

An integrated sustainability platform

Solving business mission critical problems

Monitising the Industrial Internet of Things

Buildings, Assets, People



Why Saamsol See™

- Built for scale
- Stakeholder collaboration
- Streamlined decision making
- Improved outcomes
- Substantial utility savings possible
- Enhanced asset life
- Significant productivity improvements
- Automated KPI reporting
- Reduced analyst costs
- Greater return on investment
- Augmented reality ready
- Protected IT infrastructure
- Increased profitability



BEMS and beyond

Integration with CAFM & IWSM

- 📶 Energy management
- 📶 Workspace environmental management
- 📶 Asset management
 - 📶 Plant, building and production
- 📶 Waste monitoring
- 📶 Performance monitoring
- 📶 Asset warranty monitoring

- 📶 Occupancy monitoring
- 📶 Space monitoring
- 📶 Communications
 - 📶 Corporate
 - 📶 Visitor
 - 📶 Public
 - 📶 Contractor
 - 📶 Private
 - 📶 **Collaboration**
- 📶 Security integration





Environmental

Utilities

- 📶 Optimisation and reduction
- 📶 ESOS & ISO reporting
- 📶 'Real-time' reporting by
 - 📶 Property portfolio
 - 📶 Region
 - 📶 Building
 - 📶 Floor
 - 📶 Circuit
 - 📶 Machine
- 📶 Procurement
- 📶 Water

Internal Environments

- 📶 Occupancy
- 📶 CO₂, CO, VOC's, other gaseous pollutants
- 📶 Temperature
- 📶 Humidity
- 📶 Alarms
- 📶 Performance monitoring

Waste

- 📶 Monitoring
- 📶 Performance
- 📶 Identification of trends





Social

Behaviour

- 📶 Identification of best practice
- 📶 Performance management
- 📶 League tables
- 📶 Engagement
 - 📶 Individual
 - 📶 Team



Integrated Communication

- 📶 Secure
- 📶 Corporate
- 📶 Team
- 📶 Individual
- 📶 M2M
- 📶 Stakeholder Collaboration





Economic

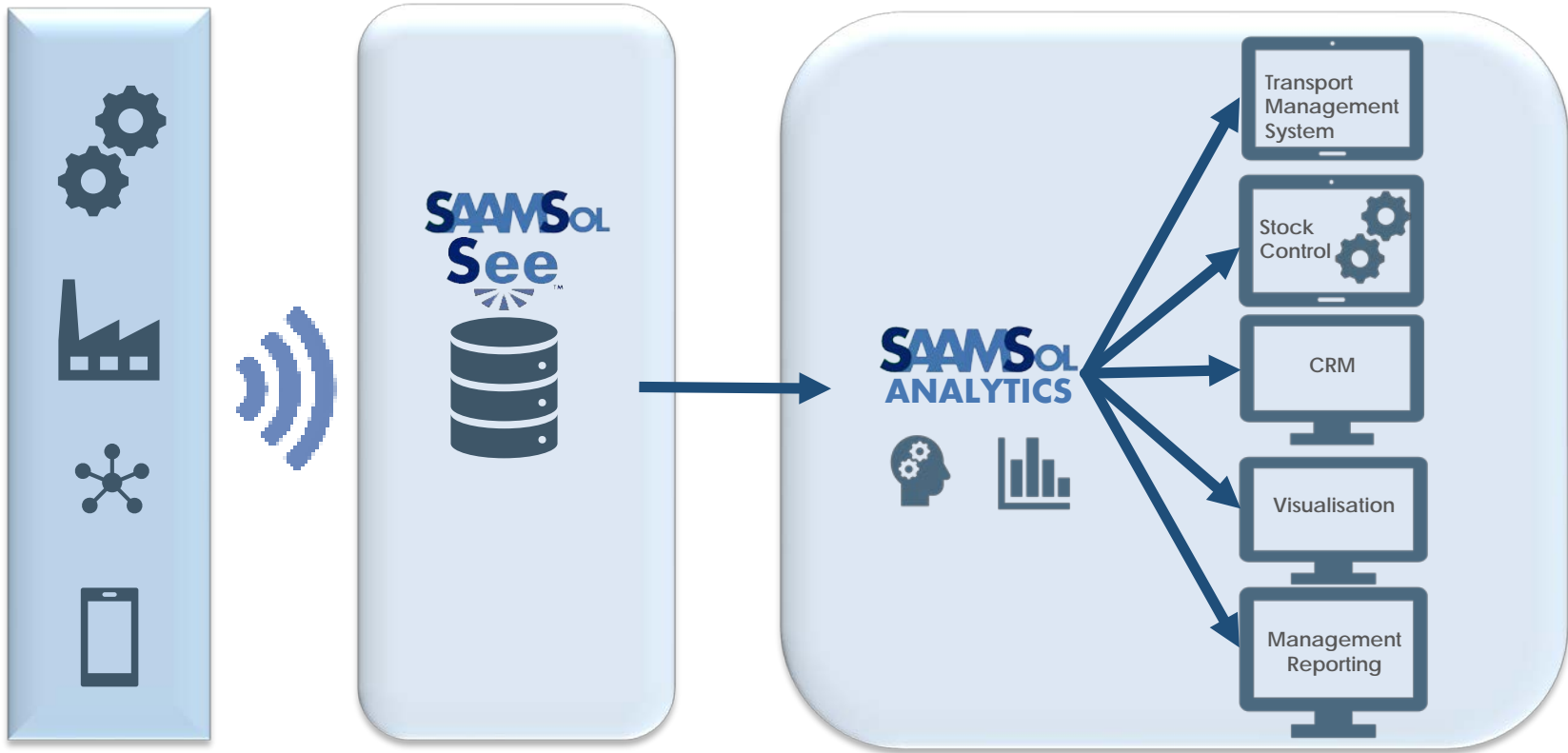
- Protect long-term value
 - Minimising risks
 - Insights into operational costs
 - Investment and disposal of assets insights
 - Maximise returns on
 - Plant/Assets
 - Minimise down time
 - Proactive condition monitoring
 - Optimise usage
- People
 - Optimise space management
 - Ensure environmental conditions maximise performance
 - Engagement
 - Collaboration
 - Staff
 - Visitors
 - Contractors
 - Cost reduction
 - OPEX& CAPEX optimisation
 - Increased profitability
- OPEX& CAPEX
 - Minimise OPEX
 - Ensure maximum longevity of assets
 - Enhanced return on CAPEX
 - Automated reporting
 - Fully customisable automated analysis
 - KPI Reporting
 - FDA 21 CFR Part 11** compliant
 - Gamp₅** compliant
 - ISO** compliant
 - ESOS** compliant
 - Legislative compliance
 - Increased profitability

How we do it Implementation

- 📶 Ease of integration
- 📶 Fully interoperable
- 📶 Fully managed service
- 📶 Training on site and via knowledgebase



How we do it - Architecture



How we do it

Data

- 📶 Harvest data from sources such as:
 - 📶 BMS
 - 📶 CAFM
 - 📶 Additional sensors where required
 - 📶 Production systems
 - 📶 Accounts
 - 📶 Logistics
 - 📶 CRM
 - 📶 Other internal and external data sources



How we do it Software

Integrated



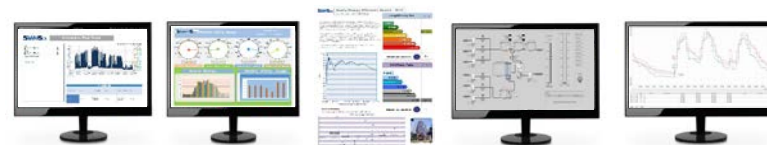
SAAMSol
Intelligent Solutions

or

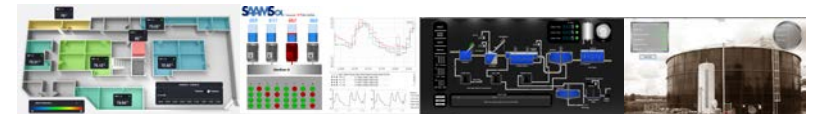
Stand-alone

SAAMSol
See

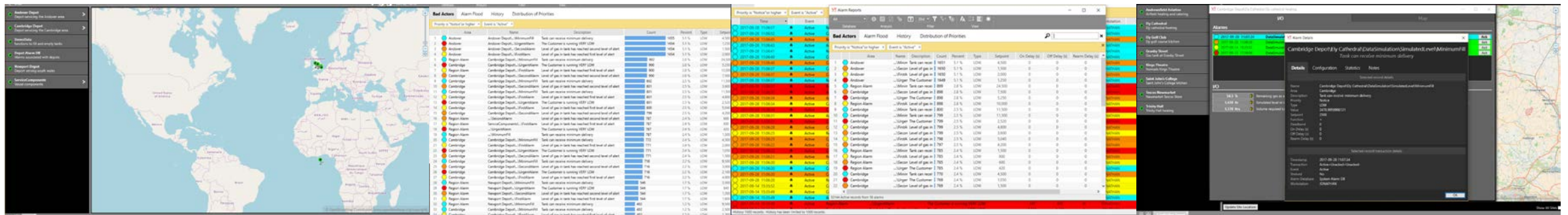
Reporting



Visualisation



Integrated Local & Global

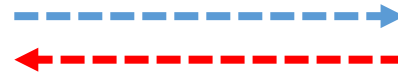


In-cloud or on premise

Integrated Communication

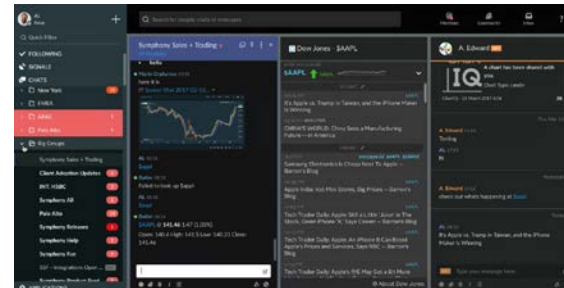
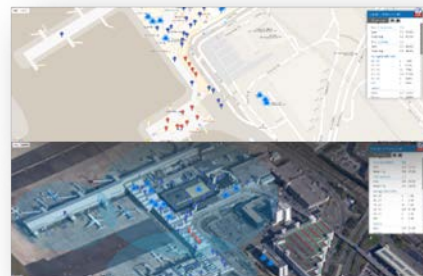


Wi-Fi platform

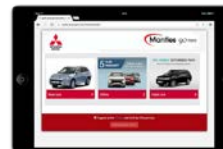


Secure messaging

- Corporate
- Staff
- Contractors
- Visitors
- Contractors
- M2M



- Machine to human interface
- Staff
- Suppliers
- Visitors
- Clients
- All stakeholders



Integrated Connectivity Security

Devices – Secure provisioning and authentication

- 📶 Authentication of any Wi-Fi enabled device securely and legally, checking that items are comprehensively authorised for network use and prescribing terms of use
- 📶 Centrally-managed RADIUS-based MAC authentication platform / Inbuilt profiling service to live audit and classify 'traditional' devices (smartphones, tablets, etc.), plus IoT and other headless devices, such as IP cameras, phones and printers
- 📶 Authentication and authorisation via multiple sources (AD, LDAP, SQL dB)
- 📶 Data security via the latest carrier-grade encryption
- 📶 Proven to work at scale - supporting billions of secure authentications a year

Integrated Connectivity Security

Devices – Policy management to maintain quality and security

- 📶 Set tiered usage policies, access restrictions and manage devices from a single, simple interface, to handle different protocols, identity and communication security concerns
- 📶 Intuitive policy configuration templates and visibility troubleshooting tools
- 📶 Inbuilt, context-based policy engine, RADIUS, TACACS+ protocol support, device profiling and comprehensive posture assessment options
- 📶 Define specific, secure network access enforcement policies by user roles, device types, authentication method, EMM/MDM attributes, device health, location and time-of-day
- 📶 Prioritise important user network traffic to prevent Wi-Fi service risks
- 📶 Terminate device access to the network, and apply bandwidth policies
- 📶 Automate previously manual processes like threat protection and workflows

Integrated Connectivity Security

Devices - Traffic analysis for network monitoring, measurement and alerts

- 📶 An early warning system, providing alerts to unauthorised activity like sudden traffic spikes, allowing administrators to take protective measures
- 📶 Customisable reporting via a simple, accessible, dashboard
- 📶 BYOD control and reporting



Integrated Space & Access Management

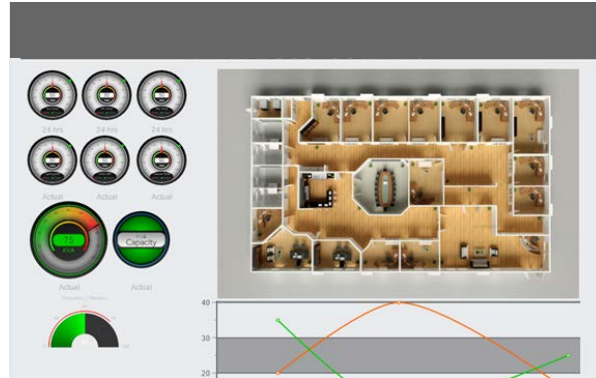
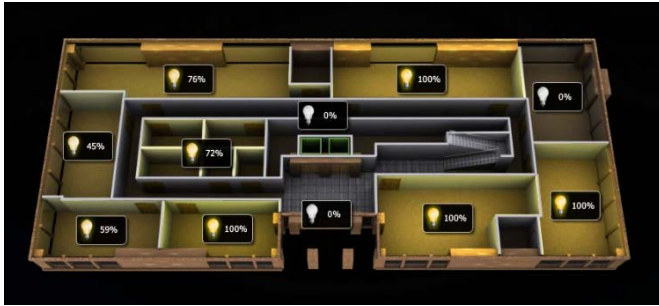
Access Control

- 📶 Face recognition for access
- 📶 Enhanced security for critical areas
- 📶 Linking to databases of known activists
- 📶 Automated updating of access protocols from databases
- 📶 Identification of BYOD with wi-fi turned on

Know where people are

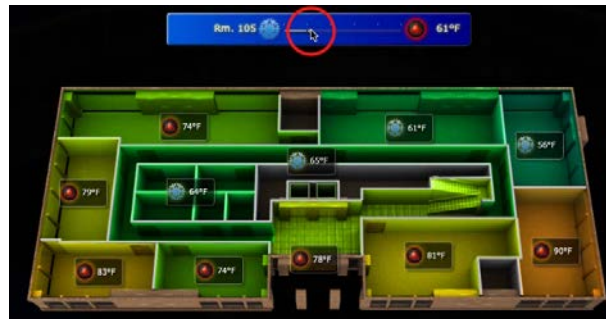
- 📶 Track contractors on site
- 📶 Certification authentication
- 📶 Footfall monitoring
- 📶 Occupant and visitor identification for H&FS
- 📶 Automated H&S inductions complete with acknowledgements
- 📶 Identify energy requirements via occupancy levels

Rooms, floors, people



Real-time monitoring with historical playback

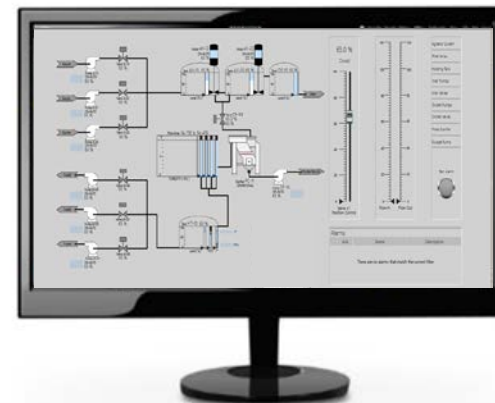
- Energy
- Temperature
- CO2, NOx, VOC's
- Occupancy
- Light levels



Operations

System Performance

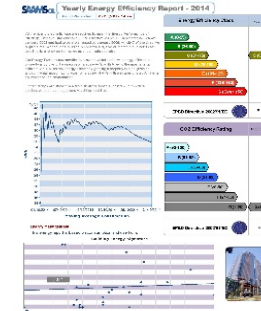
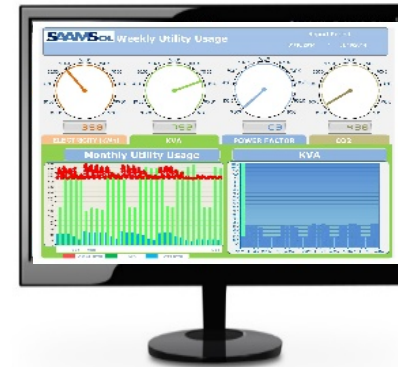
- 📶 Historical and real-time data
- 📶 Asset comparison
- 📶 Global and local visualization
- 📶 Global and local reports
- 📶 Alerts
- 📶 Exceptions – detail reporting
- 📶 Proactive interventions
- 📶 Augmented reality ready



Building & Portfolio Reporting

Reports – Templates and Custom Designed

- 📶 All reports can be role-based and by group, region, building or asset plus other parameters
- 📶 Regression analysis
- 📶 Performance
- 📶 Alarms and exceptions
- 📶 Actual versus budget, previous years
- 📶 Demand response
- 📶 ESOS
- 📶 ISO 50001



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- Enhanced asset life
- Best use of space
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Thank you

Questions?