and the venue's end users, be they for business or pleasure. The research suggests adopting the 'Outside-in approach', as outlined by Johnston *et al* in the publication – for example, instead of looking at a facility from the inside out, take the perspective of your customers, and try to match their needs.

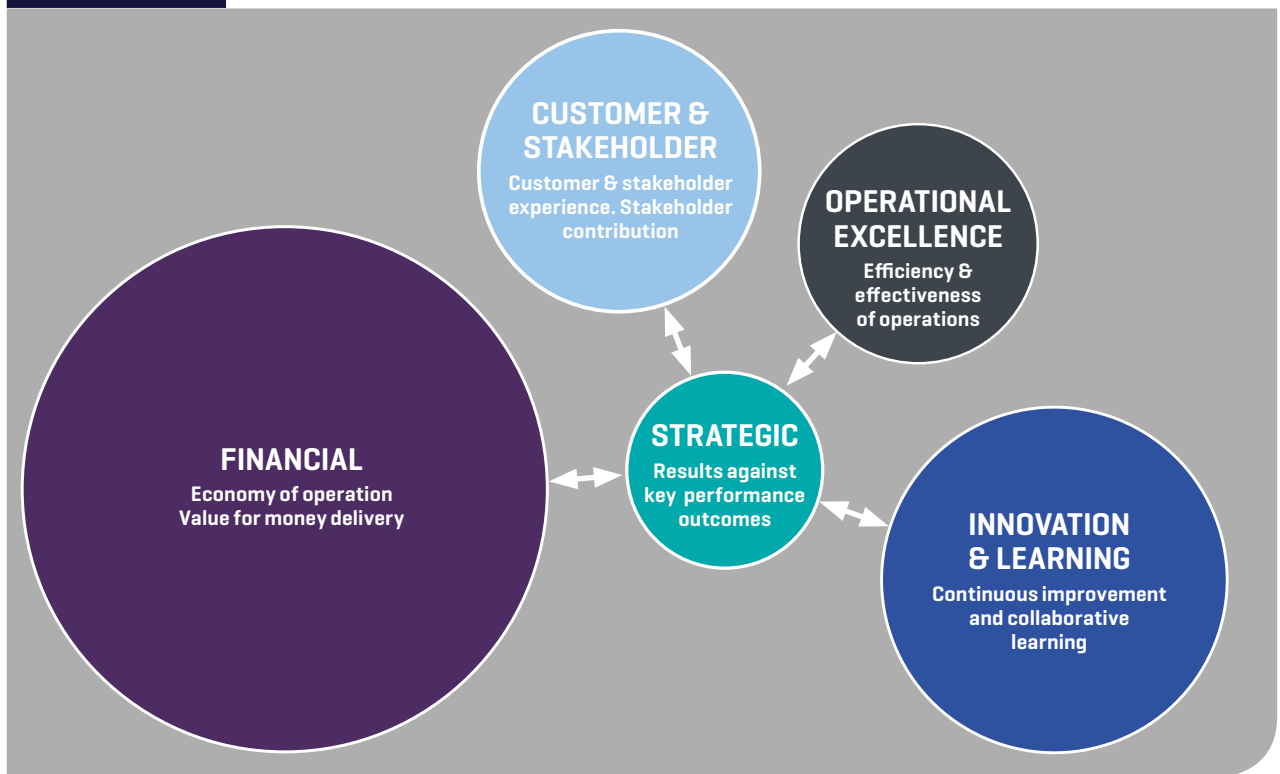
'Customers are primarily interested in the service experience rather than the delivery' quotes the research. 'Therefore, customers primarily care about the outcomes of service delivery, for example the standard of service, the emotions they felt, the benefits they gained and the productivity of their own outputs as a result.'

1 UKCSI Customer Satisfaction Index: The state of customer satisfaction in the UK: www.instituteofcustomerservice.com/files/ICS_UK_Exec_Summary-FINAL.pdf

2 Trends and opportunities report: www.i-fm.net/trends2015#

3 Leadership In Facilities Management – A Think FM Research Study – published by Workplace Law Group, 2013.

4 Balancing the performance scorecard: how to maximise customer feedback in Facilities Management: www.rics.org/us/knowledge/research/research-reports/balancing-the-performance-scorecard-how-to-maximise-customer-feedback-in-facilities-management/

Figure 1.1**Financial dominance in measuring FM performance**

Source: Adapted from Moullin [2002]

Therefore, for an events venue, an inside-out perspective to space and service provision would consider the event space, number of seats, tables, toilets and facilities (i.e. audio visual and projection equipment) available. This would be aligned to seasonal variations, and customer trends. However, if an outside-in perspective is adopted, i.e. from an event-goer's viewpoint, then the focus becomes about ensuring visitors receive inspirational and exciting experiences that they will remember; and they are able to use facilities that stimulate, assist and wow them.

Indeed, according to a survey⁵ conducted by event caterers, Jackson Gilmour in association with the Science Museum, a venue with a 'wow' factor is the most important aspect when attending an event. Of the 170 respondents, 43% stated that a venue with a 'wow' factor creates the best first impression at an event, closely followed (31%) by a warm welcome from hosts (i.e. good customer service) and a well-organised reception area (23%). 38% also stated that the venue's location and ease of access is the most important factor when considering whether or not to attend an event.

Customer feedback is evidently an essential tool when establishing a competitive edge, and should be given as much precedence as financial metrics when

looking at service delivery. However, as RICS' research demonstrates, the scorecard is not always balanced in this regard, and financials often dominate the measurement of FM performance.

It also identified the link between employee motivation and customer satisfaction, and noted that 'employees with positive outlooks on their roles and their responsibility to customers can directly influence customer perception of service delivery'.

Whoever the customer is, for FM it is crucial that a culture must be built that supports a constant alignment to customer and employee needs, and actively uses customer feedback to help deliver excellence in FM service delivery.

In order to measure performance, it has been noted⁶ that FM should track 'moments of truth' – to figure out what makes a great customer experience, and how it delivers this for individuals.

In 2013 there were an estimated 1.25 million business events⁷ in the UK, accounting for approximately 148 million business event days. It is a growing and competitive market where the quality of the facilities delivery can directly impact on the success of the venue.

5 <http://jacksongilmour.com/science-of-events-survey-reveals-guests-prefer-venues-with-wow-factor>

6 Raising the Bar: City Roundtables (Phase II): RICS: www.rics.org/uk/knowledge/research/research-reports/raising-the-bar-enhancing-the-strategic-role-of-facilities-management/

7 UK Events Market Trends Survey: www.evcom.org.uk



Image source: 1 and 2: Arena Photo UK / Shutterstock.com
3: Paul Stringer / Shutterstock.com

Case study

NEC Group

The National Exhibition Centre (NEC) in Britain's second city, Birmingham, is one of the UK's most iconic events venues, which, since its opening in 1973, has staged some of the UK's leading shows and exhibitions, from large-scale pop concerts to auto-sport events and dog shows.

The NEC Group⁸ encompasses four venues: the NEC itself, the Genting Arena, the International Convention Centre (ICC) and the Barclaycard Arena – which, between them, welcome over four million visitors per year. Each of the venues has a unique identity with a defined culture, such as pride, wow, and delight.

The NEC's corporate objective is to be one of Europe's most prestigious venues for exhibitions and events and the UK's number one choice for organisers, exhibitors and visitors. It aims to provide services that maintain its position as a leading venue management company in a highly competitive market.

The company's ethos is built around values of customer, energy, teamwork and spirit, and it dedicates time and energy towards working with and for the community, creating jobs and building careers with its current and potential workforce, mitigating its impact on the environment, and encouraging its suppliers and customers to being committed to corporate social responsibility.

Since 1 July 2012, OCS (a part of the OCS Group, specialising in the provision of Facilities Management services, including cleaning, catering, security services and waste) has been delivering the major soft FM services across all the NEC's venues, including security and event stewarding, traffic and car park management, portering, cleaning, waste management and helpdesk services.

Customer service

According to Brian Pell, Director of Operations at the NEC, when the OCS contract started in 2012, customer service was 'good', but good customer service was no longer good enough. He says:

"I joined the business nearly four years ago from a retail background, and what I found was that the standard of customer service at the NEC Group was 'good', but not 'great'."

⁸ www.necgroup.co.uk



One of the major challenges of running such a diverse set of venues is in satisfying what are essentially four types of customers. These comprise:

- **the organisers** – who hire the halls and who focus on the logistics around the sites and the level of facilities they can offer exhibitors, including security, traffic and waste;
- **the exhibitors** – who choose to buy a space in one of the halls;
- **the trade customers** – predominantly business people who visit the exhibitions, usually for free; and
- **the consumers** – members of the public who pay to attend concerts or shows.

Says Pell:

“From all these visitors we’ve got different responses and different interactions so that they have differing expectations. It’s very complicated.”

Pell and the Executive Board were keen to find a soft services provider that shared their values of delivering fantastic customer service, and were looking for something akin to that found at a hotel or a good shopping centre.

It was decided to put the NEC contract out to tender, and for the first time to bundle all the services together, rather than as individual services. Previously, part of the security, and all the cleaning services, had been delivered by an external contractor, and the helpdesk and portering services were self-delivered.

Throughout the tender process, the NEC reserved the right to award individual service contracts if they were not confident that one supplier could support their aspirations for excellence. Says Pell:

“It was all about getting an operational team that could deliver good customer service and really live and breathe our values. We all know how to clean, and fulfil compliance and manage logistics and security; they are the hygiene factors, but [the tender process] was all about finding a provider that offered a true partnership.”

OCS⁹ is a private organisation, in the fifth generation of family ownership, where great stock is placed upon value and enhanced business performance, because ‘if we don’t value ourselves as individuals, we won’t value others or our customers, and our customers may find it more difficult to value us’.

It aims to deliver a quality-driven service that is valued by customers and suppliers, reduces the environmental impact of its activities, supports its staff, manages risk, and creates a safe working environment.

These objectives and values are at the heart of OCS’s customer service strategy for the NEC, which, as an entertainment business with millions of customers, has as its main objective the need to create an excellent customer experience.

⁹ www.ocs.co.uk



Challenges

One of the biggest challenges that OCS faced was mobilising a contract with such a large and diverse workforce, and identifying and bridging skills gaps. The staff requirement was for over 1,500 people, through TUPE from staff directly employed by the NEC or the previous cleaning and security service incumbent, and through a major recruitment programme. There was a very short lead-in time (just six weeks) for such a huge undertaking, before facilitating high profile events such as the Madonna indoor arena tour and the Conservative Party Conference.

Explains Paul Thrupp, OCS Account Director:

“Previously, teams were working in silos, whether between different venues or in separate cleaning, traffic or security teams. Each of those departments had their own management teams, and some of them their own directors, but now there is one Account Director and one fully integrated management team.”

During the tender process, it was clear that the NEC management team was keen to improve the profile of customer service across the venue, and with this in mind the OCS bid team included dedicated roles in customer care that were new to the operation.

The team identified the need to create a focus for customer excellence, and to this end, recruited a dedicated Head of Customer Excellence – Sue Pedley,

an experienced customer service specialist with 20 years’ front of house managerial knowledge.

Before she officially took up her position, Pedley spent several months ‘undercover’ as a mystery shopper, looking at OCS’ on- and off-site operations to identify gaps and to ensure consistency across all sites.

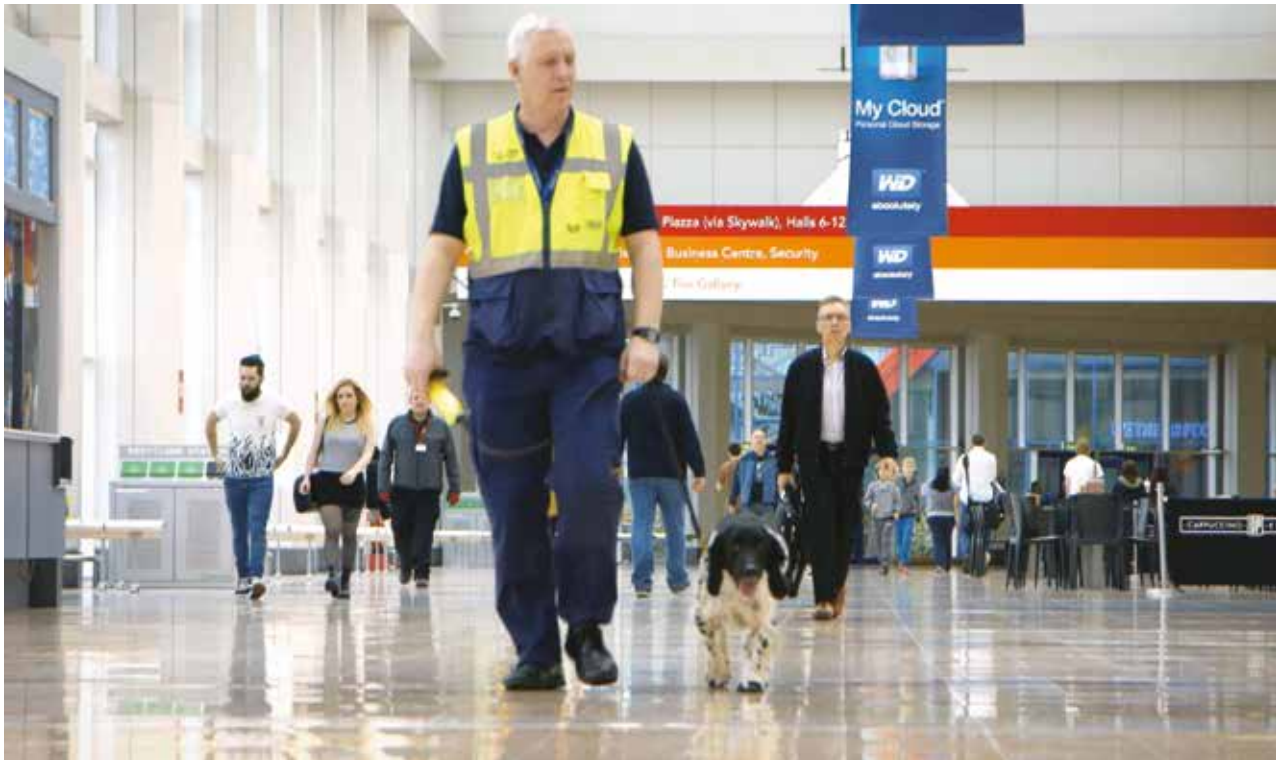
Since then, she has worked in partnership with the NEC management team, as well as the OCS teams, to improve, develop and measure customer service across all four venues, resulting in a 26% improvement in satisfaction levels after a year of training and induction.

Says Thrupp:

“What Sue’s done is integrated OCS values into NEC values, just to align them, so that people don’t get confused. Ultimately they’re all the same values, we all want to achieve the same thing, but it’s making sure that the message gets across so that people can see that what we’re delivering aims to meet the NEC’s values, and she’s done that quite cleverly.”

This has resulted in a focus on customer service at every level and at every stage of the customer journey, including exhibitors, promoters, artists, agents, and the paying public.

To help achieve this, Pedley extended the Mystery Shopper programmes across all four venues, with teams competing in a mystery shopping league table, which has inspired every team to do better.



As part of her role, Pedley would advise key staff as to how they could improve customer experience. As an example, a cashier sitting in a kiosk might argue that, with queues of people waiting to pay, they have limited opportunity to help them feel special. But by advising them to say, “Thank you; don’t forget to keep your receipt because that’s how you get out of the car park. Enjoy the show,” they have learnt how to create a better customer experience.

Brian Pell concurs:

“The best customer feedback we get is completely unsolicited, so the guys that are driving out of the gate, they take their time to stop and talk to security and say ‘I had a great time today, and by the way John Smith or Mary Rose went far above and beyond what we were expecting and helped us’.

“This is not an isolated example – we are getting regular factual feedback that these people are adding value to our business. The NEC may be iconic, but there is much more choice of events venues today; however, we are starting to get more and more competitive business because of our high quality of customer service.”

Pedley has also designed and managed the delivery of customer excellence training and introduced a recruitment centre and training academy, which attracts, recruits, trains and retains over 1,500 employees. This, again, is customer service driven and, with this focus in mind, is run by the ‘People and Talent’ team with new recruits being ‘auditioned’ for a role.

Coming from a shopping centre background, Pedley also helped to introduce a new Childsafe initiative, having identified a need to safeguard the broad demographic of visitors to the venues, which range from the elderly to young children to vulnerable adults.

Staying safe is of course integral to the NEC contract, which is why a dedicated HSQE Manager, Roy Terry, was appointed to review all Health and Safety standards and risk assessments. He has introduced a robust bespoke Health and Safety Management System and innovative Health and Safety audit systems. Staff training in emergency and first aid response has also been introduced to ensure that the NEC’s visitors remain safe and secure whilst enjoying the facilities.

Contract management

To meet the aspirations of the NEC Group, OCS has committed to implementing over 130 innovations over the life of the contract.

For example, they have introduced chemical-free cleaning, and are driving sustainable operations. OCS has full responsibility for waste management, including the day-to-day operation of the on-site WPTC (Waste Pre-Treatment Centre) and all of the waste streams produced. In September 2012, the NEC was able to announce that it had reached its zero to landfill target two years ahead of schedule, supported by OCS’s waste management services, which was recognised when the NEC won the AEO Sustainability Awards.

The appointment of OCS's dedicated HSQE Manager has also enabled the client to achieve ISO 14001 accreditation – when in July 2014, the NEC picked up the award for 'Best Waste and Recycling Scheme' in the Business category at Birmingham City Council's first Sustainability and Recycling Awards.

This is not a standard FM contract: customer excellence is the main objective for OCS and the NEC and this drives the contract strategy and is at the core of all operations.

There is a huge network of client contacts, from Facilities Managers through to venue management, Health and Safety, finance and event management contacts.

To ensure that the client has peace of mind at all times and that proactive and up-to-date communications are maintained, OCS Account Director, Paul Thrupp, has introduced a system of relationship mapping so that all relationships are aligned and fully-owned. OCS operates a system of regular contact and a policy of open and honest communication with the client. Explains Thrupp:

"There are a large number of client contacts within the NEC Group, as there are four venues, with multiple services at each location, and somebody from the NEC ordinarily heads those services up.

"This means we've counted something like 14 relationships at my level alone. So what we've done is mapped people to every level of the NEC organisation chart, so we always have OCS people to have a direct interaction with their clients.

"Every single member across the organisation is mapped by a member of our staff, and this works. It means that we have good communications; we don't get any surprises, and there are always people to step in. So for example, if someone is on holiday, there's always someone that's going to pick up the customer service side of it, so we don't get any dramas."

A robust Performance Management System is also in place, which measures the contractual agreement; ranging from governance, health and safety, financial performance reporting, to the specific services in terms of customer ratings, mystery shopper scores, quality inspections, feedback non-conformities and helpdesk statistics.

The PMS system uses iPads and PDAs for mobile monitoring and for receiving and closing down requests and work orders from a CAFM work scheduling system and helpdesk. As a result, the company has achieved high scores consistently across each monitoring period with scores exceeding 95% and no major non-conformances.

OCS has also worked closely with the NEC to support its objective of teamwork, building strong relationships both in the workplace, and in the wider community. It has introduced working collaborations with other NEC service providers, such as the Norland Group, and has introduced community collaborations with NEC community group partners, such as a garden project and work experience opportunities for schools, colleges, and universities.

In order to maintain awareness of the latest innovation in product and services, OCS also engages stakeholders, suppliers and other service streams through three-monthly innovation forums, regularly trialling new innovations.

The company also works with industry bodies to identify innovation and good practice, whilst drawing on the experience gathered from its leisure industry business portfolio.

"A lot of our contracts are driven on innovation," says Thrupp. "At every single management meeting, I'm not looking at what we did last month or the month before; I'm looking at what we've learnt and what we are going to do that's keeping us going forward."

The requirement was to move from a silo culture to a fully integrated customer-centric service team, which OCS addressed by multi-skilling staff to be able to work across venues; the introduction of a new management team with a 'walking the floor' policy; by introducing recruitment drop-in centres and candidate selection events, where recruitment was focused on attitude, not just capability; and through an intensive staff development programme. Says Pell:

"In terms of adding value to the business, I couldn't be happier, as the facilities service OCS has delivered has really made a difference."

Lessons learnt

The events sector is all about people, and it is essential to win the hearts and minds of the staff who are there to deliver customer service at the sharp end of customer care. Says Pell:

"From Day One I accepted the challenge of how our services provider would change the hearts and minds of 2,500 people. That was the essential ingredient we were looking for; a true partnership and a big handed approach."

Thrupp has followed this mantra, saying that if you can win peoples' hearts and minds, by showing enough care and interest, and giving them the right tools, then you will succeed.

“If you think that in FM the mechanical solution is going to deliver everything, you’re wrong; you need people, and you need people to understand their role.”

Given the fact that customers are increasingly dictating the way events are managed and led (see Box), this is a key issue. He also advocates direct communications with staff, customers and clients.

“You don’t get a successful contract by sitting behind a laptop. The big lesson for me and for anybody in this business, and I think I’ve always preached it, and I’ve certainly always demonstrated it, is – get out there on the frontline, see what’s going on, talk to people and get their input.”



Top trends shaping the events industry in 2015

Quality v. quantity

Events are no longer measured by the number of people in the audience, but by the responses and interactions from delegates and the messages they transmit after the event.

Word-of-mouth content v. take away content

Events need to be treated more like campaigns rather than single events, because the pre-event activity and the post-event activity become really important to extending its life. When you’re measuring how effective events are, takeaway content is an easy way to drive measureable data. The post-event takeaway content is particularly helpful because it starts to spur that next conversation.

Audiences taking control

More and more audiences are taking control of the content of events and social media is the biggest driver of this. People are looking for ways to engage on their own terms. Delegates bring iPads and smartphones to events and they’re not told to turn them off because it allows delegates to take control of the content they want to see and allows them to direct it. It is a much more powerful way for interaction and creating word-of-mouth experiences.

Big data

By tracking what your attendees’ likes and dislikes are, you can make the event experience more relevant to them. But not everyone has a CRM System. People in the industry are still running their events and member databases from Excel spreadsheets. It’s not possible to keep track of all the interactions you can have with delegates nowadays, with all the technology that we have available to us, in a single spreadsheet. If you want to track the messages you have shared with people then a CRM System is probably the best method of doing so.

Source: The New Marketing Landscape’ at MPI EMEC 2015.

2.0 Critical FM: Facilitating business and pleasure at the world's busiest airport



The issues

The adoption of mobile digital technology means that people are increasingly working everywhere and anywhere; with transport hubs such as train stations, motorway service areas and airports becoming places to meet and do business, rather than purely being a conduit for a journey.

Responding to customer demand for more places to work, airports have created more business areas where users can access the internet and recharge their laptops. According to the 2015 Workplace Trends Report by Sodexo¹, there is an increasing trend for the development of 'airport mini-cities' in which an airport becomes a business magnet and an engine for regional economic development.

The report found that for a growing number of companies, large and commercially developed airports provide not just physical connectivity but a functional headquarters where geographically dispersed corporate staff, executives, and board members can fly in for sales meetings, client contacts, and high-level decision-making.

These airport cities are also creating large-scale employment opportunities for workers across sectors, from warehousing and transportation to finance and insurance. In the US, Chicago O'Hare, for instance, has 450,000 jobs in the radius of five miles; Dallas-Fort Worth has 395,000 jobs in the same radius; and Atlanta comes in at 448,700 jobs. In addition, the hospitality industry booms around large transport hubs, with increasingly larger clusters of hotels and entertainment facilities centring around airports as opposed to the cities they serve.

Strategic approach

Research² has shown that global airline travel rebounded rapidly from the 2009 financial crisis and is forecast to grow robustly over the next decade. However, the same report found that traditionally high spending Western business travellers in particular have been slow to recover old spending habits, and are a lot more cost conscious in controlling travel budgets.

In-depth studies³ by business travel expert, Carlson Wagonlit Travel (CWT), shows that lost luggage and no internet connection present the greatest areas of stress for business travellers. Based on the responses of 6,000 business travellers from nine global companies, CWT found three main categories of stress: lost time, surprises (an unforeseen event such as lost or delayed baggage) and routine breakers (inability to maintain daily habits).

¹ <http://viewer.zmags.com/publication/6afcd068#/6afcd068/6>

² Shaping the Future of Travel: Macro trends driving industry growth over the next decade www.amadeus.com/documents/Thought-leadership-reports/Amadeus-Shaping-the-Future-of-Travel-MacroTrends-Report.pdf

³ www.carlsonwagonlit.co.uk/en/countries/uk/newsandinsights/press-release/2012/news-09102012.html

It is therefore imperative that airports in particular provide a way to make business travel as stress-free and smooth-running as possible. Airport facilitation plays an intrinsic role in ensuring high levels of customer satisfaction. Airports Council International (ACI)⁴, the global trade representative of the world's airports, defines the function as the efficient management of the flow of passengers, baggage, cargo and mail through airport facilities, ensuring that services are delivered in a healthy, safe and secure environment, and meeting and exceeding when possible the needs and expectations of customers.

It adds that this standard of facilities should be applicable for all scenarios, during good days and bad days, under normal operations and situations of flight disruption. With ever-increasing numbers of people working remotely, or agilely, airports are increasingly being seen as a 'third place' to work.

The following case study focuses on the work of the facilities team at the world's busiest airport, and discovers why it's been recognised as the most efficient airport in the world for the 11th year running.

Case study

Hartsfield-Jackson Atlanta International Airport

Hartsfield-Jackson Atlanta International Airport⁵ in Atlanta, Georgia, USA, was recently named the world's busiest airport for the 17th consecutive year, when passenger traffic surged by more than 1.7 million travellers, reaching 96.1 million passengers in 2014. The airport serves over 150 US destinations and more than 60 international cities in 50 countries, with over 2,500 daily flights.

The total airport area is 4,700 acres, with the terminal complex measuring around 130 acres or 6.8 million square feet. This complex includes the domestic and international terminals building and concourses T, A, B, C, D, E and F. Within these concourses, there are a total of 207 gates, comprising 167 domestic and 40 international gates.

The airport contributes more than \$34bn in direct business revenue to the Atlanta local economy and employs more than 63,000 people.

Hartsfield-Jackson's vision is to be the global leader in airport efficiency and customer service excellence, and to help fulfil this aim, a range of capital improvement programmes have been carried out over the past decade.

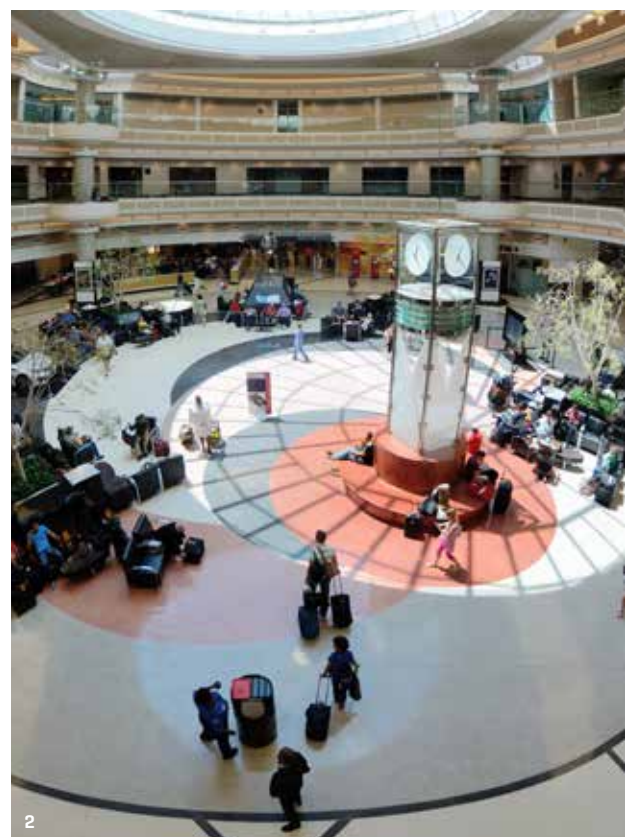
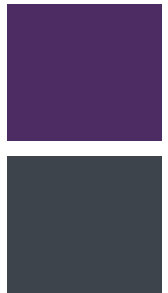


Image source: 1: © Cecil Clontz 2011 2: Sean Pavone / Shutterstock.com

⁴ www.aci.aero
⁵ www.atlanta-airport.com

This included the opening of a fifth runway in 2006, a rental car centre and elevated ATL SkyTrain, which began service in 2009 and the new Maynard H. Jackson Jr International Terminal which opened in 2012. This facility features a new concourse which connects to the existing Concourse E to create a 40-gate international air travel gateway for Atlanta.

Hartsfield-Jackson has not only been named the world's busiest, but also the world's most efficient airport for the last 11 years, according to the Air Transport Research Society⁶ annual benchmarking study of 200 airports in Asia, Europe and North America.

The airport facilities are looked after by Planning and Development (P&D), which strives to deliver world-class aviation facilities that meet and exceed customer expectations, and to plan and develop existing and future aviation facilities in an environmentally safe manner.

The division comprises four teams: Planning and Environmental; Asset Management and Sustainability; Project Development; and Facility Management.

Explains John Means, Facilities Director:

"Planning and development is really the overall technology centre group in charge of keeping and maintaining all of our facilities, ensuring that we plan for the future, and that our capital projects are planned with ample time to meet market demand – which in some cases, is 20 years before the time for them to actually be deployed."

"At the same time it ensures that if a water faucet breaks today, there's somebody fixing that in less than ten minutes. We manage multiple billions of dollars of assets; our latest audit showed that we had something like \$8bn in assets here."

Facilities are primarily divided into two groups; between the customer-facing Central Passenger Terminal Complex (CPTC) and the rest of the properties, both air and landside. This includes general outbuildings such as support buildings, the cargo buildings, the maintenance buildings, and the Department of Aviation (DOA) Design and Construction Building, which houses the facilities support teams.

Most of the actual implementation of the maintenance is highly decentralised, with the largest contractor being the Atlanta Airlines Terminal Corporation. AATC's main functions are to service and maintain the Central Passenger Terminal Complex (CPTC); provide services to the concessionaires and other airport tenants; deliver project management services to the Hartsfield-Jackson Development Programme and administer the lost and found programme at the Airport.

Says Means:

"I provide oversight from a capital improvements, capital construction, budgeting and management standpoint, but for day-to-day maintenance and upkeep, it's AATC's job to keep the place running."



Image source: Sean Pavone / Shutterstock.com

⁶ www.atrsworld.org

Means is part of the Asset Management and Sustainability (AMS) team, which includes the Facilities Management function, responsible for detecting problems, including any deterioration of the facilities and assessing the level of deterioration and work that is necessary to bring that facility back to an 'as new condition'.

"As a result," explains Means, "we drive all of the other corrective actions throughout the airport and we accomplish that by putting forward capital improvement orders that are then executed by our engineering design and construction group, which comprise around 100 engineers and construction managers."

According to Means, if a problem falls within the area of efficiency and sustainable improvement, then that deficiency is handed over to a sustainability and asset management group for further study and development. They will in turn submit the job to the design and engineering team once they've thoroughly assessed the best solution to achieve a highly efficient, highly sustainable, solution to the problem.

A lot of the work, however, lies in the proactive maintenance of existing facilities. A group of seven Facilities Managers is responsible, on a daily basis, to track down problems, identify them, quantify them and assess the depths of upgrades that are necessary to get the assets back to a 'like new' condition. They not only inspect and maintain the entire campus, but must also ensure that the airport's other business partners, like AATC, are doing their job on their assigned areas.

"It's a monumental task to keep it all going and flowing and operating at peak performance," says Means. "But this is the core of where the watch-dogging takes its place; for us to see where our deficiencies are beginning to show themselves and ensure that we deploy the right human resources to resolve those issues, to get them corrected and redesign where we need to redesign, reconstruct what we need to reconstruct, and maintain where we need to maintain."

Challenges

One of the major challenges in running the facilities at Atlanta airport is the humid subtropical climate, which is constantly moist, with very hot and muggy summers that can result in severe thunderstorms.

A hailstorm in 2013 devastated the roofs of the buildings, which are constructed primarily of thermal plastic polymer. TPO is designed to work extremely well in the very intense heat of the southern climate; the roofs have high reflectivity factors that reflect a lot of the sun's rays so that the heat never gets into the building, which reduces some of the pressure on the air cooling systems.

However, one of the roofs' weaknesses is that, over time, like any other polymer, it becomes more and more brittle, and with most of the roofs being over 20 years old, they had become less resistant to impact.

Says Means:

"When you have a major hailstorm where you're getting pea-sized to golf ball-sized hail coming down, it basically ruined 80% of our roofs. It was my job to assess really how bad the roofs were and to develop a plan to repair them; to redesign where necessary and to gain the capital approvals necessary that would enable us to get these things replaced in the quickest fashion possible."

"We've also worked with underwriters within risk and insurance to recoup what we could from these damages, as the cost to replace the roofs is anticipated to run between \$50m and \$70m."

Another major challenge is in identifying and prioritising all the facilities and infrastructure within the airport. This requires constant review of all assets, keeping a record of them and then ensuring these records are kept updated.

To achieve this, the AMS team has installed an asset management and maintenance programme from VFA⁷, a provider of facilities capital planning and management solutions, to help manage the airport's 'fixed' assets.

The VFA Facilities Management tool allows the team to input every single asset on the site. It then starts to age each of those assets based on their designed useful life and provides information on the major repairs required at different points in the lifecycle of that asset that will need to be addressed.

In this way the VFA can be used as a proactive tool to help manage the maintenance priorities within the entire campus and to plan the implementation of various maintenance tasks in order to keep facilities up to standard.

Says Means:

"We use VFA as a rule of thumb tool that gives us a prioritisation and time horizon to get things done, but at the same time we're reconciling the theoretical maintenance requirement with actual physical inspections by our Facilities Managers that lay eyes on these assets and make business determinations on whether we need to do it sooner rather than later."

Using the VFA has helped the AMS team identify some underlying problems with the assets. For example, being in such a hot climate, the airport runs a huge number of chilling systems. Most chiller units are designed for a 20 year lifecycle, but because these chillers are run extremely hard and for many, many hours during the day, they aren't expected to last that long at Atlanta Airport.

⁷ www.vfa.com



However, when one needed replacing after just 12 years, the facilities team looked into the records on this asset and found that key maintenance tasks had not been performed, which had contributed to a quickened end of life. They also discovered undue stress was occurring to some of the chillers as a result of inadequate isolation mounts that allowed much of the high torque of starts and stops to transfer directly to the equipment components.

The AMS team therefore carried out tests, including vibration analysis, and even flow analysis, to give some indication of where these assets were receiving higher levels of stress than they should, which enables them to carry out predictive maintenance that will help to extend the life of the equipment.

Sustainability

This efficient management of assets goes some way to helping the AMS team achieve its aim of leading Hartsfield-Jackson to become one of the greenest airports in the US by “proactively managing our ageing infrastructure based on lifecycle analysis, total cost of ownership, and sustainable development”.

However, meeting sustainable goals is quite a challenge when running an airport in a hot, humid climate where a lot of the chiller equipment alone has to be run 24 hours a day.

Explains Means:

“We try to link those chillers and boilers with highly intelligent controls that turn them off when they’re not needed and turn them on when there are cooling demands.”

“For example, at two in the morning, yes I still need to keep the building within a certain limit of comfort but it doesn’t need to be 72 degrees Fahrenheit when there are no people there. I can maybe let the set temperature rise to around 76 degrees as a click-on point.”

This is all achieved through automated controls via a building management system (BMS) which enables the team to fine-tune heating and cooling to a much greater degree, as well as offering remote control.

Recycling is also part of the green mix. Instead of taking the damaged roofs to landfill, they were taken to recyclers or remanufacturers, allowing them to reuse the materials.

Meeting customers’ needs

An additional service that Hartsfield-Jackson offers, with the busy business traveller in mind, is a suite of rooms rentable by the hour or overnight, including business and internet facilities, and a pull-out bed. Understanding that a significant proportion of its average 250,000 customers each day are visiting the airport as a stop-over to another flight (the airport has the enviable position of being within two hours’ flight time of 80% of America’s population), its amenities are set up for this purpose, and are well-used.

Planning for the future of the busiest airport in the world meant that the facilities team was involved with 540 projects in 2014, to the cost of \$335m, which according to Means is a typical annual target and one set to increase.

Some ongoing projects include:

- A \$48m roads project is underway to eliminate weaving and improve wayfinding by allowing more time for decisions and presenting only binary decisions, thus making access to the airport safer, simpler and more efficient for passengers both entering and exiting the airport.
- A \$75m HVAC upgrade that is swapping out the old analogue equipment and controls and replacing them with new digital devices, and intelligent controls that are more efficient and accountable when it comes to staying efficient over time.
- The replacement of the roofs with even higher efficiency roofs that have better insulation factors, keeping the buildings cooler in the summer and warmer in the winter.
- Sanitary sewers projects to repair sewer systems that have been in place as many as 50 years and have had very little major work done previously.
- Maintaining the cargo buildings, as over time the level of wear and tear requires that the 'dock doors' for example need to be replaced.

Says Means:

"The magnitude and the width of the type of challenges we have is endless; for example we experience lightning storms here on a regular basis, which even strike our runways and so we literally have to go in and dig them up and repair them. That's one of the things we pride ourselves on; we keep the planes moving all year round, no matter what."

The primary aim of the AMS, P&D and Operations teams at Atlanta is to help fulfil the airport's overriding aim of providing first class customer service; as shown by the opening of the new Maynard H. Jackson Jr International Terminal in 2012, and the ongoing launch of a range of concession food and retail outlets. However, with an eye on business travellers in particular, the airport's DIT Team has also spent \$6m on upgrading its wireless access system.

According to Means, it was a business decision made solely on the basis of customer service, as that is the ongoing vision of the airport leadership; to ensure that Atlanta's airport is the preferred choice.

"Some things we couldn't engineer, particularly the fact that this particular airport is within a two hour flight of 80% of America, which is a strategic advantage. But we still need to ensure that the airport is a pleasant place to be."

Lessons learnt

Good communications are a key reason why the AMS team has helped Hartsfield-Jackson Atlanta International Airport earn such positive, internationally recognised accolades. As Means explains, some of these communications are actually mandated by the airport leases, which state there will be monthly meetings between the city department of aviation leadership and the leadership of AATC.

In practice, Means holds monthly meetings with his counterparts on the AATC side to ensure there's an ongoing cooperative effort to address issues in an efficient and conscientious manner.

But it's support from the leadership that really plays a crucial role.

"The leadership for the airlines, as well as for the city of Atlanta and its airport executives, is such that no one believes people will continue to come and visit this airport unless they have an optimal experience when they do visit."

"So everything from the aesthetic look of the airport to the amenities within, our restaurants and our holding areas to the temperature, are maintained and protected to the highest standards."

"Our leadership has consciously made business decisions that ensure we remain a hub that people want to come to because it has all the amenities that you could possibly want."

3.0 Critical FM: How introducing smart working practices has helped National Grid create a sustainable legacy



The issues

It's probably fair to say that one of the greatest challenges facing Facilities Managers worldwide is finding new sustainable energy solutions and developing energy systems that can support their companies' economic prosperity in the future. Despite the slump in the price of oil during the first few months of 2015, an expected rise in fuel costs over the next five years to 2020 means that energy efficiency will become one of the most important activities companies and individuals can undertake to keep their energy requirements affordable.

Lord Redesdale, CEO of the UK Energy Managers Association¹, remarked in November 2014 that over the next few years energy bills will begin to exceed rent, meaning that the most assured way to contain a property's running costs will be to reduce its demand for energy. A joint report² published in 2014 by CoreNet Global and the Rocky

Mountain Institute, supports this argument by showing clear evidence of the benefits to organisations of taking action to better manage energy use within their facilities.

The report followed up previous research³ by the two organisations, which looked into the progress made by corporates in energy management and performance since 2007, when CoreNet Global and RMI first collaborated. It found that over two-thirds of corporations now have a sustainability agenda in place, as well as specific energy management plans, and nearly half have dedicated energy managers, a position that was only just emerging in 2007.

Strategic approach

Sustainability is now an integral part of the Facilities Management discipline, incorporating not just the lifecycle of the building, but the quality of life of its inhabitants. A major report by the World Green Building Council⁴ found that Facilities Managers have a wealth of data that can be utilised to help them ensure their building incorporates green design features that can lead to healthier, more productive, occupants.

However, sustainable FM goes beyond managing the hard services, such as heating, ventilation and lighting. Offering more sustainable ways of working can dramatically reduce costs, ensure workplace productivity, and provide an organisation with long-term value. By introducing agile or flexible working, organisations can reduce their outgoings on heating and ventilating workspaces that are often left half empty.

1 www.theema.org.uk

2 Next Generation Energy Management: Solutions for the Next Level of Performance in Corporate Real Estate: www.corenetglobal.org

3 Next Generation Energy Management: www.corenetglobal.org

4 Health, wellbeing and productivity in offices: www.worldgbc.org/activities/health-wellbeing-productivity-offices



The benefits of cutting down on unused space are increasingly being recognised at board level, as illustrated by the recent formation of the Agile Future Forum⁵, led by some of the UK's largest companies.

The group highlights the role that factors such as new technology, changing demographics and globalisation are having on the business case for the adoption of agile working practices, and champions the cause of agile working as a way of running a business that is competitive, productive, and attractive to employees.

It can also benefit the wider economy. Recent research by mobile technology firm Citrix, and the Centre for Economics and Business Research (CEBR) into flexible working, calculated that if the majority of knowledge workers in the UK had the option of working more flexibly, this could add around £11.5bn annually to the economy by saving UK workers £7.1bn in commuting costs, and over half a billion hours spent travelling.

Regardless of a company's purpose, efficient energy management is paramount, but arguably no company devotes as much importance to the issue as energy companies themselves. The following case study looks at how the introduction of agile working and a sustainable transport initiative by the property team at the National Grid is helping the organisation meet its ambition to provide a sustainable legacy.

Case study

National Grid

National Grid in the UK is one of the largest investor-owned energy companies in the world. It owns and manages the grids that connect people to the energy they need, from whatever the source, safely and reliably. Doing this involves managing the physical infrastructure of the gas and electricity grids, as well as designing and building networks for the future.

In the UK, National Grid operates the high-voltage electricity transmission network and the high pressure gas transmission system, as well as half of the regional gas distribution network. The National Grid estate comprises around 1,460 sites, covering the whole of the UK, from Scotland all the way through to the south coast of England. The diverse mix of sites includes electricity sub-stations, gas compressor stations, major office locations and depots, vacant land and vacant property. It has a huge workforce of around 10,000 people based at its main offices and depot sites around the UK, as well as around 7,000 remote workers within the main fleet.

⁵ www.agilefutureforum.co.uk

⁶ www.cebr.com/reports/impacts-of-a-flexible-working-culture/#download-pdf

Sustainability and responsible working practices are high on the company's agenda, influencing the way it sources, designs, uses and reuses its assets to ensure maximum value, whilst reducing environmental impact. By working closely with its supply chain and partners, National Grid is embedding sustainability into the way it designs and builds its physical infrastructure, 'from transformers to pens and everything in between'. Its UK target is to reuse or recycle 100% of recovered assets by 2020⁷.

Simon Carter, Head of Corporate Property at National Grid, explains:

"The main drivers for National Grid are to operate a highly efficient and effective estate, which benchmarks well against our competitors. We've got a critical national infrastructure operating out of a lot of our locations so our responsibilities are to maintain business continuity planning and plans around that."

National Grid is in the middle of a multi-billion pound investment programme to meet future energy demands, by modernising and extending its UK networks and connecting new, cleaner energy sources. Its ambition is to transform the way it does business and provide a sustainable legacy as a result of its operations.

Strategic estates review

In 2007, National Grid began a strategic review of its property estate to help improve service provision to occupiers and customers. Aligned to the 2007 strategic review was a structural review within National Grid Property. The former supply chain management function underwent a major strategic change, with a focus on creating longer-term strategic partnerships with suppliers. The change enabled National Grid Property to source expertise and work together with partners to drive efficiencies and improve customer satisfaction. The aim of the new soft services contract was to consolidate services, reduce costs, and increase scope.

A key soft services contract is with 14forty which, in its previous incarnation as Eures, has had a relationship with National Grid for over 20 years, and has been providing total facilities services for five years, with the contract recently extended to 2016.

14forty is part of the Compass Group and is so called because there are 1,440 minutes in every day, and every one of them matters. It aims to provide integrated Facilities Management services to deliver the best value, and believes that no one size fits all, so takes a tailored approach to each client.

For National Grid, it initially provided catering, vending and hospitality services to a small number of sites. Today, 14forty provides integrated Facilities Management soft services, including cleaning, security, food service, business and guest services, pest control and vending. These services are provided to more than 800 sites every day.

For 14forty this means the challenge of providing services to an extremely varied estate – from offices in urban conurbations to remote area sites.

Says Ian Hollister, 14forty's Account Director for National Grid:

"The requirements are very diverse across the 800+ sites and one size certainly does not fit all. Managing the remote staff across these sites provides its own challenges as some staff may only work a couple of days a week for a couple of hours a day."

The contract has had to be flexible enough to deal with changing business needs. As a result of the strategic review, new working practices have been implemented across the business, which has required a new approach to managing the workplace.



⁷ www2.nationalgrid.com/Responsibility/Preserving/Managing-our-impact/Positive-about-resources

Flexible working

As part of the strategic review, National Grid's property team carried out a demographic mapping exercise that provided a detailed analysis of the organisation's field offices. This resulted in a rationalisation programme, which involved removing around 30 sites and renovating a further 85.

According to Simon Carter, a more recent analysis has resulted in a further reorganisation of the field estate, with the closure of 17 more locations and the renovation of 65 sites.

He explains:

"The number and the type of location required in the field is changing because the more technology that gets rolled out to the frontline staff through their vehicles, the less they require a normal office depot environment."

"The field requirement is moving more towards a community centre model, where field staff can attend team meetings and collaborate with colleagues. By doing this we can utilise our field assets more efficiently, reduce our cost base, and improve the workspace."

A new flexible working system called Smart WorkSpace (SWS) was first introduced to National Grid House in Warwick, which accommodates around 3,000 employees.

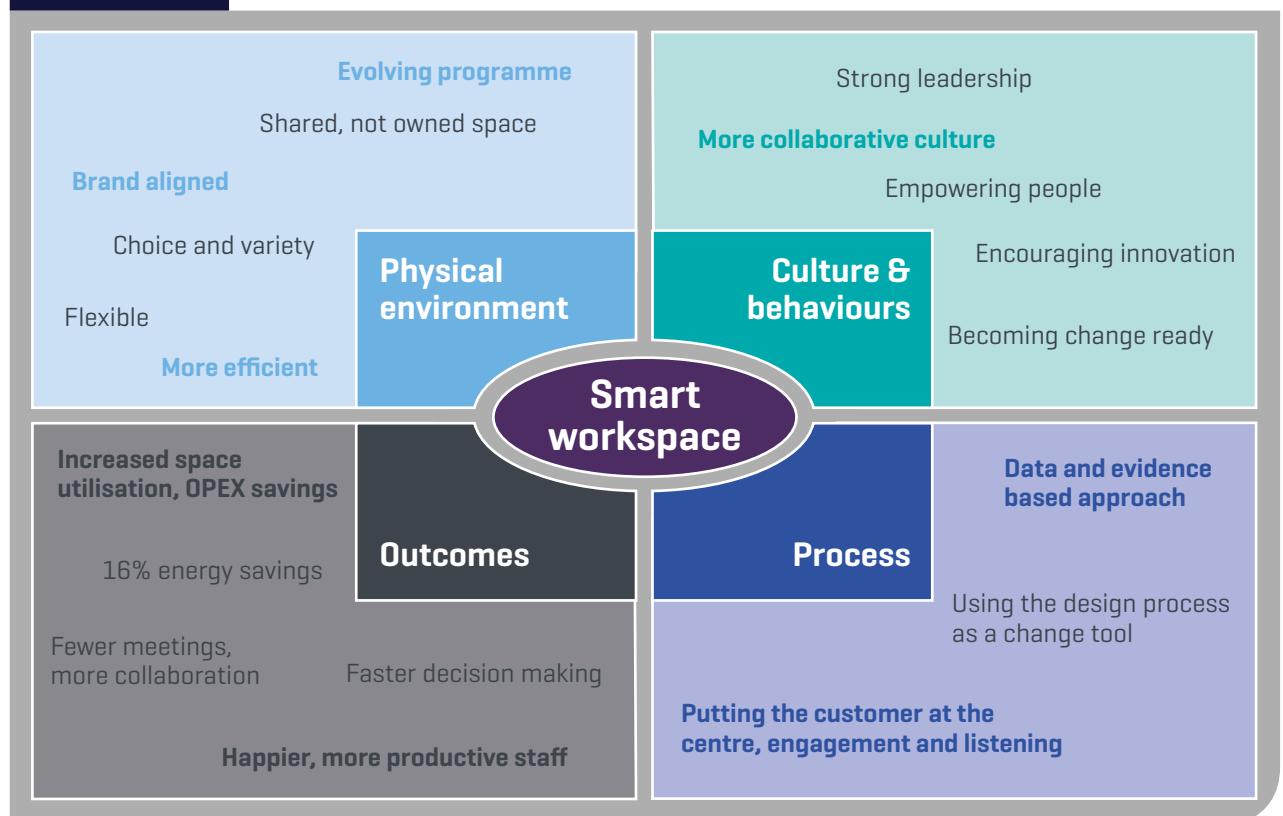
With this approach, dedicated employee desks have become a thing of the past with staff using any desk in any neighbourhood when in the office, storing their personal work items in lockers and drawers. Eighty-six per cent of occupants say they prefer the new working environment.

As a result the space is used much more effectively, and collaborative workspace has been introduced to reduce the pressure on meeting rooms. Electronic occupancy monitoring ensures the space continues to be used well, maintaining industry leading performance. Energy efficiency has been crucial in the SWS design, with every detail assessed to put sustainability at the forefront. For example, motion sensors have been installed so lighting is on only when movement is detected.

Buildings have been fitted out with sustainable furniture, made primarily of steel and aluminium, which can be adapted for additional uses and, when no longer needed, disassembled and recycled, supporting the principles of the 'circular economy'. Office furniture that was removed as a result of the refurbishment was sold at bargain prices to colleagues, friends and family of the National Grid. The £11,000 raised was donated to local charities.

The more efficient use of office space and meeting rooms has increased capacity in the building by 35%, increased informal meeting space by 30%, and resulted in savings of around 16% in power, heating and lighting.

Figure 3.1 Smart WorkSpace Concept



Source: RICS

The more flexible working environment, plus additional opportunity for people to work from home, has reduced travel and its associated environmental impacts, as well as saving people money. SWS has also been rolled out to other head office sites, including Osprey House in Derbyshire, which houses around 400 National Grid and partner employees, and resulted in National Grid winning a regional British Council for Offices 'Fit Out of Workplace Award' in 2013⁸. It has now been rolled out to the 'big fleet' and now has about 6,000 people working in this way.

Explains Simon Carter:

"When we began the SWS process, typically we would have four out of ten work stations occupied and two out of ten work stations showing signs of life (meaning somebody has left a laptop on the desk, or a coat on the back of a seat). Today we've got up to six out of ten work stations occupied, we've got three out of ten showing signs of life, and only one out of ten empty."

"We always used to work to a benchmark of approximately ten square metres per person; now we're down to five or six as part of our normal planning criteria today."

"I think National Grid is pretty much in the vanguard in that we have pushed up densities, got great customer satisfaction and feedback, and saved energy. Employee productivity is also proven to have increased. I've seen so many other places where it's actually in effect just ended up as a fit-out but the densities haven't been there."

Challenges

The SWS only allows limited bookable rooms, because a trial process revealed that people tended to save the space, but didn't always utilise it, so instead 'good strong office protocols' are in place that were actually developed by the teams that went through the trial process. In practice this means that, within the Warwick offices, there are very few 'anchor' people for each team. They are principally there so that visitors know roughly where they can find, for example, where the property team sits.

Measuring the use of office space is integral to the success of the SWS project and, to help gauge demand, National Grid has introduced an infrared monitoring system on each floor plate within the Warwick office, which is being rolled out to other sites.

Explains Simon Carter:

"This system gives you regular counts throughout the day on how many people are in the building, and because it is cloud based I could go in now and find out how many people are in Warwick, and how many people are on the floor plate that I work on. It's a great innovation and makes a big difference to the overall management of the estate."

Because individuals do not have 'ownership' of a desk, they are less likely to report any maintenance issues, so to ensure standards are maintained 14forty delivers a customer liaison or concierge service. These floor-walkers constantly check around their designated areas, helping occupants with any issues associated with the workplace, including printing, phones, tele-conferencing and computer connections.

In addition to facilitating the efficient running of the office by solving any problems, they also help drive further improvements through the collection and analysis of office occupancy and desk usage data.

Green thinking

Alongside the Smart WorkSpace initiative, National Grid has also created a 'green' travel plan. This includes a car sharing scheme and a shuttle bus service to the nearby train station, to minimise the number of cars at each site, reducing carbon emissions and helping ease road congestion.

This is in place at the Warwick, Wokingham and Osprey House sites, and currently under development at Hinckley. At the Warwick site, more than 500 car share groups have been established, eight coaches travel daily from major towns, a shuttle bus connects with the train station, and around 100 people cycle to work each day.

The plan continues to evolve through the various events that are run, such as free breakfasts and bike maintenance during Bike to Work Week.

Using a website called 'lift share'⁹ National Grid guarantees staff a car parking space if they car share, and users can also go on the website to see how many tons of CO₂ they've saved as a result. The plan is managed on a daily basis by a Travel Plan Coordinator, employed by 14forty.

All the changes made by the National Grid property team and its service providers have been business case driven, and have required a considerable investment in time and money to achieve results.

For example, the SWS project has cost approximately £20-30m but has resulted in a reduction of at least 200,000 square feet of property. However, reducing costs was not the only reason behind the changes. Explains Simon Carter:

"I always had three ambitions with this work: firstly, to save money; the second was to delight our customers, and the third was to save energy."

In terms of cost benefits, around £8-10m has already been saved; in terms of energy, on most of its sites National Grid is saving between 16% and 18% of its energy bill on the parts of the property that have been refurbished; and in terms of delighting its customers, satisfaction rates amongst occupants range from around 86-95%.

⁸ www.bco.org.uk/Events/TourNati2933.aspx
⁹ <https://liftshare.com/uk>

Across all sites where the changes have been implemented thus far, a considerable process by the property team was undergone to engage occupants, usually beginning around five months or so ahead of the move. The fit out of the floor plates only takes approximately three months of that time.

Because staff are consulted throughout the process, feedback tends to be very positive, with a recent poll revealing that 95% wouldn't go back to their old way of working.

Lessons learnt

Energy management is critical to the economy, to business, and to the individual, and it is the joint approach taken by companies such as National Grid and 14forty that allows sustainable development to take place, so that the overarching goals of a company – to keep the UK's lights on – are reflected in its own working practices. 14forty is owned by the Compass Group, which is a member of the FTSE4 Good Index Series – an independent organisation that measures the performance of companies that meet globally recognised corporate responsibility standards. By acting responsibly throughout its supply chain, National Grid is able to focus on its key objectives, without waste or unnecessary expense.

National Grid's strategy to reduce energy consumption integrates a number of strands: rationalisation of office space, reducing commuter journeys to work, and encouraging some home working. In the UK, home working has increased significantly and now accounts for about 13% of the workforce. The Carbon Trust has reported¹⁰ that home working in the UK could reduce energy costs by £3bn with a saving of three million tonnes of carbon. However, warns Sue Gregson, Environmental Consultant at International Workplace:

“Projected carbon savings are not always achieved because of the rebound effect whereby the increased carbon emissions from employees working in homes that are energy inefficient offsets savings from reduced commuting. This is clearly a point to be considered carefully by any organisation making strategic decisions concerning the workplace environment, and the role which home working plays in an energy reduction plan.”

It is therefore clear that working with, and engaging, the occupants of the company's assets is a key factor. According to Simon Carter, before making any major changes, facilities and property people must treat occupants as customers.

“As a head of a corporate property unit the one thing that you want is happy folk, because otherwise your life is going to be difficult; so not engaging your occupiers and not thinking of them as a customer is a fatal mistake.”

He also advises implementing an efficient change management process, typically beginning to communicate the proposed changes at least two or three months before the actual physical renovations begin.

In order to ensure the full engagement of occupants he recommends carrying out a work style analysis with the people undergoing the change to understand what they do and how they do it, and their timeframes. Other key elements in the process are paying attention to the quality of design by providing variety, colour, stimulating lighting and good ventilation.

Aside from engaging occupants, a good relationship with service providers is absolutely critical with, in National Grid's case, no differentiation being made between the in-house property team and their service providers. National Grid's property team and its partner, 14forty, share the same vision, and are prepared to constantly adapt to meet the energy supplier's changing needs.

Because National Grid is a growing, changing and evolving organisation, 14forty has had to evolve in line with the changes, and over the last couple of years has restructured its team to provide added excellence through the inclusion of more professional Facilities Managers, along with a dedicated National Security Manager and Business Support Manager.

In addition, 14forty is currently reviewing its area site structure in order to better meet the needs of differing sites, while also improving the interaction and support of its own staff.

Says Simon Carter:

“I don't differentiate because we're all in this together. The success of my team is dependent on the delivery of the supply chain; the supply chain's success is on the systems. So actually we're inextricably linked; we can't do it without each other, so we have to work together and collaborate, and 14forty do that in probably one of the best ways that I've seen.”

Ian Hollister concurs:

“We work very closely with National Grid in a true partnership and develop to meet their needs. It really is a one-team approach; I never get a customer/supplier view. It is one team working together and quite genuinely I think it works.”

¹⁰ www.carbontrust.com/resources/reports/advice/homeworking-helping-businesses-cut-costs-and-reduce-their-carbon-footprint

4.0 Critical FM: Procurement via partnership – FM in health and social care



The issues

The population of the UK is ageing. There are currently ten million people in the UK over 65¹ years old and the latest projections are for five-and-a-half million more elderly people in 20 years' time. That number will have nearly doubled to around 19 million by 2050.

Many of these people will require care in later years, whether via home assistance or through a care home for round-the-clock help. More than 465,000 people currently live in care homes in England² and when the rest of the UK is taken into account, the figure is above 500,000.

The ageing population is also influencing the type of health care required. For instance there are higher levels of chronic conditions such as obesity and dementia amongst the elderly, as well as increasing demand for elective treatments such as knee and hip replacements³.

The UK's National Health Service (NHS – one of the world's largest publicly funded health services) is also facing other challenges, such as rising demand pressures, tightened budgets and increasing clinical complexity. To help meet these demands, the NHS utilises the health services of the independent sector to increase capacity and reduce waiting times.

Research⁴ has shown that the British general public tends not to care who provides the service, as long as it continues to be free at the point of use and of high quality. The quality of health and adult social care being provided by the independent sector is closely monitored in England by the Care Quality Commission⁵ and in Scotland by the Care Inspectorate⁶, whose job it is to ensure health and social care services provide people with safe, effective, compassionate, high-quality care, which is continually improving.

The two regulatory bodies do this by monitoring, inspecting and regulating services to make sure they meet fundamental standards of quality and safety and by publishing their findings, including performance ratings, to help people choose care.

1 www.parliament.uk/business/publications/research/key-issues-for-the-new-parliament/value-for-money-in-public-services/the-ageing-population/

2 www.bbc.co.uk/news/health-30919525

3 www.njrcentre.org.uk/njrcentre/Patients/Jointreplacementstatistics/tabid/99/Default.aspx

4 www.nhsconfed.org/~media/Confederation/Files/Publications/Documents/A-positive-partnership_121011.pdf

5 www.cqc.org.uk

6 www.careinspectorate.com

Strategic approach

The Health and Social Care Act 2008⁷ established the Care Quality Commission as the regulator of all health and adult social care services in England. Furthermore, the Care Quality Commission (Registration) Regulations 2009 and the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010 require all service providers to be registered under the new Act or they will be committing a criminal offence.

Healthcare providers must sign a declaration stating that they are compliant with new Essential Standards of Quality and Safety⁸. If non-compliant, they are forced to submit an action plan stating how they will achieve and maintain compliance.

In addition, the CQC carries out unannounced inspections of all care homes, acute hospitals and domiciliary care services in England at least once a year to judge whether or not the essential standards are being met.

In its recent State of Care report⁹ the CQC reported that its more rigorous, people-centred and expert-led inspections were seeing some outstanding care. However, it added:

“We are also finding care that is inadequate or requires improvement. This variation in the quality of health and adult social care is too wide, and unacceptable. It is no excuse that this problem has existed for years. CQC is calling time on this unacceptable lottery.”

While agreeing that there is a mounting financial challenge across the sectors, the CQC said this should not excuse inadequate care. The report advised that too many providers have not got to grips with the basics of safety, and must learn from the outstanding examples of others with the same resources.

The following case study focuses on the work of the property team at Care UK, one of the leading independent health and social care providers in the UK, to enhance the procurement and delivery of facilities throughout its portfolio.



7 www.cqc.org.uk/content/legislation

8 www.cqc.org.uk/sites/default/files/documents/gac_-_dec_2011_update.pdf

9 www.cqc.org.uk/sites/default/files/state-of-care-201314-full-report-1.1.pdf



Case study

Care UK

Founded in 1982, Care UK¹⁰ is one of the UK's leading independent providers of health and social care. The organisation provides a range of healthcare services to NHS patients as well as social care for older people, those with mental health conditions, and people with learning disabilities, in both residential and community based settings. The company's ethos is to enable people to live healthier, more independent and more fulfilling lives. Care UK works across more types of care service than any other organisation in the UK, but all have one thing in common: a commitment to providing every patient, resident and service user with the highest standard of care and the very best service.

Around one in four people in the UK is supported by one of its services, which include:

- 113 residential, nursing and dementia care homes;
- 21 offender health services;
- 19 GP out of hours services;
- 18 mental health facilities;
- 13 NHS 111 services;
- 11 NHS treatment centres;
- nine NHS walk-in centres; and
- four specialist eating disorder and self-harm treatment centres.

Because these services are spread across both the health and social care market the range of properties are diverse. It is the role of the Care UK property team to provide and maintain a fit-for-purpose environment whatever the challenge, to help the organisation deliver the highest quality of care and generate maximum revenues.

¹⁰ www.careuk.com

Figure 4.1
Care UK's services in numbers


According to Mark Rudkins, Group Property Director for Care UK, the property team utilises resources economically and effectively, placing the customer at the heart of everything it does. He explains:

"Many of our properties represent a challenging environment from an FM point of view. On the care home side a lot of our spend is around the fabric environment – including security, nurse call systems, that type of thing."

"Some of the homes have got combined heat and power systems as well so from an M&E point of view it's more complex than just a simple hot water and heating system. And for our residents, many of whom have dementia, this is their home, so we must provide a safe and secure environment."

"The health care side incorporates quite complex environments; for instance in treatment centres, you've got all the different gases, sterilisation units and operating theatres. So there are challenges."

Challenges

The FM function at Care UK was originally managed in-house, including a centralised helpdesk that scheduled planned and reactive maintenance through an outsourced provider. The home managers also sourced some services locally depending on requirements. This created a disparate set of standards of service delivery and didn't allow for visibility of performance and cost. Because there was no CAFM system in place, the works processes were somewhat basic, time consuming and inconsistent at times.

Explains Mark Rudkins:

"We were reacting to things because we had no meaningful insight in terms of how our buildings and our assets were performing."

Initially, Care UK hired a property consultant, PRG Consult, to review the FM service strategy for its care homes. As part of this review a specification was developed for a more robust, joined-up and efficient service delivery model for the care home portfolio that would provide more transparency in performance and cost.

It was vital that the FM service was developed collaboratively with a supplier that understood the unique needs of the health and social care provider. Care UK recognised that a solution could not simply be 'bought' but that such a relationship had to be developed actively over time, through a managed evolution.

In July 2012 Bellrock was appointed as preferred managing agent. It was felt the firm's culture and ethos represented a good fit for Care UK's intention to evolve its processes into an integrated management structure that would bring best value to the organisation.

Bellrock Property and Facilities Management Ltd is a provider of specialist facilities management, building services and property management services to a wide range of clients. The company manages services at over 45,000 sites, working with over 1,500 contractors, supported by a 120-seat helpdesk. Within the healthcare sector, the company's output focuses solely on patient outcomes. Whether procured through PPP or traditional frameworks, its approach to the provision of healthcare estates and facilities management delivers cost effective, transparent and joined up thinking, helping healthcare providers deliver on their commitment to patient outcomes.

Bellrock has the capability to scale services – from software implementation and management reporting to supplier monitoring services, contact centre management, supply chain management and specialist service delivery such as energy management. This meant it could collaborate with Care UK in identifying a phase-by-phase approach to creating the right solution.

Explains Martin Holt, Chief Executive at Bellrock:

“The key reason that Care UK brought us in was to gain data transparency in terms of the level of compliance and the cost effectiveness of the supply chain. They wanted somebody who could effectively in-source a help desk solution, which would provide that visibility and transparency.”

Procurement and processes

A strategic organisational review of the property functions within Care UK revealed the need to improve the quality of the FM service delivery, which at that time was largely being provided by a full Total Facilities Management (TFM) contract.

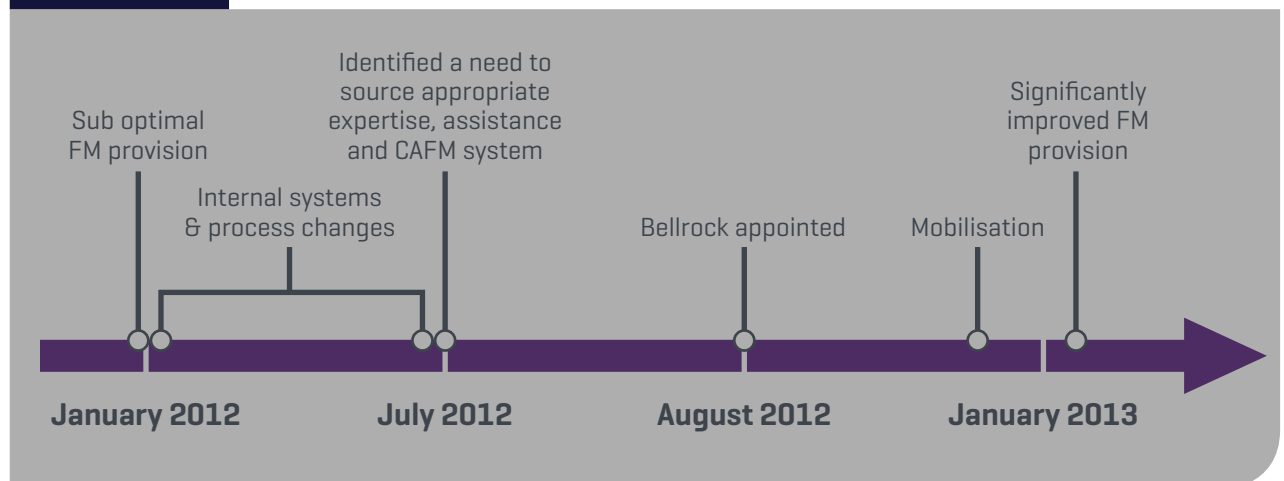
It was decided to unbundle the services and instead identify and appoint a ‘first tier’ supply chain of suppliers. A Procurement Road Map was then drawn up that identified all the key service lines.

To ensure the right suppliers were put in place, a number of inter-company workshops were held to identify which suppliers the care home managers were happy with, what service lines needed to be covered, whether there were any gaps, and if so whether a Bellrock supply chain partner could fill it.

Alongside the procurement changes a new Facilities Management Helpdesk was installed to process all maintenance, repair and equipment purchasing requests. This enables the status of all service requests, scheduled Preventative Planned Maintenance (PPM), quotes and Compliance Certification to be viewed for each property. Bellrock also provided them with access to a site-specific version of the CAFM System.

Figure 4.2

Timeline of partnership between Care UK and Bellrock



This access was eventually rolled out to all Residential, Mental Health and Learning Disability Homes and is gradually being made available to the remaining sites within Care UK.

All sites can use the system to view the most up to date status for service requests logged through the Helpdesk; they can even see a snapshot of any scheduled PPM inspections and can access compliance certification – for example, a Landlord’s gas safety certificate.

The software platform is operated by both Care UK and Bellrock. Care UK has retained the in-house helpdesk team, which has helped to maintain loyalty, commitment and cultural behaviours in terms of how calls are handled, as well as knowledge of the estate and the expectations of the home management teams.

Meanwhile, the Bellrock team, using its Leicester-based contact centre, offers an out-of-hours’ service for the care homes that works to the same call-handling procedures as the Care UK team. The new system means the care home managers have got real visibility regarding task completion, so they know where they are, for example, with their preventative maintenance and the progress of jobs. They have their own system and are no longer reliant on a third party.

Unity programme

The next step in the evolutionary process was to put a change programme together, which saw the setting up of a group property function with budgetary responsibility for all the care home properties.

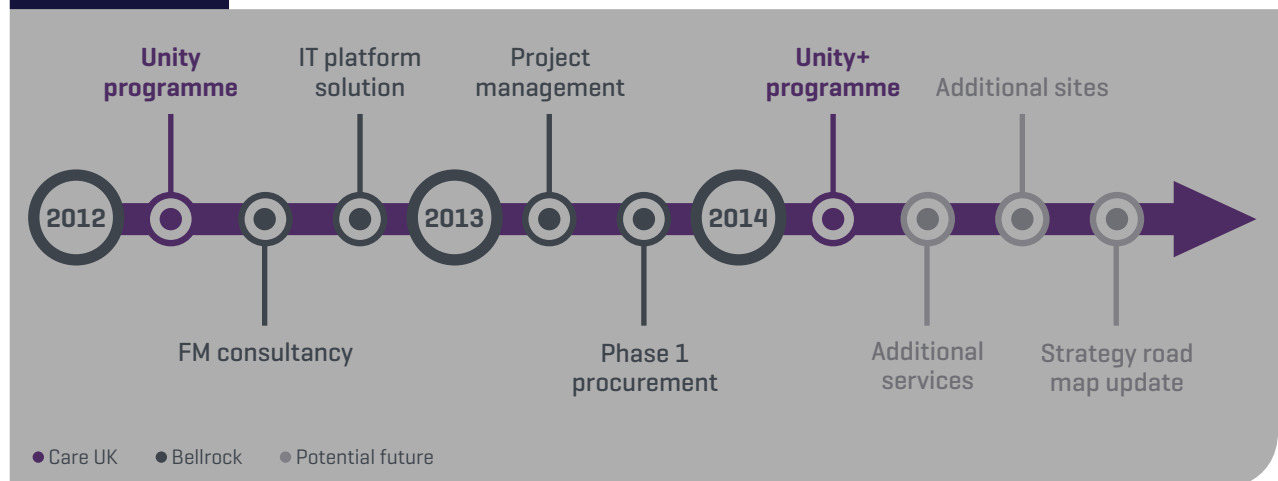
Code-named the ‘Unity Programme’, this was established to align the property department with the operational and commercial objectives of the Care UK business, with its overriding philosophy being to focus on the impact of service on the customer.

The key objectives of the Unity Programme were to:

- reassess the capabilities of the existing project services;
- establish robust, effective and efficient operational property services for the portfolio;
- complete the implementation of the managing agent model with Bellrock; and
- introduce a governance controlled system of portfolio management.

Figure 4.3

Timeline of the ‘Unity Programme’





Explains Rudkins:

“The programme was set up to unify all of our systems, processes and people as well as our supply chain, tackling it from a work stream perspective. We did this as a change control piece of work so we could manage our internal stakeholders as well as managing the work streams themselves.”

In order to foster a sense of partnership working, team building workshops were developed and provided for Care UK and Bellrock team members together, forging stronger working relationships, alignment and significantly speeding up the process of integration.

As a result of the collaborative working model, in September 2013, the Care UK property leadership secured authority to extend this model way of working to implement a process of change across the whole Care UK portfolio (some 450 property interests).

This was delivered by rolling out the Unity Programme across all operational divisions. Known as the Unity Plus change programme, this had greater scope and remit. Says Rudkins:

“Unity Plus was designed to establish a consistent approach to how we manage property across the entire estate. And when I talk about ‘property’ this includes projects, real estate, FM, property insight, commercial management and compliance.”

This programme delivered significant improvements in operational performance, with commercial visibility, customer experience and satisfaction, and visibility of compliance all being enhanced. Compliance is one of the most important FM considerations for Care UK, as Rudkins explains:

“Working within health and social care is not like running an office. We never forget that our buildings have an impact on people’s lives, wellbeing and health. Quite rightly, our environment is heavily regulated by CQC in particular or the Scottish Inspectorate in Scotland and both of them are keen to test us and make sure we are compliant.”

To help ensure the delivery of an environment that is safe and compliant for service users, staff and visitors, a regular report is produced by Bellrock which provides Care UK with real-time reporting that shows compliance for the estate by region, home, service line and supplier.

The report also provides details behind the statistics so that users can see where tasks are overdue or failed, demonstrating transparency in service management.

Care UK now has an end-to-end process with its supply chains, with documents scanned, stored and put onto the system. This means if any documentation is needed it can be retrieved and the certification verified almost immediately.

Care UK and Bellrock also collaborated to produce measures of performance through a 'balanced scorecard' approach. This identifies trends in asset, supplier, end user satisfaction and team performance, and provides a monthly report which gives both an overview of performance, and goes into more detail to help determine the cause of any problems and to reduce the number of incomplete jobs.

Within a month of using the new scorecard process to manage the suppliers, performance levels increased measurably and now run at 98%.

Each service line varies in the number of jobs allocated and Bellrock's supply chain management team can analyse each job that is overdue, managing that supplier until the job is completed. This means that Care UK now has access to a fully transparent service performance report which helps to monitor suppliers by performance, cost and overall relationship, as well as their technical, transactional and strategic ability.

Says Holt:

"You need a supply chain that you can trust when working in the health and care environment – and some of them require a specific skill set for maintaining things like hoists and the lifts and other specialist, vital equipment."

With the new system the property team is now able to benchmark suppliers to establish the best service and cost. An efficient and effective two-stage re-procurement process by Bellrock, and the swift approval of Care UK, enables resources to be deployed efficiently. This trusted process delivers a priority-based approach to re-procurement. The examples below illustrate this point.

Lift maintenance: Uptime of lift availability is a critical Key Performance Indicator (KPI) for Care UK's service delivery. Provision in this category had not been good, so it was important to move this service to a more leveraged position using Bellrock's wider purchasing influence and relationships with the supply chain. Utilising Bellrock's strategic supplier management and re-procurement approach helped to deliver a better deal and maximum performance of these assets.

Hoist supplier: Following an intensive supplier management negotiation, the supplier was set key goals and targets which resulted in maintenance performance improving from 74% to a SLA target of 90% within three months.

Electrical supplier: The procurement process has not only ensured better value but also helped protect Care UK against any unforeseen problems. When an electrical supplier gave notice on a Friday afternoon that they had gone into administration, within an hour replacement suppliers were in place and all relevant stakeholders updated to ensure there was no impact on service delivery.

In another example, the incumbent supplier for water hygiene services was replaced, despite submitting improved pricing proposals, as the procurement team was concerned the supplier showed a lack of understanding of Care UK's needs and expectations. Within the first year of the new partnership a 35% saving on maintenance had been achieved, illustrating the positive impact that the analysis and benchmarking process has on supplier selection and service, and contract negotiation.

Explains Holt:

"Our job is to deliver the best provider to Care UK, and if there's a particular provider that over a period of time isn't delivering the required level of service to the operational team at Care UK, we can sort it out."

Care UK continues to use a combination of self-delivery and an outsourced model, particularly for its social care side, where most of the homes use 'handy people'. The property team is currently going through a process called the 'Handyman Review' which is looking to up-skill these staff so they can perform minor electrical works, carry out more planned fabric repairs, and generally in-source some of the minor repairs.

In doing this the level of reactive spend can be reduced in favour of planned spend to both reduce the costs of outsourcing while also utilising the organisation's in-house capability more effectively.

The CAFM system is also being utilised to allocate the handymen work just as if they were an external contractor. This enables the property team to check on their performance and their overall capability levels.

Further evolution

All of these changes have enabled the property team to be a lot more strategic with its property in terms of how it is used and how it will be managed going forward.

Rudkins explains:

"That can be as simple as making sure we're budgeting correctly, through to strategically determining where the property needs to be and what we can do to consolidate our properties."

The latest initiative is 'FM of the Future', which will help the property team to determine whether to re-partner with its current suppliers or, depending on its customers and stakeholders' views, look at new ways of delivering FM.

New technology will also play its part in the future. Bellrock has instigated a new pilot study where remote sensing devices have been installed into some critical assets. The data is being gathered to produce 'heat maps' that help identify breakdowns, failure rate and call out rates for certain types of assets in certain buildings. In this way, the team can identify which of the health or care home facilities have got problematic equipment.

Explains Holt:

“Remote monitoring helps us avoid a situation whereby a critical piece of equipment, such as a hoist or a lift, is unavailable. Because that clearly has the greatest impact. If we can do that remotely, either through Care UK’s contact centre or through Bellrock’s Leicester centre, we will spot things before they fail.”

Lessons learnt

The integration of Bellrock within the in-house team has played a significant role in the evolution of Care UK’s property functions. Carefully managed performance and project management principles have been applied to clarify the integrated team’s purpose, vision and direction, and to help them put new, improved processes and systems together.

“The corporate governance around the transformation is one of the key things,” says Holt. “There was a great understanding throughout the organisation as to why transformation was important from a strategy perspective.”

Both Rudkins and Holt also agree that good communication is key, particularly in a health and social care environment where you’re dealing with frontline carers, many of whom are running their own businesses.

Given the complexity of the estate it is also vitally important to understand who the key stakeholders are, be they the care home managers, their residents, the residents’ families, patients, practitioners or the management teams within Care UK.

Adds Rudkins:

“The other big thing for me is about describing what ‘value’ means and therefore making sure you get the right representation in the right level of the business. This is really a subset of communication but it’s about making sure you’re giving the right people the right level of insight.

“We’ve had a very consistent approach, massively supported by Bellrock, particularly around the procurement aspect of our supply chain. It wasn’t just Bellrock and it wasn’t just Care UK; it was genuinely a really integrated approach in how we tackled it, and for me, like all successes, it is genuinely about creating one team. I know it’s a bit of a cliché in FM and property, but it just doesn’t work otherwise.”



5.0 Critical FM: Providing specialist Facilities Management consultancy services in the United Arab Emirates



The issues

Following the 2008-12 financial crisis, the economy in the Middle East is enjoying sustained recovery in 2015, and the property and manufacturing markets in the United Arab Emirates (UAE) in particular are seeing increased investment¹. A 2014 study of the region revealed that Facilities Management services contracts in the UAE could be valued at approximately AED 20bn per annum over the course of 2015².

However, FM in the Middle East is still an evolving discipline. According to Bill Heath, Managing Director of Mace Macro International³, FM was viewed as something of a caretaker role until 10-15 years ago – where it was referred to as Operations and Maintenance (and how it is still widely known in the Kingdom of Saudi Arabia).

According to Heath, previously there was little forward thinking in terms of property maintenance, with FM seen as predominantly a reactive process, with just a small proportion of planned preventative maintenance (PPM).

Heath explains that despite the development boom in Dubai in the early Noughties, which drew international FM providers into the region, there was still a reliance on paper-based systems rather than CAFM (Computer Aided Facilities Management) based asset management. Although this approach was effective, it meant that managing assets in the medium- to long-term became complicated and unwieldy.

As a result, by the mid-Noughties new opportunities arose for experienced Facilities Managers to move into the market, which has helped further the profession in the region.

Strategic approach

The professionalisation of FM in the Middle East is one of the primary aims of the Middle East Facility Management Association (MEFMA), a non-profit organisation set up with support from the Real Estate Regulatory Agency (RERA) to provide a dedicated platform for FM professionals, wider construction industry stakeholders, and owner associations of the Gulf Cooperation Council (GCC)⁴.

Although facilities services in the Middle East have traditionally been provided in-house, the UAE is increasingly taking an integrated FM service provider approach to managing assets, which is more advanced than in other Middle East countries⁵.

¹ Parkhouse Bell: Annual compensation and benefits report for UAE: www.parkhousebell.com/wp-content/uploads/2014/12/Parkhousebell-Integrated-Services-Sector-Salary-Benchmarking-2013_14.pdf

² <http://ameinfo.com/blog/real-estate/uaes-facilities-management-industry-value-hit-approximately-dhs20bn-2015-says-g4s/>

³ www.i-fm.net/international-fm-report

⁴ www.gcc-sg.org/eng

⁵ Facility Insight: Magazine of the Middle East Facility Management Association: http://issuu.com/dmcauae/docs/facility_insight-october_november_2/27?e=0/10010327

It has been predicted that over the course of 2015⁶ up to 60% of FM services, ranging from mechanical and electrical systems maintenance, to cleaning services, office services, landscaping, waste management and building management systems operation may be outsourced within the UAE, resulting in the increased sophistication of FM contracts in the region.

Landlords tend to source FM services from multiple service providers and manage them directly, which means that market conditions are competitive in the UAE. Another strategic challenge, according to MEFMA, is in finding trained personnel in the FM industry in this region, where it claims the average rejection rate for FM foremen, technicians and engineers is 70%.

Bill Heath, who moved to the UAE in 2008 to set up Macro International, believes the UAE is now the most advanced FM market in the Gulf area. He predicts⁷ that with a variety of FM contract models being adopted, standards in the region will improve vastly, with clients becoming much more appreciative of the role of strategic Facilities Management services, and why they should be considered as early as possible in the asset lifecycle.

The following case study illustrates the positive contribution facilities consultancy services are making to the ambitious expansion plans of a world-renowned wildlife centre in the heart of the United Arab Emirates.

Case study

Al Ain Wildlife Park and Resort

The Al Ain Wildlife Park and Resort (AWPR) was established as Al Ain Zoo in 1968 by the Founder of the UAE⁸, the late Sheikh Zayed bin Sultan Al Nahyan, as a centre for the conservation of endangered species, most notably desert antelopes and gazelles, such as the endangered Arabian oryx.

The facility is located in the eastern region of the Abu Dhabi Emirate, 150km east of Abu Dhabi city and 140km south of Dubai. Over the years it has built a reputation for excellence and leadership in the international conservation community, with the mission to be a sustainable world-class destination where cultures, people and wildlife live in harmony and mutual respect.

Al Ain Zoo is currently home to 197 animal species and more than 3,700 animals, including 2,260 mammals, 865 birds and 520 reptiles. This large and diverse collection makes Al Ain Zoo one of the largest in the world.



6 <http://ameinfo.com/blog/real-estate/uaes-facilities-management-industry-value-hit-approximately-dhs20bn-2015-says-g4s/>

7 www.macemacro.com/media-centre/macro-contributes-to-international-fm-report

8 www.uae-embassy.org/uae/history/sheikh-zayed-bin-sultan-al-nahyan-founder-uae



Image source: Sergei Afanasev / Shutterstock.com

Since 2011 work has been carried out on an ambitious project to transform the area of the existing zoo into a new institution dedicated to exhibiting and conserving the wildlife of the desert world. The 900 hectare site's new development includes safari parks which recreate the habitats of Africa, Arabia, Asia and North America and offer tourists the opportunity to experience desert flora and fauna of the region as well as other deserts of the world.

Along with the intention of becoming a prime tourist attraction, the Park aims to extend its education, awareness and wildlife conservation mission with the opening of the Sheikh Zayed Desert Learning education centre. This covers 13,000 square metres over six floors and features interactive exhibits that help educate visitors about wildlife and desert traditions.

The building, whose exterior façade is clad with natural stone panels, sourced from neighbouring Oman, also benefits from a range of design measures used to reduce energy consumption. This has resulted in it achieving a LEED Platinum and Estidama (Abu Dhabi Green Building Rating System) 5 pearl status, currently the highest sustainability rating in the UAE.

Macro – a wholly owned subsidiary of Mace®, the international project management and consultancy company – has been commissioned to provide a full suite of specialist Facilities Management consultancy services throughout all the phases of the project, from design through to transition and the operational Facilities Management phase.

Macro has been in operation since 2002, developing organically as an extension to the many other building and property-related services already on offer from Mace. Macro International has been providing services to Al Ain Zoo since 2010.

Explains Simon Long, Senior Consultant on the project:

“The initial engagement was purely consultancy services, delivering a design review specifically for the Sheikh Zayed Centre.”

These services have included FM design reviews, the development of an FM strategy for service delivery and the production of policies and procedures required for the operational phase of Sheikh Zayed Centre. The project has required a wide range of tasks, including:

- Providing interim maintenance to mechanical and electrical systems prior to the tender process for the appointment of an FM service provider.
- The creation of FM service specifications and Bid evaluations for FM service provision and recommendation to the client.
- Providing an interim Helpdesk system (using Macro in-house staff and a proprietary CAFM software system), prior to the installation of the AWPR in-house function.
- Development of an asset coding system and physical application of tags and labels for all mechanical and electrical assets, as well as coding rooms and spaces within buildings.

Challenges

Because Facilities Management in the UAE has only gained recognition and momentum over the past decade, concepts such as lifecycle planning and cost determination are only gradually gaining credence. One of the biggest challenges can be in providing facilities services to buildings where provision for ongoing maintenance has not been fully developed, such as systems access and isolation. This is partly due to fast-paced development in the region and also because, due to the extreme desert climate, buildings require a higher maintenance input.

Design stage reviews of FM aspects – particularly focusing on ‘maintainability’ and ‘usability’ – help to address these issues.

For the Sheikh Zayed project, this meant a recurring theme of the design reviews was to ensure maintenance access to equipment or plant; for instance, being able to gain safe access to light fittings or air conditioning equipment.

Chris Bond, Director of FM Consultancy for Mace in UAE, explains:

“One of the key areas of FM consultancy is to work with the client to develop an understanding of FM requirements, based on stakeholder objectives, why these are required and how this affects the lifecycle cost of the asset. An upfront (capital) cost increase may well provide reduced lifecycle expenditure and duration, through improved design life, reduced maintenance and ease of access.”

However, he adds, because the profile of FM has risen over the years there is a growing understanding in the region that the earlier FM gets involved in a building’s lifecycle the better, which was how the Sheikh Zayed client’s approached the project.

Dealing with a range of international and local standards, such as health and safety, is another challenge. Although many requirements are based on European or American standards, there are well developed national and Emirates-based regulatory standards. Within Dubai, for example, compliance with the Dubai Electricity and Water Authority is required, but in Abu Dhabi, it would be the Abu Dhabi Distribution Company, as well as the Regulations and Supervision Bureau.

“It’s not that you can take one standard and apply it across the board – it is very much based on each individual circumstance,” explains Simon Long.

Another major challenge for the project was finding the right sub-contractors. The level of service varies greatly within the UAE, due to the developing market, and given the extreme climate it was important to find suppliers who could help maintain essential equipment such as air conditioning units, which are operating approximately 90% of the time.

Achievements

The services Macro has provided to the Sheikh Zayed Desert Learning Centre at the Al Ain Wildlife Park and Resort included FM design reviews, the development of an FM strategy and the production of policies and procedures.

Following the design and development process, Macro mobilised its own FM team which managed all the sub-contractors (water treatment, fire alarm, fire-fighting, lifts etc.) on the client’s behalf during the interim operations phase and went on to manage the transition and handover of the Desert Learning Centre to the outsourced FM provider and the in-house client team.

Macro also procured service providers and ensured the specialist training of both the client’s and the new outsourced supplier’s staff on the operation of the new LEED Platinum building.

This boasts a number of innovative design features that both allow for, and benefit from, the desert climate, including a state of the art Building Management System (BMS) that monitors the operation of all the energy- and water-consuming equipment, and ensures that these operate optimally to achieve the desired performance whilst saving energy.

LED lighting fixtures provide more energy-efficient lighting, and by harnessing the desert climate, a portion of the energy demand of the building can be generated from an array of photovoltaic solar panels installed on the roof, which are capable of generating and contributing at peak approximately 149kW of clean green electricity on a daily basis.

An array of solar panels located some distance away from the building also generates sufficient amounts of hot water. Minimising the level of water demand is essential to the sustainability of the project, so the design features the use of sophisticated water saving and grey water treatment plant. A water efficient re-cooling system works at adiabatic mode¹⁰, which negates any requirement for chemical additives.

Reinforced concrete suspended floors have been constructed as bubble decks – a technology developed and practised in Germany for over 15 years and used for the first time in the UAE. The application of the bubble slab technology for the production of flat slabs has reduced CO₂ emissions by a total of 20% compared to a conventional solid flat ceiling slab. As a result of these innovations, the Sheikh Zayed Desert Learning Centre was nominated for an international award for sustainability¹¹.

The building’s safety and security systems are also controlled and monitored through the BMS Security Management System, which covers access control, a Video Surveillance System (CCTV) and Fire Systems.

¹⁰ www.cibse.org/knowledge/cibse-ks/ks19-humidification

¹¹ www.thenational.ae/uae/tourism/al-ain-desert-learning-centre-shortlisted-for-international-green-award



Another boost to lifecycle management is the introduction of a new CAFM system that offers call logging for reactive tasks and notifications for PPM (Planned Preventative Maintenance). These are automatically generated by the system and sent out to the appropriate service provider registered on the system, the benefit being that when PPM schedules are reviewed, the relevant provider's information can be plotted against each of the assets and the system automatically generates PPM requests two weeks before the maintenance is required.

The system ensures that all reactive maintenance calls are logged, and the job is tracked all the way through to closure. Any mitigating circumstances preventing a job from being completed are recorded on the CAFM system and reported back to the client, so at any point in time a snapshot can be taken to determine how many calls are being received, how many jobs have been raised, how many are closed and how many are outstanding, all of which are used to gauge how well the KPI (Key Performance Indicators) are being met by providers.

"This provides a double benefit," says Simon Long. "It not only highlights issues with any particular service provider so we know who performs well and who doesn't; it's also very good in measuring assets, because you've got all of the asset history to hand. If an asset has failed three times in six months you've got to ask the question why; is there a manufacturing defect, do we need now to call the manufacturer under the warranty? It provides all this useful information."

Other achievements include:

- The production of standard operating procedures for the building.
- The production of a building user manual, which works in accordance with the Estidama¹² Standard.
- Development of a comprehensive, critical and recommended spares management system, based on both manufacturers' recommendations, and critical requirements.

Andreas Bruckner, Director of FM at AWPR, comments:

"Macro has successfully accepted the handover of the prestigious Sheikh Zayed Desert Learning Centre on behalf of AWPR, in terms of documentation, testing, drawings and training."

"Macro has also produced a fully comprehensive RFP (Request for Proposals) for the total Facilities Management solution, while operating the building in the interim, produced building user manuals in accordance with Estidama, provided life cycle costing, and so on."

The positive client relationship is continuing, as Macro has been asked to provide further FM consultancy services in line with AWPR plans to expand the zoo into a wider safari park.

¹² www.upc.gov.ae/estidama.aspx?lang=en-US

Lessons learnt

As the facilities market expands in the Middle East, there are more and more opportunities for the discipline to prove its worth and demonstrate the benefits strategic FM can bring to the region.

According to Chris Bond, FMs must ensure that they can adapt to both a different climate and a different culture, and be prepared to justify and provide solid evidence to clients as to why investment in FM expertise is crucial to lifecycle management. He says:

“Make sure the FM objectives are appropriate for the asset environment, and ensure you plan your operational requirements early enough so they can be mobilised for effective customer-faced service delivery on Day One of a building’s operation.”

This requires a marketing drive to raise the profile of FM with the objective of ensuring that it is involved early in the design process, developing client understanding of the operational phase (the longest period in any project).

Macro’s positive relationship with the Al Ain Wildlife Park and Resort demonstrates there is a growing understanding of the positive contribution Facilities Management can make to the success of a project. Says Long:

“Clients are certainly becoming more au fait with what is required, and getting FM teams and FM consultants involved from a much earlier stage than previously. I think FM in the Middle East may still take some time to be fully adopted, integrated and understood, but on the whole Facilities Management in the region is certainly on the up.”

6.0 Critical FM: Working to deliver FM services at the largest dedicated rugby union venue in the world



The issues

There is a growing awareness within the Facilities Management sector of the need to innovate, to help ensure that the level of service provided is not only of a high quality but has a positive impact on the performance of an organisation.

Innovation can take many forms in FM; from employing the latest Building Information Modelling (BIM) technology to streamline the delivery of hard FM services, to reorganising the way in which facilities are managed across an entire estate¹.

According to research², the most effective route to innovation in FM seems to be through a collaborative process, where the in-house FM department works closely with its outsourced providers. This applies to any in-house/outsourced agreement, whether it's one integrated or Total Facilities Management (TFM) provider or a number of FM contractors.

In fact, the research reveals that bundled services and integrated or TFM contracts are increasing, and there has been a marked shift towards strategic partnerships.

Whatever the contract model, the need to collaborate illustrates the importance of the creation of more partnership-style relationships between the client and their FM service providers. Successful strategic partnerships share a vision and goals, and are good environments for continuous improvement and innovation.

¹ RICS Strategic Case Studies II: www.rics.org/Documents/RICS%20Strategic%20FM%20Case%20Studies.pdf

² Evaluating performance in facilities management, published by www.internationalworkplace.com



Image source: 1: Mitch Gunn / Shutterstock.com 2: Neil Balderson / Shutterstock.com

Strategic approach

The greatest challenge when mixing an in-house FM department with its outsourced providers is in creating one team that shares a sense of ownership in the level of service it delivers.

According to research by RICS³ good communication between the client and the outsourcing partner is one of the key ingredients necessary to have a positive impact on the level of satisfaction from both the client organisation and its end users.

The research found that the frequency and openness of communication between the client and the outsourcing company can help ensure that any potential problems can be addressed – proactively – before they impact negatively on the customer.

In circumstances where the outsourced company was seen as more ‘vendor-orientated’ rather than as a partner, the lines of communication were less defined, there was less opportunity to innovate, and consequently improve the level of service delivery.

By contrast, where a longer-term partnership relationship between clients and outsourcing providers has been established, there is greater scope to measure and strive to improve customer feedback, and to mutually improve both parties’ performances.

As the case study below illustrates, at the heart of this is the importance of gaining a good business fit between the client and outsourced provider, where both work seamlessly together to continually improve service delivery.

Case study

Twickenham Stadium

Twickenham Stadium⁴ in South-West London is the home of England’s Rugby Football Union (RFU⁵), and seats an impressive 82,000 spectators, making it the largest dedicated rugby union venue in the world.

Aside from match days, Twickenham Stadium operates as a major venue for other events, such as music concerts featuring the likes of U2 and Rhianna, and houses the renowned World Rugby Museum which offers stadium tours. In a joint venture with Twickenham Experience Limited⁶ it also offers a range of corporate events and conferences. To help people get the most from a visit, a 155 room Marriott Hotel is located within the Stadium, offering conference facilities and a Virgin Active Leisure club.

3 Balancing the performance scorecard: how to maximise customer feedback in FM: www.rics.org/us/knowledge/research/research-reports/balancing-the-performance-scorecard-how-to-maximise-customer-feedback-in-facilities-management/

4 www.englandrugby.com/twickenham

5 www.englandrugby.com/about-the-rfu

6 www.twickenhamexperience.com

Managing this high profile and demanding venue is the facilities team, which is based in the Rugby Football Union's headquarter offices in the South Stand of the stadium.

The FM team comprises approximately 25 people, covering the hard and soft services, including building services, cleaning, security, health and safety, and sustainability. RFU's facilities team recently renewed its FM services contract with Shepherd FM⁷, which provides most of the hard FM services, including M&E, water treatment, lifts and escalators, heating and ventilation and boiler servicing.

Explains Neil Theuma, RFU's Head of Venue Facilities:

"The recent contract renewal with Shepherd was competitively tendered and they won on merit; the monetary value wasn't the main driver for our choosing them, it was because of the positive relationship that we'd built up."

Shepherd FM provides essential Facilities Management services to a wide range of clients in the public and private sector. As one of the leading FM companies in the UK, the firm provides high quality, cost effective services built around the client's requirements and develops bespoke programmes and systems, all serviced by its highly skilled engineers.

At the time, Neil Theuma said the FM services company had been selected because it was able to demonstrate a significant technical capability and understanding of the importance of system continuity, and as the FM division of Shepherd Engineering Services who installed the infrastructure as part of the south stand project. He added: *"These were critical factors in the decision-making process, given the high-profile nature of the stadium and the volume of visitors that pass through our gates."*

Day-to-day and event management

The FM team at Twickenham effectively performs two roles; a day-to-day job, and event delivery. On a day-to-day basis the team provides facilities for approximately 250 people based in the South Stand offices, as well as around 50 people working across the venue every day.

In practical terms this means that in the summer months the FM team tends to focus on getting a lot of the repair work done – which includes the building fabric – while through the winter, when the stadium tends to host more events, the FM team must also deliver a full range of facilities services for a series of matches and other events.



⁷ www.shepherdfm.co.uk



Preparation for an event varies according to the type of occasion and its frequency. For instance, for the QBE Internationals⁸, which took place in November 2014, there were four games in a row, which had quickly followed a Barbarians⁹ match the previous week.

For the FM team this meant five weekends in a row of matches, requiring a great deal of preparation to ensure the venue was ready, in part because, prior to a match, there are huge areas of the stadium that may have remained unused for weeks which then have thousands of people going through them in one day. These areas include the main seating section, corporate hospitality boxes, and of course the public toilets.

To ensure a high standard of facilities the Shepherd delivery team works alongside the RFU facilities team both before, during, and following each match. This requires a range of expertise, from ensuring the heating, ventilation and associated electrical equipment is in working order to, while during a match, “running around and unblocking toilets”.

The first game in a series of events tends to be the most demanding as the venue has to be made ready and all the facilities checked over thoroughly. This requires in-depth knowledge of the site and a good understanding of the challenges within the FM management team. Once a series of matches gets underway, for instance during a tournament, this initial set-up can then be replicated for each event.

Although the facilities team can’t always pre-empt every problem that may occur, they must be prepared to react quickly to any eventuality on a match day. The key, they explain, is being as prepared as possible for any situation that might arise.

It also helps that most of the staff – whether from Shepherd or from the in-house team – have the right experience, including site knowledge, and that Shepherd ensures that additional expertise is brought in from other sites, to ensure resilience.

Darren Payton, Operations Director at Shepherd FM, explains:

“What we aim to do is get as many of our people familiar with the site and keep refreshing their knowledge by bringing them in from other sites on a regular basis. That way, especially as we build up to the World Cup, we’ve got a couple of teams on standby.”

Theuma agrees:

“If we’re managing a full England game with full hospitality then we have to bring in lift engineers, fire alarm engineers, and basically cover anything that could cause a safety issue on the day. We also bring in standby building services, so they’re on site, in the venue, ready to deal with any eventuality.”

Following every event the FM department carries out a full team debrief, comprising both the in-house team and its FM partners, where a list of faults, and any trends or patterns, are picked out from a log that is kept during each match or event day.

From this log any trending patterns can be identified and addressed with specific building or maintenance projects, and, most importantly, the services team can ensure any defects are resolved before the next event.

This can prove quite a challenge during periods of back-to-back events, as FM is engaged in recovering the venue for the next day when the gates open again, making sure it’s clean, safe, with any defects rectified.

⁸ www.qberugby.com

⁹ www.barbarianfc.co.uk

This may require some overnight work, and some staff shift changes, to ensure a rapid response to any problems that are uncovered.

It is this rapid response that exemplifies the critical role played by the FM team at Twickenham. While most people would assume the greatest risk at Twickenham would be bad weather affecting the pitch, they'd be wrong. It has undersoil heating, an extreme weather response plan and can cope with just about any condition. The recent investment in the infrastructure at Twickenham Stadium now means that the stadium is resilient to grid power disruption and can continue to operate unaffected using onsite generated power.

Twickenham Stadium Upgrade Programme

To help ensure the quality of the facilities on offer, in early 2015 the RFU completed a £76m refurbishment of the stadium, referred to as the 'Twickenham Stadium Upgrade Programme' (TSUP). One of the primary motivations for the refit was because, following the opening of the South Stand seating bowl in 2006 and the completion of the South Stand (which houses the RFU offices, Marriott Hotel and Virgin Active club) in 2008, the rest of the Stadium required an update. The North Stand was built in 1991, the East Stand in 1993, and the West Stand in 1995 when the typical demographic in terms of match attendance was around 90% male, and the stadium hosted between six and seven major events a year, with little or no use in between. Says Theuma:

"We outgrew our infrastructure, and generally we felt we were not able to deliver the experience we wanted to give our customers."

A programme of work was identified which included a major upgrade of the stadium infrastructure. The changes made include the installation of a new power network, and a new set of generators, which makes the venue more resilient against power failure.

Chilled and hot water is now plentiful throughout the venue, thanks to a new central energy centre. The water systems have also been boosted throughout the site, and are fed from a central tank rather than having to rely on gravity-fed tanks, with the result being that none of the toilets and washrooms can run out of water. There have also been significant improvements to the drainage systems to cope with the extra demand.

Shepherd Engineering Services was contracted to complete the main infrastructure work in 2012. This, argues Theuma, was a major advantage as it meant that when the project was handed over all the changes had already gone through Shepherd FM's guardianship. Darren Payton agrees that his team would not allow any services to be handed over unless they had been rigorously tested.

The decision to use Shepherd Engineering wasn't solely because the incumbent hard services provider was Shepherd FM, but it did afford a clear advantage, maintains Theuma:

"In a live environment such as Twickenham Stadium, with very limited opportunities to carry out testing and commissioning, it was a more desirable outcome for us to have effectively one team working on the delivery, handover and management of this major project."

Challenges

Alongside the demands of running day-to-day services and managing a range of events, are the challenges of planning and carrying out projects at a site that is permanently in operation.

Although some smaller works can be carried out by closing down parts of the stand or buildings, for larger projects this isn't an option. International sporting events cannot be delayed or rescheduled, so the pressure for projects to finish on time to allow the venue to be ready to open its doors on the allocated day is immense.

During the major refit, Theuma admits:

"We'd have loved to lock the doors for two years and then opened it again but we couldn't, so instead we had windows of opportunity to deliver the project."

While all the structural improvements have enhanced the quality of the facilities on offer, they have also in turn put pressure on the facilities delivery teams. For instance, the addition of new bars and toilets has affected the flow of people. So whereas on match day, visitors used to walk out in one direction, some now head to the new bars and toilets, causing an impact on the direction of traffic, and requiring changes to signage and security.

Maintaining high standards of customer service at such an iconic venue is another challenge, as paradoxically, the success of the Stadium has raised customers' expectations. Anyone who now visits Twickenham Rugby Stadium, be they a box-holder or a first time visitor, expects it to be a major occasion, and it's up to the services team to help ensure an excellent customer experience.

Of course, it's difficult to please 82,000 people, but getting the fundamentals right is a start, and those fundamentals are generally the facilities – which all contribute to providing a memorable visit.

World Cup

The RFU facilities teams will face their greatest challenge to date in autumn 2015 when the prestigious World Cup comes to Twickenham. England will act as the host nation and Twickenham will be responsible for ten tournament games, including the opening ceremony, and opening match, both semi-finals and the final itself during the six weeks of the tournament; some of which will be run back-to-back.

Part of the £76m redevelopment project included the world's first LED floodlighting system in a national stadium, as well as the installation of two 21m x 8m TV screens, suspended off the stadium roof. Working together as 'Team Twickenham', Shepherd's engineering services and FM teams collaborated closely with the RFU, and used Shepherd's off-site manufacturing facility, Shepherd PRISM, to prefabricate a large number of modules and equipment, playing a major role in meeting the project's tight deadlines. Shepherd PRISM also helped the team meet the complex logistical and safety demands of working in a 'live' environment, in which it is required by law that entire installation projects must be removed prior to every event held on site and started again from scratch after the event.

Shepherd's engineering services' Regional Director for London and South East, Derek Joiner, explained:

"Ultimately, the key word associated with this project is 'legacy' and the modernisation of this legendary stadium will ensure it remains among the best in the world. Selecting a team with the range of skills required was essential to make sure the home of England rugby was ready to welcome fans from across the globe and the project's successful completion is a testament to the outstanding work of 'Team Twickenham' throughout."

RFU Twickenham Stadium Director, Richard Knight, commented:

"Shepherd has been working on the Twickenham Stadium upgrade project since 2012. This was a very challenging project over a two-year period, which required careful programming and coordination to ensure it did not impact our event and 365 day non-event business. Shepherd has proven to be a supportive, professional and diligent partner with a full appreciation of our requirements."

Although the tournament will be the biggest event so far in the Stadium's history, the FM team's job won't end when the last match is played. The role of the FM team is to ensure that the facilities at the stadium work both before, during and after the tournament.

In practice, explains Theuma:

"On a Monday after a heavy weekend of games we've got hotel guests coming here, we've got people coming in for small events and the daily RFU business operations, so we have to return the venue back to business as usual."

However, he adds, the RFU FM team and their partners are determined to just "enjoy the whole experience".

This spirit of enjoyment, and working together, is echoed by Noel Clancy, CEO at Shepherd FM, who adds:

"I am extremely proud of our achievements at Twickenham. Our strong customer care ethos combined with our strong management team has allowed us to build a relationship at all levels built on trust and openness."

"We very much look forward to supporting the RFU in providing what is arguably one of the best rugby spectator experiences in the world. We are proud to have worked with the RFU during this exciting phase."

Lessons learnt

According to both the in-house FM team at Twickenham Stadium and its FM services provider, Shepherd FM, providing high quality facilities services at such a demanding venue requires flexibility and a 'can do attitude'. It means developing a trusting two-way relationship between the client and the FM provider. Explains Darren Payton, from Shepherd's perspective:

"Our industry is all about the people. So yes, we know this is a stressful environment, and a pressured environment, but our success relies on us working together closely, developing good relationships and listening carefully to our client's needs."

According to Theuma, it's all about customer service, whether delivered by the in-house team for spectators during a match day, or on an everyday basis for RFU staff and visitors.

He says:

"We are an iconic brand, and the facilities providers do interact with a wide range of visitors; including the players, royalty, and VIPs, so customer service is key."

"At the same time we must ensure we deliver that same customer service to everybody – from Royalty to the family that comes to the stadium for the first time."

So whether it's delivering FM on a daily basis, or providing services to the third biggest sporting event in the world – where the consequences of any failure are magnified thousands of times – the FM services team at Twickenham Rugby Stadium will continue to ensure the high quality of service provision to the thousands of people that come through its doors.

Concludes Theuma:

"We know what we want from our services providers because we in turn are service providers to our RFU staff and other stakeholders. We know and understand how we want our services delivered because we are doing it ourselves."



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