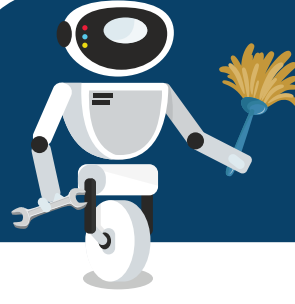


# THE EVOLUTION OF CONTRACTED SERVICES

WHAT'S IN STORE FOR 2020 AND BEYOND?

If the last 40 years are any indication, the turn of the decade guarantees a new wave of transformative technologies that will change how we clean and manage facilities. Take a look at the cleaning services industry innovations driving the biggest changes in 2020 and beyond, and then take a trip down memory lane to see how far we've come.



## Beyond 2020 The Future: Intelligent, Demand-Based Services

Sophisticated technologies are moving facilities management into a new era where precision is not only possible but also increasingly autonomous. The Internet of Things (IoT) and connected devices enable sensors to monitor spaces remotely and relay information to intelligent maintenance systems (IMS), which allows staff to be more efficient and responsive. Predictive analytics powered by artificial intelligence can also forecast future needs and improve operations.



### SERVICE & STAFFING APPROACH:

#### DYNAMIC

- Staffing is determined by real-time traffic and volume.
- Sensors monitor conditions and relay information to an IMS.
- IMS system automatically notifies cleaning and maintenance staff of potential issues via mobile devices.
- Data analytics allow for predictive modeling and staff leveling to meet demand.



### QUALITY ASSURANCE:

#### INTELLIGENT QUALITY CONTROL (I-QC)

- All operations are tracked and managed by intelligent software.
- Data scientists analyze data generated by these systems to find ways to optimize processes.
- Quality is in a constant state of improvement



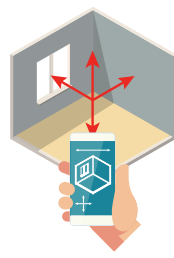
### TECHNOLOGY:

IOT SENSORS, INTELLIGENT, CLOUD-BASED PLATFORMS AND ARTIFICIAL INTELLIGENCE

#### Innovative Technology Already In Use:

- **Vibration Analysis** - Sensors provide continuous diagnostics on critical equipment, preventing costly breakdowns and downtime.
- **Self-Generating Electro-Chemically Activated Solutions (ECAS) Systems** - Infuse water with a low-level electrical charge to lift dirt from surfaces like a magnet without chemicals.
- **Customer Service and Real-time Service Recovery Systems** - Allow occupants to rate restroom cleanliness and alert staff to needs in real-time.
- **Virtual Guides** - iPods map out cleaning tasks and routes to maximize staff efficiency.

### Innovations On The Horizon:



#### 3D Space Laser Process Modeling

Handheld devices capture exact measurements of space and generate a 3D rendering and interactive mapping for more precise cleaning and asset management.



#### Microbiological Sensing Technologies

Automated systems detect bacteria growth, provide colony analysis, and respond with corrective action without human interaction.



#### Responsive Robotic Cleaning

Autonomous cleaning machines are already in place at some locations and will be more widespread as AI technology improves.



ENHANCES THE OCCUPANT EXPERIENCE



MAXIMIZES STAFF EFFICIENCY



REDUCES COSTS



PROVIDES OPERATIONAL INSIGHTS AND IMPROVES PERFORMANCE MEASUREMENT



## 2000-2020 The Present: Service To A Standard

The millennium has marked a shift away from manual processes in favor of service level agreements, key performance metrics and advanced quality of service (QoS) technology. New software platforms have improved efficiency, while industry benchmarks have improved quality.



### SERVICE & STAFFING APPROACH:

#### STANDARDIZED

- Staffing has been determined by the level of service required.
- Industry standards and averages have informed decisions (e.g., square feet per full-time employee).
- CMMS systems have sent automated alerts to staff for preventive maintenance tasks.



### QUALITY ASSURANCE:

#### VISUAL ASSESSMENTS

- A qualified evaluator has conducted visual inspections of the physical space and has assigned a level of cleanliness.



### TECHNOLOGY:

CLOUD-BASED CMMS

Mobile technology has bridged the gap between workers, assets and management, allowing maintenance staff to access, send and receive information anywhere, anytime.



MORE VISIBILITY INTO OPERATIONS AND CONSISTENT QUALITY



LACKED ANALYTICAL CAPABILITIES TO TURN DATA INTO ACTION



INEFFICIENT OPERATIONS



## 1980-2000 The Past: Task-Based Scheduling

Employees followed a firm schedule according to the tasks and frequency outlined in the contract, regardless of external factors. Employees logged progress on charts or Excel spreadsheets. Supervisors validated tasks were completed.



### SERVICE & STAFFING APPROACH:

#### STATIC



### QUALITY ASSURANCE:

#### HIGHLY MANUAL



### TECHNOLOGY:

COMPUTERIZED MAINTENANCE MANAGEMENT SOFTWARE (CMMS)

Replaced pencil and paper to help service providers document, standardize and validate processes for cleaning facilities and maintaining equipment.



INEFFICIENT OPERATIONS, INCONSISTENT QUALITY



Aramark provides comprehensive facilities services covering nearly one billion square feet of space globally. Our deep expertise, integrated facilities management strategies and partnerships with product development companies enable us to stay on the leading edge of innovation.

Learn more about how we can help your company maximize asset performance, cleanliness and operational efficiency with an intelligent approach to cleaning and maintenance.

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