

# Tunnel Tolling

Faroe Islands

## High availability 100% video tolling for the Vágur, Norðoya, Eysturoy and Sandoy sub-sea tunnels

The Faroe Islands are a North Atlantic archipelago that is interconnected by bridges and tunnels. To improve travel on and between the islands two sub-sea tunnels were proposed. After work started in 2017, the Eysturoy tunnel is scheduled to open to the public in 2020. The Eysturoy tunnel connects Skálafjørður and Tórshavn together with a sub-sea tunnel, which will be a full 11 kilometers long, with 7.5km of it sub-sea.

The tunnel shortens travel distances and travel times significantly for residents and tourists. Like the Eysturoy tunnel, work on the 10.6km Sandoy tunnel has commenced in 2018 and is slated to be ready in 2023.

### SOLUTION

- ▷ INTRADA ALPR AND INTRADA INSIGHT
- ▷ ROAD-SIDE CAMERA AND RADAR SENSORS
- ▷ MANUAL IMAGE REVIEW
- ▷ 100% VIDEO TOLLING

**DISTANCE COVERED:** 21.6 KM

**LANES COVERED:** 6

**LICENSE PLATES SERVED:** 50,000

**EXISTING MONTHLY VOLUME:** ~85,000 PASSAGES

### Project Description

As project investments are earned back through toll fees, the project needs video toll collections to be as efficient and accurate as possible. Q-Free satisfied the strict tender requirements for uptime, automation rates and accuracy by delivering Intrada® Insight and the MD1550 with Intrada® ALPR license plate recognition libraries. In addition, Q-Free supplies monitoring back-ends and road-side solutions with Formula IT to fulfil the requirements of the customer and deliver a complete tolling solution. Q-Free takes responsibility in delivering conversion of all readable images into toll passage transactions. These are used in the Formula IT back office system. Any image that must be read or verified manually are also handled through the Q-Free system.

Both tunnels are part of a back-end system solution delivered by Formula IT, which integrates Q-Free's Intrada® Insight. In effect the Sandoy and Eysturoy Tunnel will be added to the Intrada license plate recognition and image review services similar to those delivered to the Vágur Tunnel and Norðoya Tunnel.

### Results

Intrada Insight was able to deliver unparalleled performance in high traffic volumes in previous Faroe Tunnel projects.

- >98% recognition achieved.
- <0.02% error rate.
- Ability to read and distinguish foreign plates.
- Full manual image review service.

### Tolling Challenge

- Extremely high recognition rates to maximize revenue collection.
- Reliable manual image review service

## Intrada Product Description

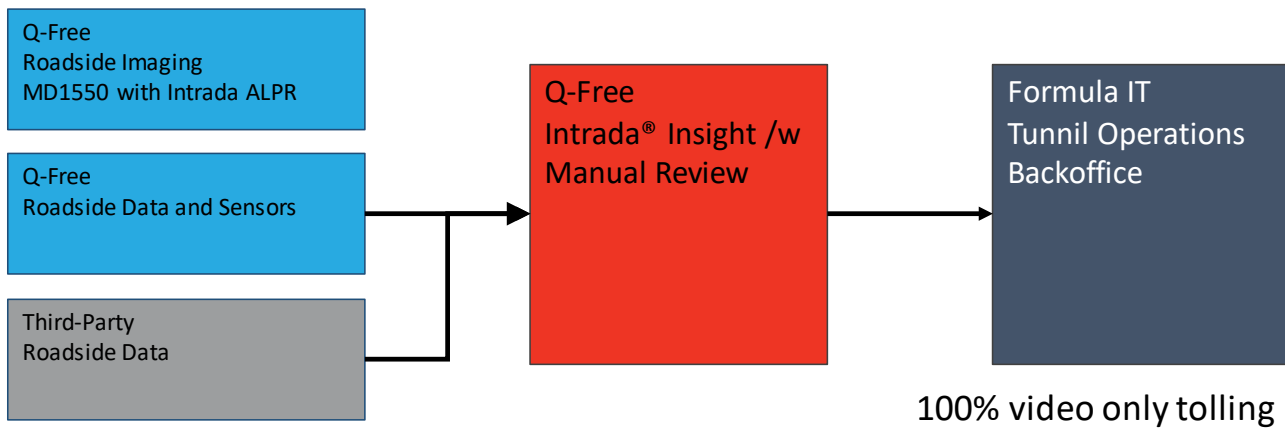
Intrada® Insight is a high-performance image processing solution for video-based toll passages with the lowest operational cost for automated video passages in the market. Intrada® Insight is camera and back office supplier agnostic providing flexibility to work with any existing or new toll system.

The Intrada® Insight automation engine video analytics is project tuned to optimize read accuracy or error rate delivering unparalleled performance in over 160 countries worldwide. Intrada® Insight deployments process millions of passages per day at unparalleled performance. Intrada® Insight saves millions of dollars per year over the traditional image review systems currently deployed by many toll agencies.

## Formula IT Product Description

The Formula IT back office system is integrated with Microsoft Dynamics NAV / Business Central, which handles all financial matters including invoicing, channeling payments to the appropriate company and division. In addition the Formula IT system is integrated with the national vehicle registration authority which enables license plate lookup to be used for billing purposes. When foreign license plates are detected, they are transferred to Euro Parking Collection plc for further processing and collection.

The solution offers a self service for customers to handle all their affairs online - anytime.



## About Q-Free

Q-Free is a leading global supplier of class-leading Tolling, Traffic Management and Connected ITS (C-ITS)/Connected Vehicle solutions. To us, a society with less congestion, pollution and accidents is achievable through smart and innovative transportation solutions. Founded in 1984, Q-Free is headquartered in Trondheim Norway and has approximately 400 employees with 18 offices around the world. With an annual revenue around 1 billion NOK/13 million USD, the company is listed on Oslo Stock Exchange and certificated accordance with ISO-9001 and ISO 14001 and soon ISO 27001. We have references from more than 50 countries, providing innovative solutions with high capability, flexibility and quality.