

AMF JOURNEY & BENEFITS ASTRAZENECA NORTH

AstraZeneca and Sodexo

AstraZeneca is a global company, whose core business is the research, development and production of pharmaceuticals that make a meaningful difference to patient's lives. There are 6700 employees in the UK working in research & development and manufacturing. Sodexo's relationship with AZ began in 2008 with a soft services provision across the UK including two key sites in Cheshire; Alderley Park and Macclesfield. In 2012 the contract increased to include hard services as a full IFM offer.

Macclesfield is AZ's second largest manufacturing site focusing on therapeutic areas such as cardio-vascular, oncology and neuroscience. This brings with it specific regulatory requirements to maintain licence to operate.

Alderley Park was the largest R&D site, sized at 400 acres. AZ's strategic plan was to move their R&D capability to the Cambridgeshire area which has had an impact on the occupied footprint at Alderley Park.

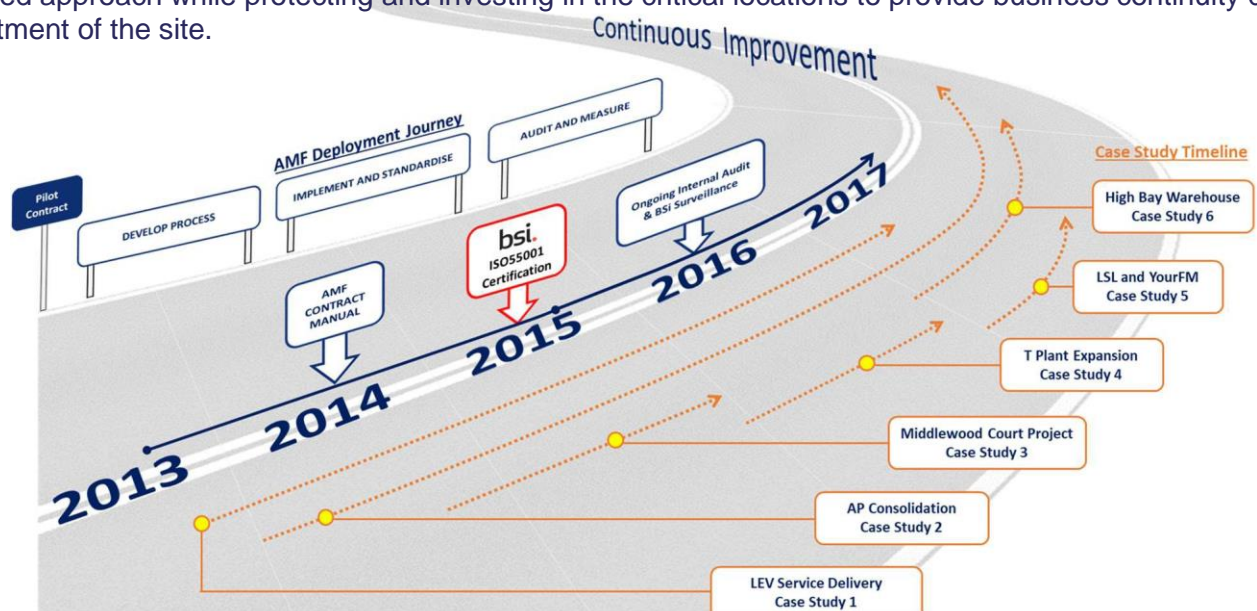
Sodexo, in partnership with AZ, selected this account to be the first deployment of the Asset Management Framework (AMF). This was Sodexo's newly developed global framework that brings compliance to ISO55001 and demonstrates world class Asset Management. The values, capabilities and aspirations of both AZ and Sodexo enabled this opportunity. Sodexo's contract is a GMP (guaranteed maximum price) arrangement.

SODEXO'S SOLUTION & JOURNEY

The AMF journey began in 2013 with the creation of a common framework. This was deployed during 2014 to encompass all technical staff, and accreditation to the ISO 55001 standard was achieved in July 2015. There are annual surveillance visits by BSI to validate adherence to the ISO standard. Asset management now delivers continual improvement to both AstraZeneca and Sodexo.

As the business strategy for the two sites developed, different opportunities to utilise and gain benefit from the suite of asset management processes were realised. At these two sites, there are common drivers such as; health and safety, regulatory compliance, increased asset availability, creating a great place to work (Quality Of Life), business continuity and value for money

The contraction at Alderley Park created drivers of consolidation and management of unoccupied buildings in a coordinated approach while protecting and investing in the critical locations to provide business continuity during the divestment of the site.



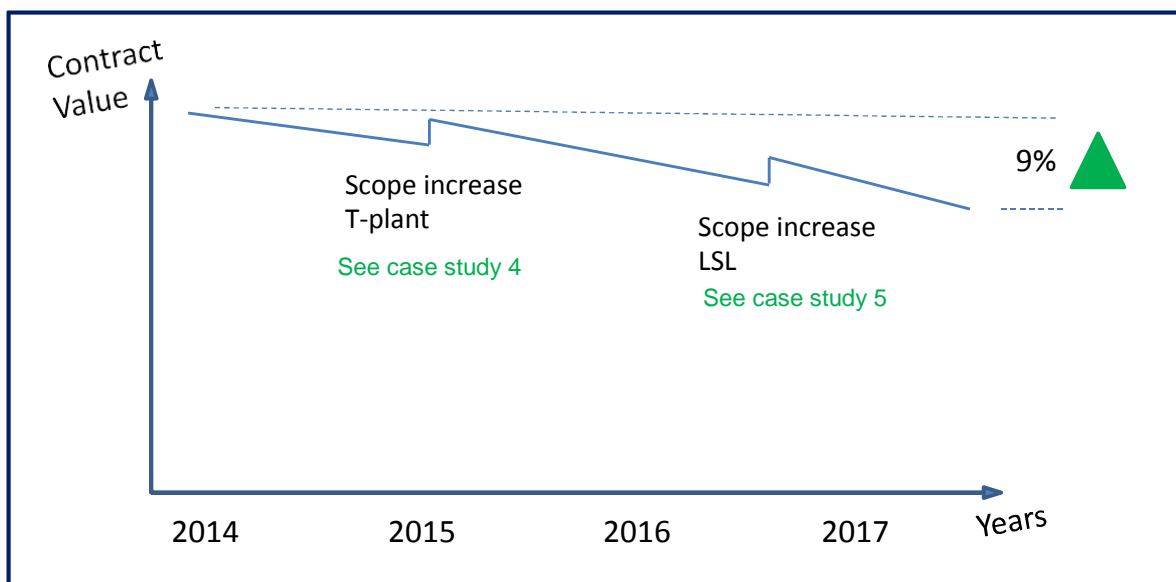
BENEFITS REALISATION

Despite the complexities of contractual arrangements, there is a simple way to consider the ‘total cost of ownership’ of a portfolio. The cost of operating a business is clearly a driver. The TCO is simply a combination of labour and material cost. Labour includes everyone; engineers, managers, admin and supply chain. Materials include; spares, consumables and construction.

Asset management creates value by optimising these resources through risk management, planning, learning & continuously improving delivery while supporting the drivers of the client’s business.

At Macclesfield, over the 3 years that Sodexo has developed, deployed and implemented the AMF, the GMP contract value has reduced in line with agreed glide path commitment. Not only has this glide-path reduction been achieved but there have been several scope increases, two of them of material value, that have been absorbed within the same contract value. Considered in totality this represents a 10% reduction in cost which has benefitted AstraZeneca.

Examples of business benefits can also found in the appendices.



Contract Value, Glide Path and Scope Increase Overview

BENEFITS TO OUR CLIENT ASTRAZENCA

As a result of deploying and utilising AMF tools and techniques the account has seen the following benefits;

- Simplification of supply chain across the Hard FM and Projects platform
- Reduced expenditure by >10% a year across the whole contract
- Improved performance, uptime and compliance
- Planned/reactive ratio improvement for all assets at Macclesfield 43/57 to 54/46 and for critical assets from 53/47 to 71/29 resulting in more predictable work planning.
- Staff retention and therefore cost avoidance of recruitment through a low 2% turnover in technical roles
- Driving value through supply chain relationships which benefit the account.
- Further benefits detailed in the below sections
- A mindset of continuous improvement driven through the account

Philip Richardson, Global Lead Asset Management, AstraZeneca :

Sodexo ISO55000 Accreditation

Dear David,

I was delighted to hear confirmation that the Sodexo Team at Macclesfield, led by Nick Hoarty, have successfully achieved accreditation to ISO55001, the International Standard for Asset Management. This must be particularly gratifying as I understand this is a first for Sodexo and indeed 'trail blazing' within the FM sector of asset management.

To me the essence of ISO55001 lies in assuring that day-to-day asset management activity is fully aligned to both the immediate operational needs of a Business and to its overall strategic direction. In the pharmaceutical industry doing the right maintenance well whilst identifying and addressing longer term risks to asset performance is essential in maintaining license to operate, and ultimately to the safety of patients relying on AZ medicines. At Macclesfield Sodexo are a vital partner in securing and enhancing the capability of our facilities. I am convinced that the ISO accreditation will further assist Sodexo in driving and embedding your commitment to continuous improvement. In doing so our facility asset strategies, which are now consistently informed by Sodexo, will be more effectively controlled and the benefits from investment better realised.

Please pass on my congratulations to Nick and the Team.

Regards.

Phil

Dr Phillip Richardson
Global Lead Asset Management

List of Appendices:

The following documentation adds further detail to the summary case study presented on this document.

1. Creation of a 'total cost of maintenance' model for LEV assets allowing total visibility and change control for these critical systems.
2. Alderley Park case study: How Sodexo supported site consolidation through a tick-over/mothballing solution using investment and 'End of Life' planning.
3. Supporting operational users of a building during extensive refurbishment and fit out of Middlewood court, ensuring no business disruption.
4. Technical capability and confidence at Macclesfield allows contract scope increase in Tablets Formulation (T-Plants).
5. YourFM project to restructure service delivery across the labs zone at Macclesfield incorporating new scope in LSL.
6. Designing and developing the operational and maintenance solution for a new building, the 'high bay warehouse' at Macclesfield during the design phase.
7. Developing the CMMS in partnership with AZ to support asset management decision making.
8. ISO 55001 certificate for the AstraZeneca account.

APPENDICES

Supporting the 'AMF journey and benefits document' the following case studies have been developed to elaborate on some of the key initiatives and projects related to asset management delivery at AstraZeneca's Macclesfield and Alderley Park Sites.

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CASE STUDY 1 - LEV MAINTENANCE DELIVERY

Development of Local Exhaust Ventilation (LEV) Maintenance and Delivery

VALUE: £360k (current GMP), **TIMESCALE:** April 2013 – Present Day, **LOCATION:** AstraZeneca (North)

KEY AMF ELEMENTS: Maintenance Strategy Development; Work Planning, Scheduling & Control

KEY FACTS

- LEV systems are designed to reduce exposures to airborne contaminants such as fumes, vapours, gases or particulates.
- They are used extensively across AZ and are crucial for scientific research, development and manufacturing.
- Typical examples include;
 - Biological safety cabinets designed to provide operator and product protection for biological materials.
 - Fume cupboards which provide operator protection from hazardous vapours, gases or mists.
- Sodexo were awarded the contract for testing and maintenance of LEV systems in April 2013.
- Over the course of the contract Sodexo have developed the service with AZ to improve the service delivery.

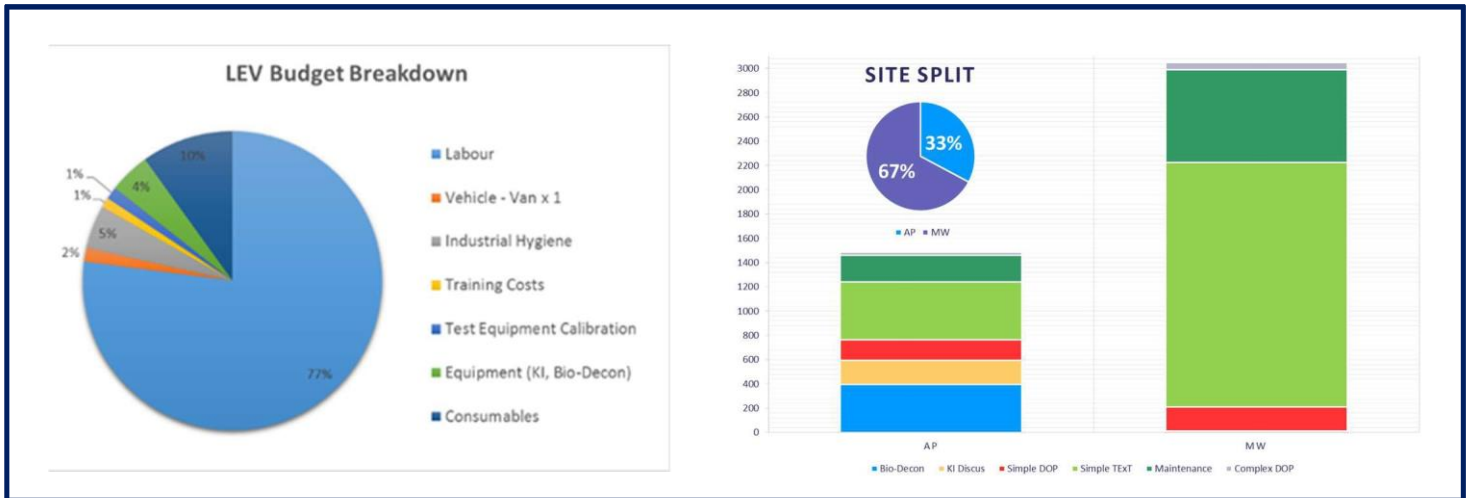
CLIENT CHALLENGES

- Availability of LEVs has the potential to directly impact science or manufacturing in the areas they are utilised.
- Thorough examination, testing and reporting is critical in ensuring LEV users are adequately protected from harmful airborne contaminants.
- Prior to Sodexo delivering the service, AZ identified an opportunity to improve and consolidate the service following a review against HSG258.
- The testing element of the service was predominantly outsourced to specialist providers meaning there was a lack of internal expertise.
- Budgets and service delivery were not aligned making changes and budgeting difficult to manage.



SODEXO'S SOLUTION

- Initially self-delivering maintenance only, Sodexo obtained the equipment, recruited and trained personnel to self-deliver the thorough examination and testing of LEVs.
- Sodexo reinvested initial savings from insourcing into people, training, development and equipment to create and develop a robust internal capability.
- An LEV ground up resource model was developed utilising AMF principles where asset data and strategy derives labour, consumables and equipment costs allocated to the correct site budgets.
- Optimisation of work planning processes and resource levelling improvements were implemented to simplify in month work demand management from the compliance database and maintenance management system.
- The LEV team planned and reactive resource has been optimised to deliver the operational activity across the sites based on ground up requirements.
- This solution has enabled a successful LEV model to be mobilised across the Southern AZ sites.
- There has been further development of the competency and skill set of the team including development of a comprehensive skills and competency matrix aligned to HSE guidance.



LEV Service Resource Breakdown

BENEFITS



- **FLEXIBLE MODEL** – Resource model allows asset changes to be reflected in maintenance delivery, team structure and budgeting. Any increase or decrease can be effectively managed operationally and commercially allowing changes to be agreed and implemented on the contract.
- **CAPABILITY** – Having site based capability and subject matter experts ensures that there is the knowledge and experience to directly support AZ and respond quickly to customer demand.
- **INSOURCING** – Insourcing and self-delivering a service is always the preferred solution however this can be challenging when specialist skills and capability are required.
- **WORK MANAGEMENT** – More efficient work management minimises disruption and allows better staff utilisation.
- **STAFF RETENTION** – Providing training, development and opportunities.



- **SPECIALIST KNOWLEDGE** – LEVs are typically maintained by specialist providers. Having the knowledge and capability on contract provides the opportunity to expand the service external to the AZ contract.

CASE STUDY 2 - ALDERLEY PARK SITE CONSOLIDATION

Building Tickover and Mothball Solutions

VALUE: £1.2M (Adhoc work), **TIMESCALE:** Dec 2013 – Present Day, **LOCATION:** Alderley Park

KEY AMF ELEMENTS: Management of Change; Asset De-commission and Disposal.

KEY FACTS

- 400 acres' site, 80% remains as woodland, water and farmland.
- Cutting edge research facilities and office accommodation occupy the developed areas.
- In 2014 AZ announced significant footprint changes resulting in the sale of the site to MSP.
- Sodexo offered a solution which would directly support AZ's management of buildings during a phased transition of the site to the new owner.
- Three phases of consolidation completed to date.
- Sodexo have supported AZ in significantly reducing costs and managing the site in a safe and cost effective way.

CLIENT CHALLENGES

- To effectively manage a large portfolio of assets during phased transfer and divestment to a new owner.
- Reduce site operating costs to support expansion of AZ's business in Cambridge and Macclesfield.
- Manage complex services and interdependencies between buildings and services across the site.
- Maintaining service delivery in remaining business critical functions.
- Maintain a great place to work and drive site vibrancy during significant business change.



Top left, Mereside
Top right, Parklands & Research
Bottom left, Campus area



SODEXO'S SOLUTION

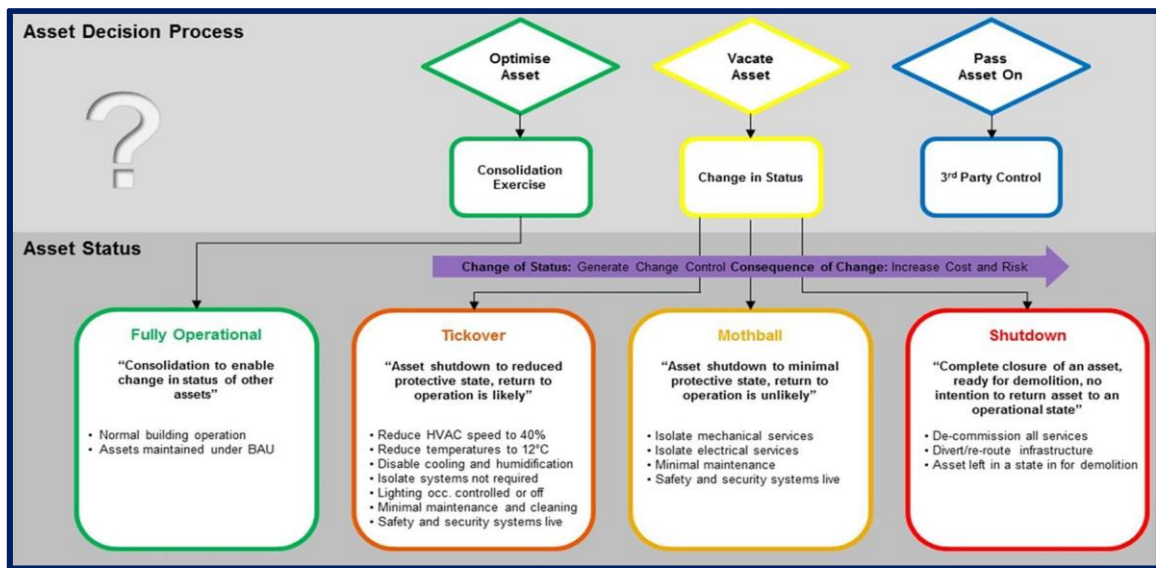
- A process to manage buildings at the end of their inhabited life.
- Risk based options dependant on potential for client to reoccupy a building.
- Tickover and Mothball offers significant efficiency saving.
- Process ensures assets and services are managed in a safe and controlled way.
- Supports the transition of buildings to the new site owner.

Tickover Solution

“Asset shutdown to reduced protective state, return to operation is likely.”

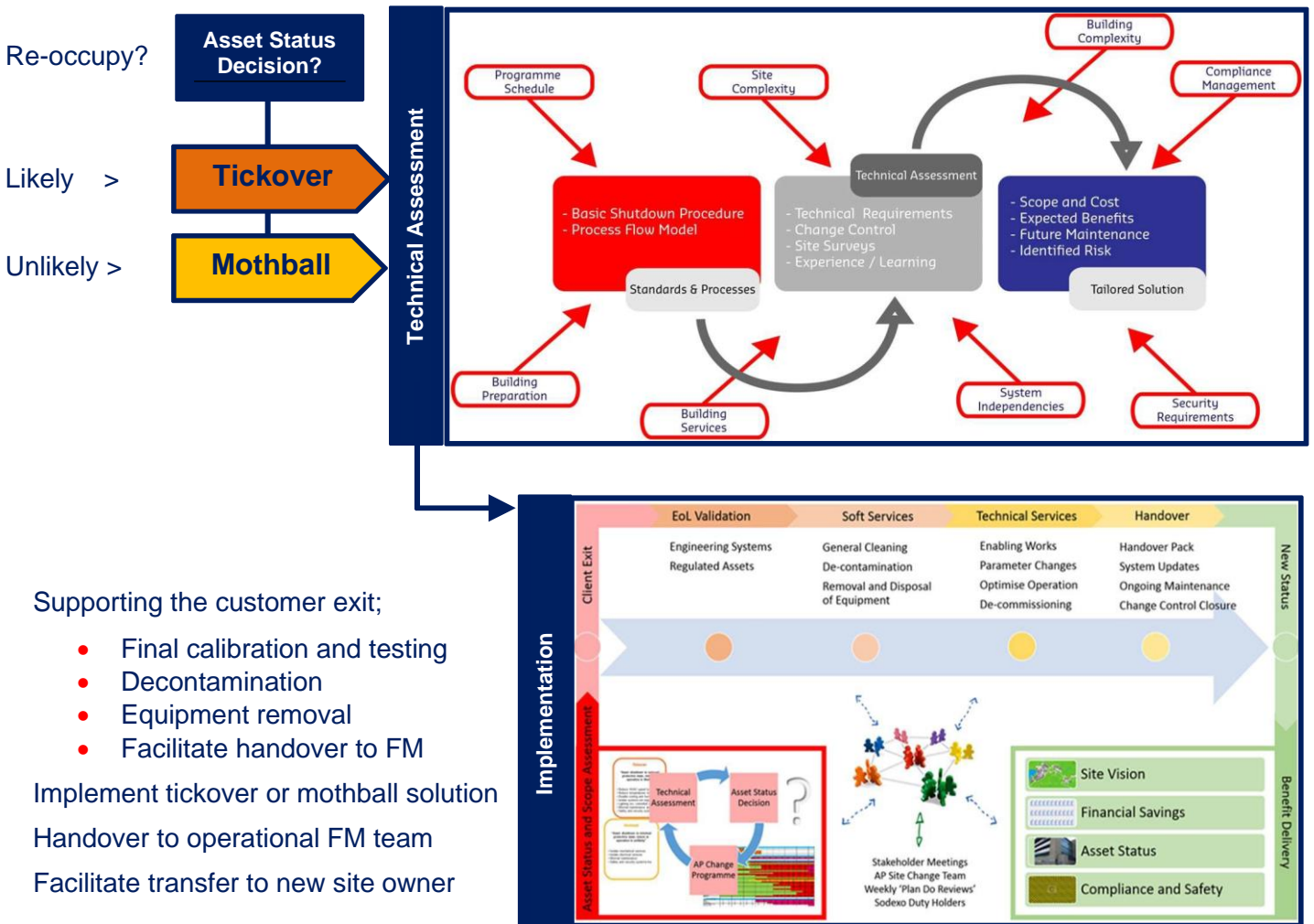
Mothball Solution

“Asset shutdown to minimal protective state, return to operation is unlikely, key service need to be maintained”.



The Asset Decision Process and Asset Status Model

TECHNICAL ASSESSMENT AND IMPLEMENTATION



Supporting the customer exit;

- Final calibration and testing
- Decontamination
- Equipment removal
- Facilitate handover to FM

Implement tickover or mothball solution

Handover to operational FM team

Facilitate transfer to new site owner

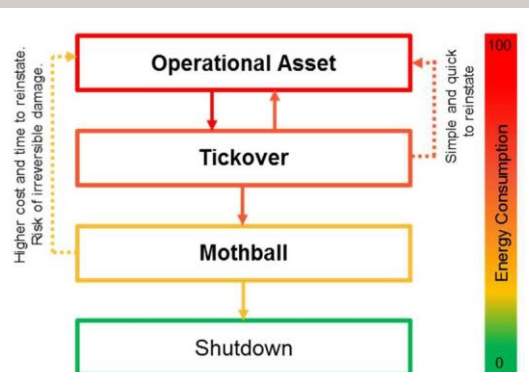
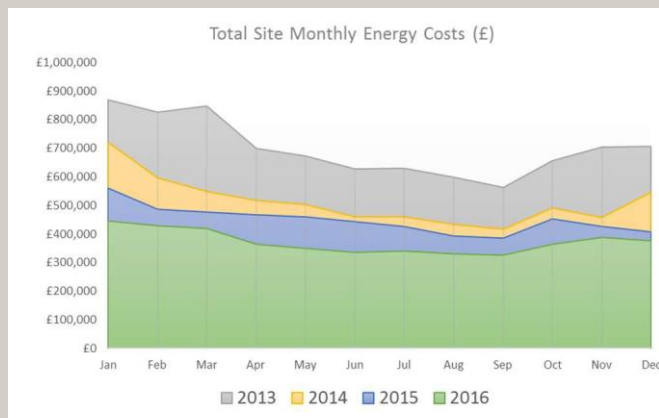
BENEFITS



- **SITE STRATEGY** – Process and application are critical in delivering the site vision and strategy.
- **OPERATING COSTS** - Annual operating costs reduced by 60% since 2014.
- **ENERGY REDUCTION** - Annual energy costs are now approximately 50% lower than 2014.
- **DECISION MAKING** - Provides key information supporting effective portfolio management.
- **SAFE AND COMPLIANT** - Buildings in a compliant, decontaminated and documented state.
- **DOCUMENTED** - Handover documentation gives clear and concise status for the building
- **SITE KNOWLEDGE** - Improved site knowledge of complexities and interdependencies ensures business continuity and service responsibilities is understood and clear.
- **BUILDING TRANSFER** - Process facilitates and supports transfer of buildings to new site owner.



- **ADDITIONAL WORKS** - Delivered a significant value in adhoc works or circa £1.2 million.
- **PROVEN PROCESS** - Process and operating model have proved successful and could be applied in other areas of the business.
- **STAFF RETENTION** - Enabled resource onsite to be re-focused on project and change activity during phases of operational restructure.



CLIENT TESTIMONIAL

“Jim and I would like to thank you for the energy, creativity and tenacity you have shown as an individual and as a team member to make the consolidation so far at Alderley Park the success it has been.

27 Buildings in a known state, saving substantial operational expense, against a background of considerable uncertainty and change in the business is a major achievement.”

Jim Lynch, Vice President Site Change Team AstraZeneca

Graeme Bristow, Alderley Park Site Manager AstraZeneca

CASE STUDY 3 - MIDDLEWOOD COURT PROJECT

Phased Refurbishment of a Live and Operational Facility

VALUE: Minimised Disruption **TIMESCALE:** Aug 2014 – Jan 2016 **LOCATION:** Macclesfield

KEY AMF ELEMENTS: Asset Design and Commissioning; Asset Handover and Mobilisation

KEY FACTS

- As part of AZ's exit of Alderley Park there was a requirement to relocate AZ staff to Macclesfield.
- AZ planned to re-purpose Middlewood Court, an old production facility on the site by performing a refurbishment and fit-out of the facility.
- This would provide a flexible working environment with new technology solutions to for up to 1000 employees.
- Initially starting in August 2014, the phase one ground floor went live in July 2015 and the phase 2 first floor was operational in January 2016.
- Sodexo were key to supporting this overall project delivery acting as a client representative on behalf of AZ.

CLIENT CHALLENGES

- When considering the options a new build project was cost and timescale prohibitive.
- The overriding objective was to re-use the existing site infrastructure where possible.
- There was a need to maintain an operational building whilst this project was delivered around occupants.
- This required the Sodexo FM team to work very closely with the project team to ensure successful delivery of all services & utilities.



SODEXO'S SOLUTION

- As part of the client steering group alongside AZ FM representatives and customer groups the team provided knowledge and experience from a building and FM perspective to influence the design and development of the project to deliver an optimum and maintainable solution.
- Highlighted issues and limitations with existing services by supporting asset reuse feasibility assessments identifying where new assets would need to be installed or old assets could be reintegrated into the fit-out.
- Advised where assets were not functioning to the required standard to enable performance to be restored to a maintainable level as part of the project.
- Developed construction plans with the project to segregate construction and live areas to minimise disruption from noise, access, cleanliness and accessibility. This included transfer of responsibility to construction and interface with the customer to maintain a professional working environment.
- Sodexo worked with Lockhart to fully fit-out and install the sandwich and coffee bar outlet.
- Sodexo engineers performed snagging and interacted with the project to familiarise and train on new systems to ensure the ongoing maintenance and management of assets would transition smoothly.
- Provided feedback to the project post-handover on maintainability reuse of existing infrastructure with new technologies.

BENEFITS

AstraZeneca 

- **MINIMISE IMPACT** - Acting as a key interface between the project team and customer groups enables Sodexo to minimise disruption to live areas from construction activities.
- **MAINTAINABILITY** – Influencing the project design ensures that maintainability is a key consideration to allow Sodexo to effectively deliver maintenance to minimise impact to the occupants.
- **KNOWLEDGE AND EXPERIENCE** – Sodexo have prior knowledge and experience of the building which was considered and integrated into the final solution.

AstraZeneca 

- **PROJECT INTEGRATION** - Involvement in the project during design, construction and commissioning allows the Sodexo team to influence project delivery and obtain valuable knowledge and familiarisation with the services.

CASE STUDY 4 – TABLETS FORMULATION EXPANSION

Expansion into Tablets Formulation for FM Service Delivery

VALUE: £105k (GMP), **TIMESCALE:** October 2015 – Present Day, **LOCATION:** Macclesfield

KEY AMF ELEMENTS: Asset Handover and Mobilisation; Management of Change

KEY FACTS

- Five tablets formulation areas TCF, TPF, TXF, STF, TPA
- Manufacturing processes including granulation, compression and coating to produce finished tablets.
- Sodexo have taken on the delivery of FM services in each of these areas.
- Mobilisation of FM services completed in three phases;
 - 1 - Cleaning
 - 2 - Engineering compliance
 - 3 - Full FM maintenance delivery
- Asset reviews and asset management initiatives are underway to deliver improvements.

CLIENT CHALLENGES

- AstraZeneca strategy is to focus on core manufacturing and tablets formulation and reduce costs as part of their ‘focus to win’ and operations 2020 strategies.
- There has been an increasing focus on environmental parameters in relation to HVAC systems during regulatory audits across production areas.
- Four of the five plants are due for closure in approximately 18 months’ time.
- A strategy will be required to transfer the assets to FM to manage the assets once they have been exited.



Macclesfield Site



Macclesfield T Plants

SODEXO'S SOLUTION

- Additional technician and technical support engineer resource recruited to support increased technical demand within the zone.
- Asset restoration exercise in progress to identify risks and restore asset standards where required.
- Completing the alignment of standard operating procedures (SOP's) to similar standards onsite.
- Engineering compliance management including defects and improvement plans integrated into existing Sodexo Duty Holder structure.
- Review of redundant areas to ensure security, control and ongoing maintenance is sufficient.
- HVAC environmental improvement project underway in collaboration with AZ to review actual HVAC performance against ISO 14644 cleanrooms and associated control environments because of regulatory audit observations.
- Review of maintenance strategy in alignment with the AMF and regulatory monitoring requirements.

BENEFITS

AstraZeneca

- **SITE STRATEGY** - Enable AZ to focus on their core business strategy for Tablets Formulation and Processing.
- **AUDIT READINESS** - Prior success of a similar model and demonstrated audit performance in regulated production environments give the client confidence in aligning similar assets to the same structure.
- **TECHNICAL RESOURCE** - Sodexo have access to a larger pool of FM technical resource including technicians and technical support engineers onsite.
- **CONSISTENCY** - Drives consistency across the packing, warehouse and tablets formulation facilities to enable standardisation, and simplification.
- **ASSET CLOSURE** – When the assets are exited in 18 months the building services will be aligned to Sodexo, providing an opportunity to adopt tickover and mothball principles described in case study 2.

- **CONTRACT INCREASE** - Contract GMP uplift increasing Sodexo's service provision to the site.
- **SCOPE** – The additional scope within Tablets Formulation demonstrates Sodexo moving closer to AstraZeneca operations.

CASE STUDY 5 - yourFM

yourFM Project and Expansion into LSL for FM Delivery

VALUE: £70k (GMP), **TIMESCALE:** Feb 2017, **Location:** Macclesfield

KEY AMF ELEMENTS: Management of Change; Legal and Statutory Requirements

KEY FACTS

- Expansion of Duty Holder responsibility into the LSL building.
- Introduction of new YourFM model for delivering FM services within labs at Macclesfield.
- YourFM is a collaboration between key suppliers to deliver a 'one team approach' to improve customer service and asset availability.
- Sodexo are part of the project team delivering the new ways of working onsite to maximise availability of lab services.
- Recruitment and team restructure has been completed to support two clusters of lab buildings with representation from other key suppliers onsite.

CLIENT CHALLENGES

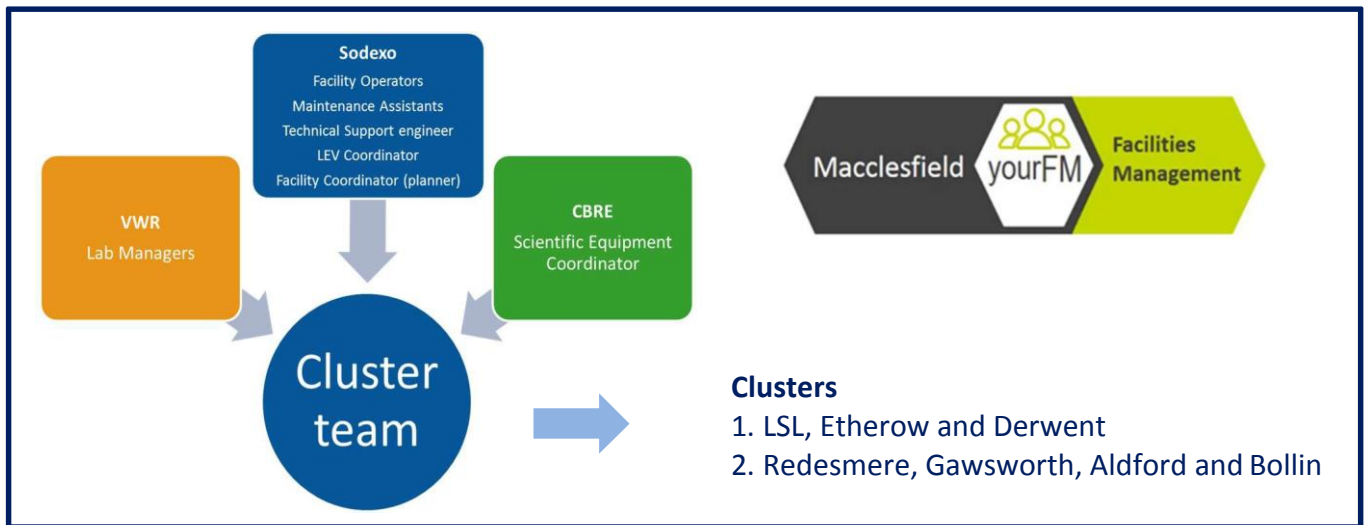
- AstraZeneca FM strategy 'time for science' and 'simplification'.
- Introduction of yourFM which is a multi-disciplinary approach to a single service standard.
- To develop a collaborative approach to service delivery between key suppliers.
- Implementing processes which maximise availability of laboratories and seamlessly manage customer demand.



Macclesfield Labs Zone

SODEXO'S SOLUTION

- Additional resource to account for increase in scope and addition of Duty Holder responsibilities.
- Restructure of labs zone to align to yourFM delivery model;
 - Technical support engineer's focus on building and infrastructure management including change control, energy management, project delivery and deviation management.
 - LEV coordinator reduces downtime of Local Exhaust Ventilation systems, improving compliance and conducts monthly operational checks of each asset to supplement routine testing and maintenance.
 - Maintenance assistant focused on fast response PA testing, speeding up bringing equipment into use when installed.
 - Facility planner ensures workload is efficiently planned, prioritised and communicated across both clusters to minimise disruption to the customer.
 - Floor captains provide additional capacity to issue low risk safe systems of work in the zone.
- LEV asset review process and availability dashboard introduced to improve communication and resolution of faults.



yourFM Cluster Overview

BENEFITS



- **COMPLIANCE MANAGEMENT** - Consistent approach to duty holder management and standardisation across all buildings.
- **SINGLE POINT OF CONTACT** – Local customer groups have single point of contact and escalation route across both clusters.
- **CONSISTENCY** - Targets same approach across all customer groups.
- **SERVICE APPROACH** – New solutions to service delivery to maximise asset availability e.g PAT testing of scientific equipment, lead times could be up to 15 days. There is now a direct person to contact to test equipment with quick turnaround.



- **SIMPLIFIED DELIVERY** - yourFM simplifies our service delivery including roles and responsibilities.
- **RETENTION & NEW BUSINESS** – A collaborative approach is a key driver for AZ, effectively demonstrating this approach will support Sodexo in retain existing contracts and gaining new business.
- **CUSTOMER ALIGNMENT** – Aligns Sodexo closely with the customer groups and suppliers allowing a joint approach to service delivery and problem solving.
- **BESPOKE** - Tailored service to key customer priorities to enable them to focus on core activities.

CASE STUDY 6 - HIGH BAY WAREHOUSE PROJECT

Business Growth in a Complex and Critical Facility

VALUE: £est. 500k, **TIMESCALE:** Construction commenced Jan 2017, Handover due March 2018

KEY AMF ELEMENTS: Asset Handover and Mobilisation; Management of Change

KEY FACTS

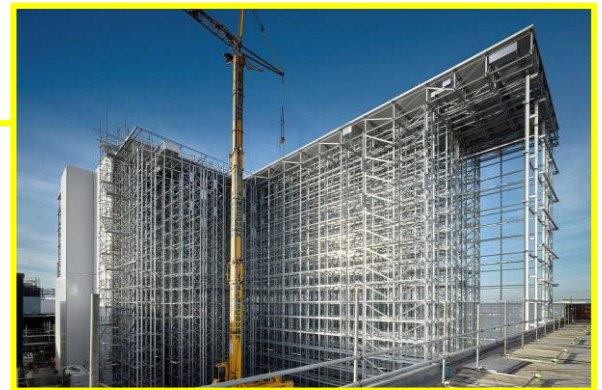
- AstraZeneca is investing in new packing and warehouse facilities including an Automated Highbay Warehouse.
- The facility is currently under construction and is due for operational handover in March 2018.
- Assets will incorporate conveyer systems, racking with 12,500 pallet locations, four stacker cranes and environmental control and monitoring systems.
- The environment will be hypoxic (reduced Oxygen) to provide fire protection but introduces restrictions and occupational health requirements for personnel entering the facility.
- Sodexo's initial proposal to support the Highbay Warehouse has been successful and a project is underway to develop the solution.
- Early mobilisation allows Sodexo to work closely with the project to influence delivery and gain valuable knowledge and experience.

CLIENT CHALLENGES

- Ensuring a smooth transition of the High Bay Warehouse from construction into beneficial operation.
- Ensuring operational teams are fully trained and knowledgeable on day one of operational handover to the client.
- Complexity, hypoxic environment and interfaces between cranes, environmental systems and IS/IT systems require robust solutions and process to be implemented.
- Offering a service solution which targets availability of facility rather than supplier SLAs.
- Driver to integrate condition based and predictive maintenance into the solution to maximise availability.



Macclesfield Site



SODEXO'S SOLUTION

- In January 2017 Sodexo and AZ FM developed a proposal with Jungheinrich to provide FM services to the High Bay Warehouse facility. Sodexo will be the single point of contact for FM service delivery in the facility.
- There is a mobilisation project and programme in place to define, develop and implement the solution prior to go live
- The project is broken down into 5 individual workstreams;
 - Governance - to deliver a governance structure and between AZ FM/Logistics, Sodexo and Jungheinrich.
 - Contract and Commercials - to ensure all contracts, specifications and commercials agreements are in place.

- HSEQ - to develop the Health, Safety, Environment and Quality requirements for the project.
- AMF - to develop the asset related AMF processes including Maintenance Plan Development, application of CBM and Failure Mode Effect and Cause Analysis (FMECA).
- Operational Delivery – to manage the operational aspects of service delivery including recruitment, training and project support.

BENEFITS



- CONTACT AND ESCALATION - Sodexo will be a single point of contact for all operational aspects of the HBW ensuring any operational issues are effectively controlled and managed.
- PROJECT INTEGRATION - Involvement in the project during construction allows the Sodexo team to influence project delivery and obtain valuable knowledge and familiarisation with the services.
- SEAMLESS SOLUTION - Sodexo are leading the partnership with Jungheinrich to develop a seamless service solution for maintenance of the crane systems and environmental controls.
- RELIABILITY APPROACH - Condition based and predictive maintenance technologies will be implemented to enable early diagnosis of asset-related issues and potential failures prior to them resulting in unplanned service outage.
- SKILLS AND CAPABILITY - The partnership between Sodexo and Jungheinrich will allow transfer of skills and capability between both organisations.



- CONTRACT INCREASE - Contract GMP uplift increasing Sodexo's service provision to the site.
- SCOPE - Getting closer to AstraZeneca operations.
- CAPABILITY – Demonstrating capability in complex, regulated environments support Sodexo's offering to potential new clients and contracts.

CASE STUDY 7 – ASSET CONDITION AND PERFORMANCE

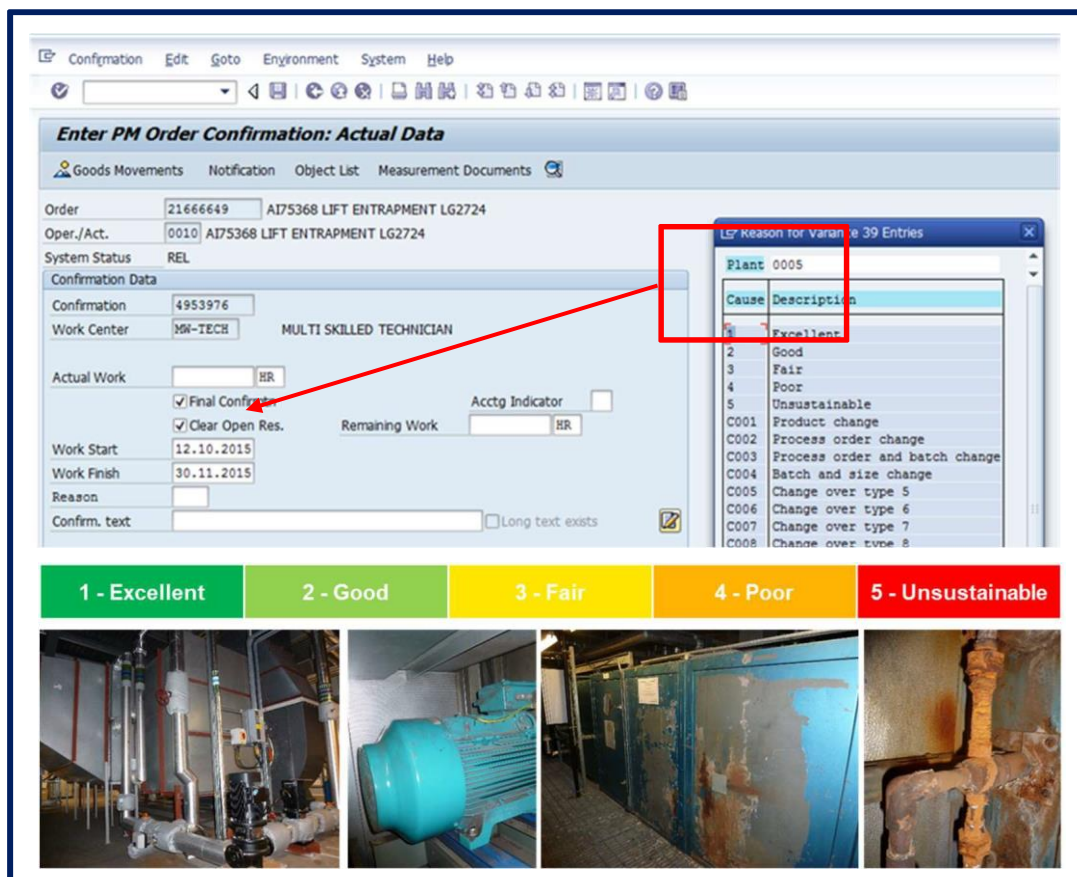
Improving CMMS Functionality to Support Maintenance Strategy

VALUE: Informing decision making, **TIMESCALE:** 2014-2015,

KEY AMF ELEMENTS: Asset Criticality Assessment and Spares Management; Maintenance Strategy Development, Maintenance Planning, Scheduling and Control

Asset Condition Reporting Field

Asset condition reporting field has been integrated into the client CMMS to record asset condition score as part of schedule maintenance.



Reason for Variance

Cause	Description
1	Excellent
2	Good
3	Fair
4	Poor
5	Unsustainable
C001	Product change
C002	Process order change
C003	Process order and batch change
C004	Batch and size change
C005	Change over type 5
C006	Change over type 6
C007	Change over type 7
C008	Change over type 8

Legend:

- 1 - Excellent
- 2 - Good
- 3 - Fair
- 4 - Poor
- 5 - Unsustainable

SAP Asset Condition Field

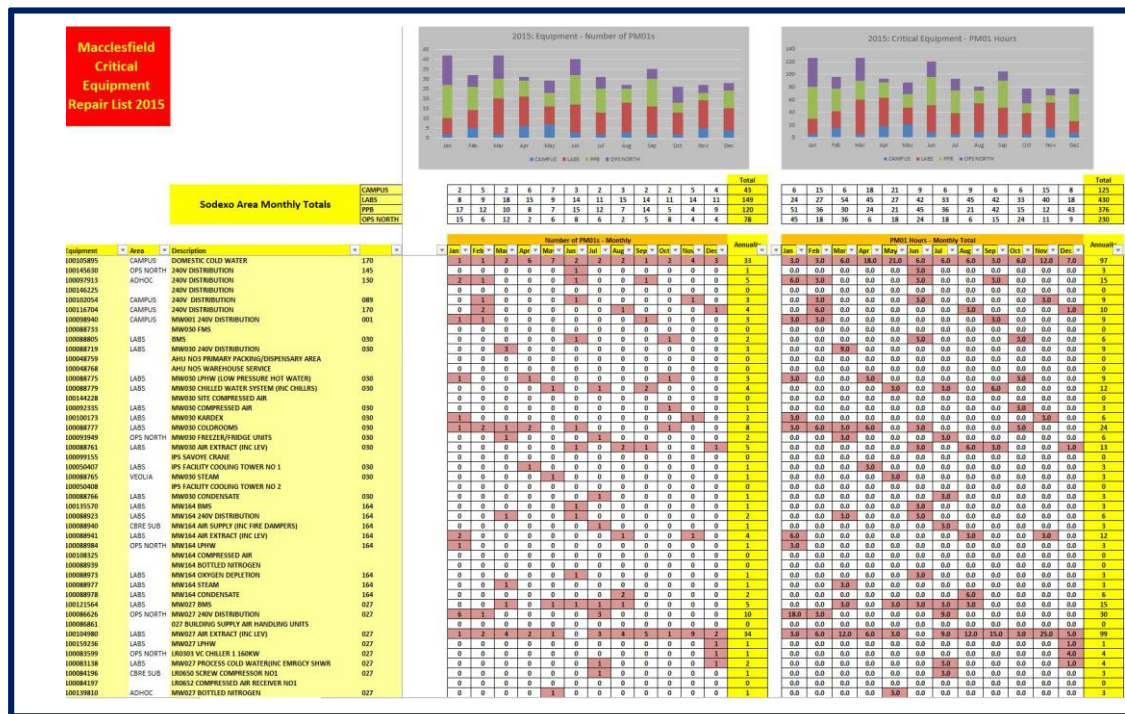
This allows the following to be analysed and trended at asset level;

- Risk of non-compliance, safety or impact to the client's operations.
- Opportunity for asset investment or replacement.
- Review of maintenance strategy effectiveness.
- Opportunities for refurbishments/restoration to improve an assets condition.
- Asset can be baselined and monitored from a known point.
- Can trend where change in maintenance strategy or tasks has had benefit.

Asset Performance Reporting

Assets performance data from the CMMS is also collated and reported against. The key metrics reported include;

- Number of reactive tasks and associated hours.
- Number of reactive tasks categorised as a breakdown (total loss of function).
- Number of root cause analysis (RCA's) carried out against breakdowns.
- History Report including technical cause, failure and RCA information summary.
- Mean time to repair showing average time to return an asset to function after failure.
- Mean time between failure showing average time between failures of an asset.



Asset Performance Report

BENEFITS



- ASSET PERFORMANCE AND CONDITION** – Generating asset condition data and performance metrics allows high level identification of potential risk areas and poor performing assets.



- MAINTENANCE STRATEGY** – Analysis of asset data allow maintenance strategy to be adjusted based upon performance, cost and risk factors.
- RESOURCE UTILISATION** – Understanding asset performance and business priority ensures resources are focused in the correct areas to maximise benefit.

ISO 55001:2014 ASSET MANAGEMENT CERTIFICATE

ISO 55001 Certificate for the AstraZeneca Account

bsi.



By Royal Charter

Certificate of Registration

ASSET MANAGEMENT SYSTEM - ISO 55001:2014

This is to certify that:

Sodexo Global Services Limited
c/o Astra Zeneca
Charter Way
Macclesfield
SK10 2NA
United Kingdom

Holds Certificate Number:

AM 621229

and operates an Asset Management System which complies with the requirements of ISO 55001:2014 for the following scope:

The asset management system in relation to the governance of AstraZeneca plc. physical assets at the Macclesfield and Alderley Park sites to provide and maintain office, catering, warehouse, GLP laboratory and GMP manufacturing facilities subject to contract.

For and on behalf of BSI:


Frank Lee, EMEA Compliance & Risk Director

Original Registration Date: 19/08/2015

Latest Revision Date: 28/08/2015

Effective Date: 19/08/2015

Expiry Date: 18/08/2018

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This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated [online](#).
Printed copies can be validated at www.bsigroup.com/ClientDirectory

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: +44 845 080 9000
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