

Maximizing hotel parking profitability through a centralized management platform



1 At a Glance

Context

Crystal Lodge, a hotel and ski resort located in Whistler, British Columbia, operates in one of North America's busiest ski destinations, where seasonal peaks and guest expectations demand operational precision. In this environment, valet service plays a critical role, representing both the initial welcome and the final impression of the resort experience.

Despite the resort's high service standards, parking operations relied heavily on manual processes. In a destination defined by seasonal surges and tight arrival windows, teams had limited visibility into real-time occupancy, vehicle retrieval depended largely on staff experience, and peak periods often resulted in congestion and unpredictable delays.

Initial challenges

- Limited visibility into actual parking occupancy
- Vehicle location dependent on manual searches
- Congestion during peak periods (check-in, check-out, events)
- Parking perceived as a friction point in the guest experience

To address these issues, Crystal Lodge selected **Spatium as the backbone of its smart parking strategy**. The platform centralizes detection, guidance, and data operations, turning the parking facility into a strategic asset fully integrated into hotel operations.

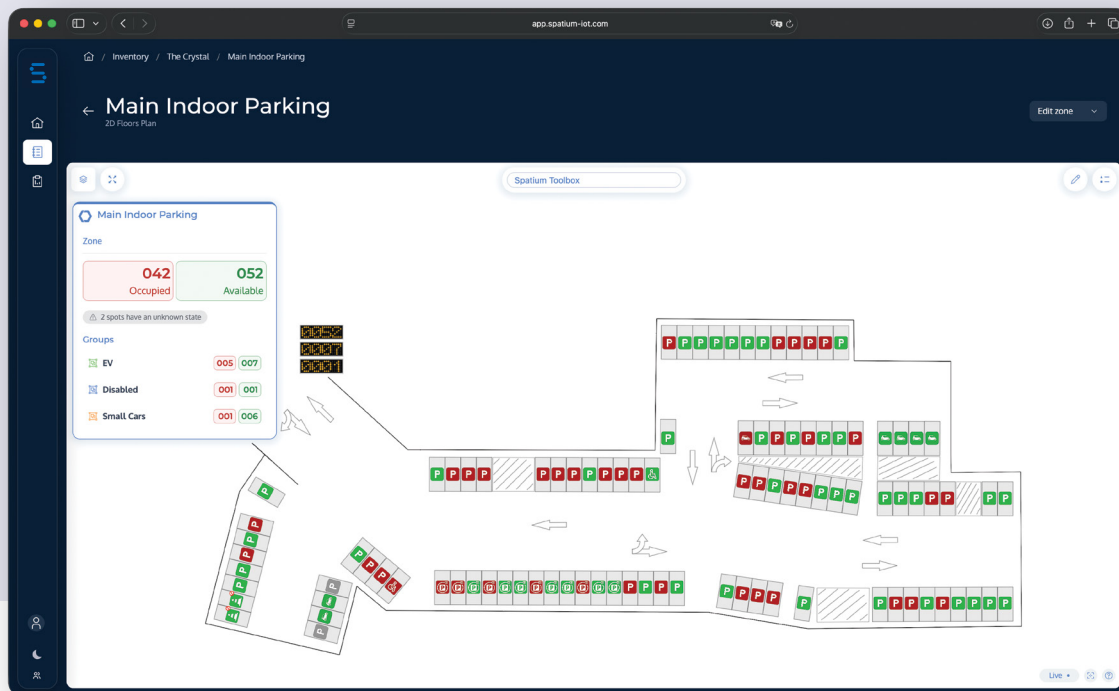
Key Objectives

The project aimed to align parking management with the hotel's service excellence standards, while improving the operational efficiency of the valet team.

- Enhance the guest experience from arrival to departure
- Improve valet efficiency and responsiveness
- Maximize the use of existing parking capacity
- Provide managers with accurate, real-time operational visibility

Parking Layout

- 1 indoor level
- 98 parking spaces across 7 categories:
 - Electric vehicles
 - Standard spaces
 - Accessible spaces (reduced mobility)
 - Small vehicles
 - Large vehicles
 - Service / maintenance zones
 - Valet-only spaces



2 Partners

For the Crystal Lodge project, Spatium centralizes and integrates all partner technologies deployed on site. Cameras, vehicle guidance, and dynamic signage are connected through a single platform, ensuring unified management and fully synchronized real-time data.

Milesight

Smart Guidance Cameras

Milesight

Signal-Tech

Outdoor Dynamic Signage

Signal-Tech



3 Project Implementation

From Design to Deployment

Rather than layering multiple standalone systems, Crystal Lodge sought a centralized approach that could unify field detection, vehicle guidance, and operational management within a single environment.

Spatium was selected for its ability to structure and support this vision. Its modular, scalable architecture makes it possible to integrate various technologies while maintaining a simple and intuitive experience for on-site teams. The project was built around three complementary pillars: enhanced detection, intuitive guidance, and intelligent data utilization.



Smart Guidance Cameras

Crystal Lodge deployed **Milesight smart guidance cameras** capable of **monitoring up to six parking spaces each**, ensuring reliable, real-time detection while minimizing infrastructure requirements.

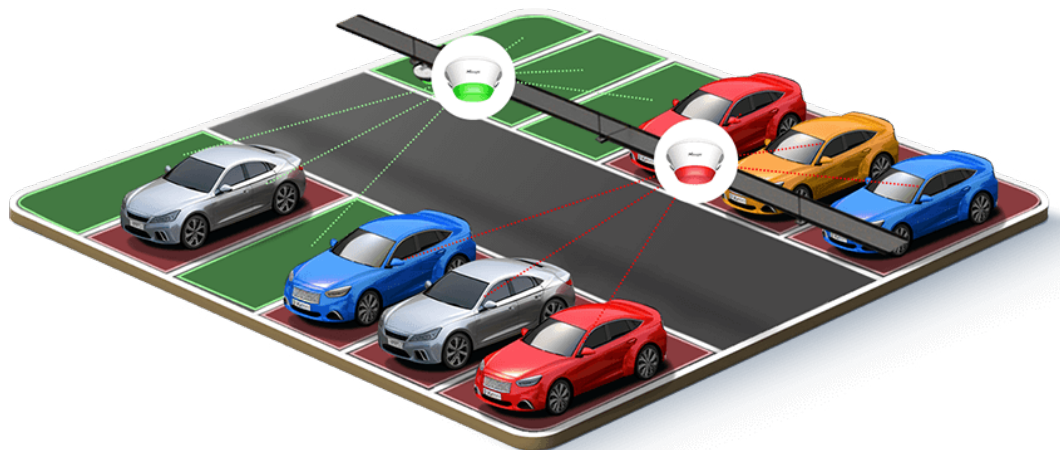
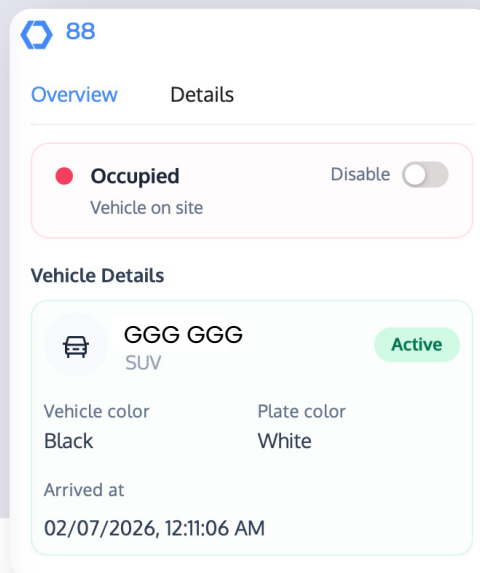
Beyond basic occupancy detection, the solution includes **license plate recognition as well as vehicle type and color identification**. This enriched data enables staff to instantly locate a vehicle and significantly reduce retrieval times.

Integrated LED indicators further enhance the system by displaying space availability by zone, improving traffic flow and reducing congestion. A green light indicates an available space, while a red light signals that it is occupied.



Key Features:

- Real-time occupancy detection
- Advanced vehicle recognition (license plate, type, and color)
- Fast orientation toward appropriate parking zones





Outdoor Dynamic Signage

At the parking entrance, **Signal-Tech dynamic signage** displays real-time information on total available spaces, as well as those reserved for electric vehicles and accessible parking. This allows drivers to immediately identify the appropriate areas upon arrival.

Connected to the Spatium platform, the signage updates automatically using live camera detection data. This integration ensures complete consistency between displayed information and actual parking occupancy.

Key Features:

- Real-time display of available spaces by category
- Automatic synchronization with detection data
- Immediate driver guidance at site entry

Centralized Management Platform

At the core of the solution, the **Spatium platform** centralizes all parking-related data and operations. Accessible through an intuitive web interface, it provides real-time occupancy visibility along with advanced tools for both valet teams and management.

Spatium serves as the central command hub for parking and valet operations.

Key Features:

- Real-time occupancy visualization
- Instant vehicle search by license plate or vehicle attributes
- Access to historical data and usage analytics
- Interface designed for both operational teams and managers



4 Results

An Improved Parking Experience

By centralizing information and streamlining day-to-day operations, the Spatium platform enabled Crystal Lodge to deliver a smoother parking experience for guests while simplifying workflows for staff.

For the Hotel

From a management perspective, Spatium provides an unprecedented level of operational control over parking. Managers now benefit from accurate, real-time occupancy data, enabling better decision-making and optimized use of existing capacity.

The time staff spend managing parking has decreased, irregular usage is quickly identified, and incidents are handled more effectively. Parking is no longer an operational blind spot; it has become a structured, reliable, and measurable service.

For the Valet Team

The impact on valet operations is immediate and tangible. Instant vehicle location eliminates manual searches and greatly reduces reliance on individual staff experience. Guest departures are now smooth and predictable, even during peak periods.

Teams can handle activity surges without increasing headcount, while reducing operational stress and minimizing human error.

Guest Experience (CX)

Before the project, the departure experience was often marked by uncertainty and waiting. With Spatium, the service is now seamless, predictable, and fully aligned with the hotel's premium positioning.

Before

- Unpredictable wait times
- Stress during peak periods
- Perception of a disorganized service

After

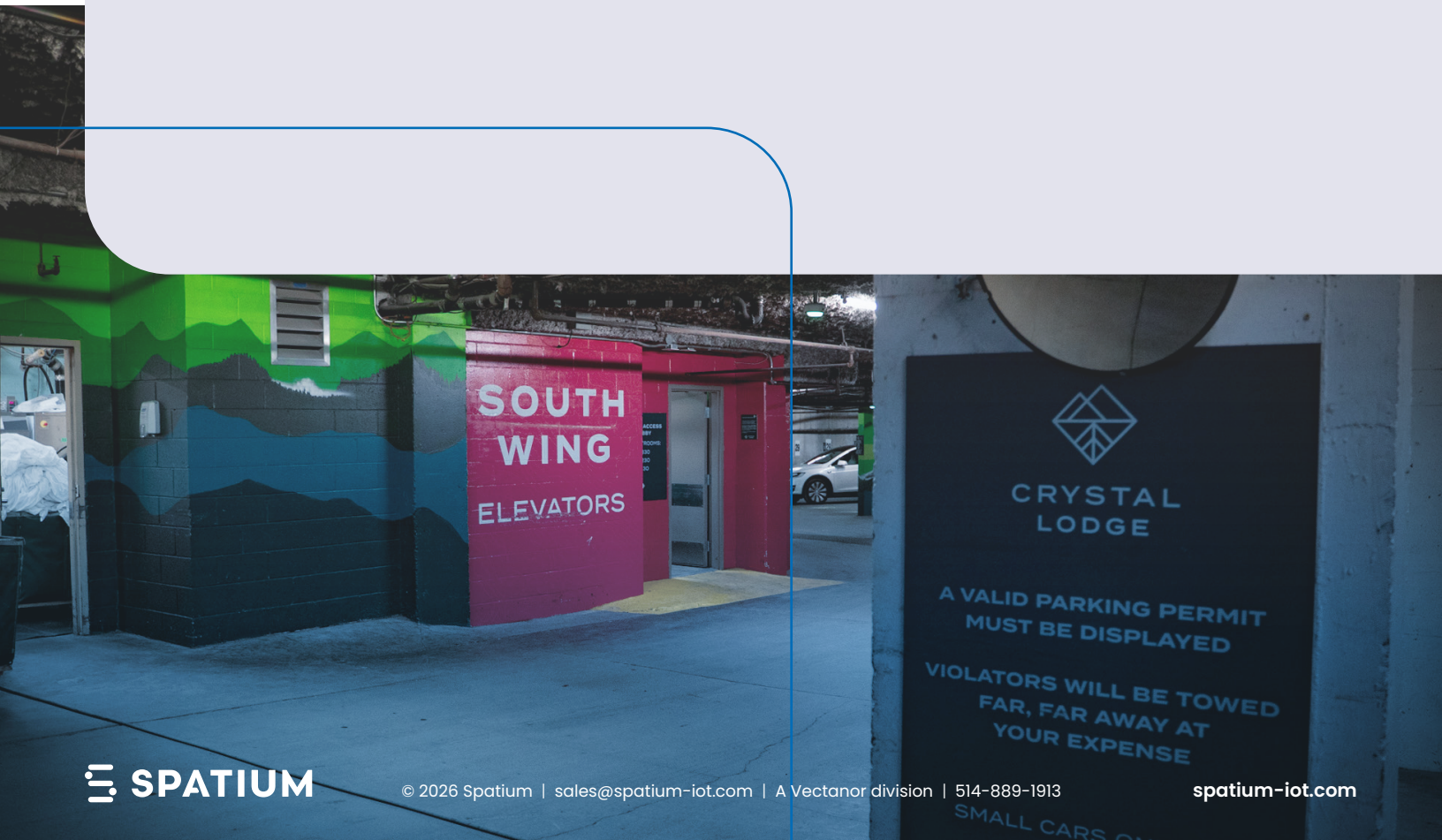
- Vehicle ready upon guest arrival
- Reduced and controlled wait times
- Smooth, premium, and differentiated experience

Value Creation and Outlook

By optimizing valet operations, Crystal Lodge generates measurable value—both operational and financial. The ability to manage more vehicles with the same staffing level creates a clear path toward improved service profitability.

Business Value Generated:

- Increased guest satisfaction and loyalty
- Enhanced perceived value of premium valet services
- Opportunities for differentiated pricing (express, VIP, events)
- Reduced indirect costs related to time loss, disputes, and brand perception



5 Conclusion

With Crystal Lodge, Spatium demonstrates how smart parking can evolve beyond its primary function to become a fully integrated operational tool within hotel operations.

By combining advanced detection, real-time guidance, and intelligent data insights, the platform streamlines valet services, reduces wait times, and brings greater predictability to daily operations.

Designed from the outset as a cloud-based, modular platform, Spatium extends beyond the specific needs of Crystal Lodge. It offers a scalable and easily replicable technological framework that ensures consistent deployments while retaining the flexibility required to adapt to each property's unique environment.

This approach paves the way for broader adoption, particularly across multi-property portfolios and hotel groups and supports various formats, from urban hotels to resorts and luxury properties, all within a single platform for parking and valet management.

*Before Spatium, our parking operations relied heavily on manual tracking and reactive oversight. Today, we operate with **real-time data, intelligent wayfinding, and full visibility** across the garage. We've **reduced wait times, improved valet efficiency, and strengthened oversight of unauthorized parking**. The platform has turned parking into a strategic, data-driven asset for our property.*

— Andrew Weir, Director of Operations, Crystal Lodge

