# Q-FREE COMPANY PRESENTATION December 2017 **LEADING THE WAY**

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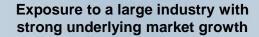
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Leading global position in electronic tolling

Exciting opportunities in "new and adjacent" ITS segments based on recent acquisitions



New Board and management team with proven track records

All-time high order backlog

Initial restructuring of company including equity raise, cost reductions, cash management, and asset disposals completed





# URBANIZATION INCREASES DRAMATICALLY





### CITIES BECOME MORE IMPORTANT DAY BY DAY



50% of global GDP is generated by the 300 largest metropolitan areas in the world



5 our of 10 people live in cities and 1.5 million people are added to the urban population every week



Cities are responsible for 75% of global energy consumption



By 2030 there could be 40 megacities with a population of more than 10 million



Cities are responsible for 80% of CO2 emissions



# CONSEQUENTLY, URBAN TRAFFIC LOADS, CONGESTION, AND POLLUTION ALSO INCREASE





### THERE ARE PLENTY OF URBAN TRAFFIC PAIN POINTS



42 hours wasted per American each year in peak traffic



300 billion USD wasted on congestion in the US each year



53 000 Americans die each year due car emissions



19. bn hours wasted in Germany each year looking for parking



20.4 billion USD spent on overpaying for parking in the US each year



1.2 million people die each year in traffic accidents



# INTELLIGENT TRANSPORTATION SYSTEMS ARE NEEDED TO SUSTAIN URBAN GROWTH AND QUALITY OF LIFE



# INTELLIGENT TRANSPORTATION SYSTEMS (ITS) BRING SEVERAL BENEFITS





- Reduced peak traffic
- Better utilization of existing capacity
- Traffic is shifted between different transport modes



- Improved guidance and information
- V2V and V2I communication
- Automated/autonomous vehicles



- Improved traffic flows
- Reduced traffic –
   «polluter pays principle»
- Traffic is shifted to greener transport modes



- Funds service and maintenance of existing infrastructure
- Raises money for new infrastructure projects



### ITS COVER A WIDE VARIETY OF SEGMENTS AND SOLUTIONS

#### **Electronic Tolling**



- Operational and commercial backoffice systems
- On-board units/tags
- Roadside equipment/systems (transceivers, cameras etc.)
- Enforcement solutions
- Misc. hardware (gantries, controllers, VMS etc.)

### **Parking**



- Central Parking Management Systems
  - Access control
  - Payment
  - Customer Management
  - Business int.
  - Claims/enforceme nt
- Parking Guidance Systems
- Misc. hardware (barriers, kiosks, VMS, CCTV etc.)

### Inter-Urban Management



- Highway management systems (SW platform)
- Tunnel and bridge management systems (SW platform)
- Road/tunnel/bridge instrumentation
- Speed cameras and enforcement
- Misc. hardware (VMS, lighting etc.)

# **Urban Traffic Management**



- Intersection control systems (SW platform)
- Detection systems (cameras, radars etc.)
- Local traffic controllers
- Cabinets
- Signal heads
- Red light enforcement systems
- Misc. hardware (VMS, lighting etc.)

### Infomobility



- · Backoffice systems
- Journey time analyses (bluetooth, WiFi etc.)
- Weigh In Motion
- Pedestrian and cycle counting
- Vehicle classification
- Weather and air quality monitoring

# ALTHOUGH IT SEEMS HARD TO QUANTIFY THE EXACT MARKET SIZE, THE ITS MARKET IS BIG AND GROWING



The intelligent transportation system (ITS) market is expected to grow from USD 36.10 billion in 2015 to USD 63.66 billion by 2022, at a CAGR of 8.3%

Marketsandmarkets, July 2016

Intelligent Transportation System (ITS) market is expected to reach \$42.67 billion by 2022 growing at a CAGR of 12.21%

Stratistics MRC, January 2016

Global ITS market is expected to reach USD 38.68 billion by 2020

Grand View Research, July 2016

The ITS market size is predicted to hit USD 47.5 billion at a CAGR of over 13% from 2015 to 2022

Global Market Insights, July 2016

The global intelligent transportation system (ITS) industry is expected to cross \$33.89 billion by 2020

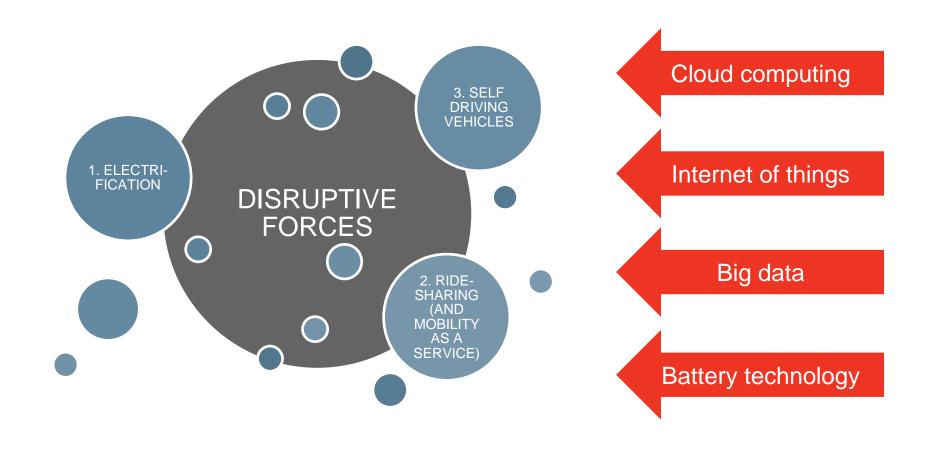
Radiant Insights Inc, July 2016

The global ITS and services market is expected surpass USD 80 billion by 2022 at a CAGR of 6% from 2015 to 2022

Credence Research Reports, March 2017



### THERE ARE 3 DISRUPTIVE FORCES AT WORK IN ITS...



# ..THAT WILL FUNDAMENTALLY CHANGE THE (URBAN) TRAFFIC SITUATION



# Impact on the city, percent change

Number of vehicles

Accidents:

Parking space:

**Emissions:** 

### Modal mix, percent of distance traveled

Private regular cars

CAVs

Traditional taxis

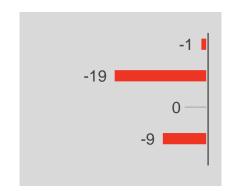
Robo taxis

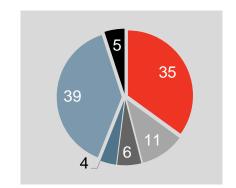
Public transportation

Walking and biking

#### **BUSINESS AS USUAL**

- CAVs complement existing mobility offering

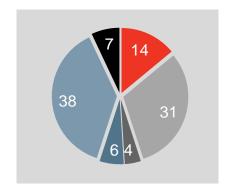


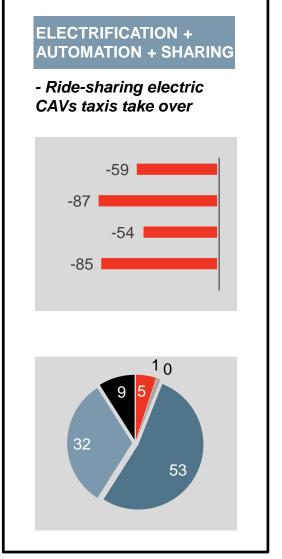


### ELECTRIFICATION + AUTOMATION

- CAVs replace most traditional cars







Source: The Boston Consulting Group, 2016





### Q-FREE AT A GLANCE











**EMPLOYEES** 



MNOK IN **REVENUES** 



**INSTALLED THE** WORLD'S FIRST **FREE FLOW TOLLING** SYSTEM IN







2007-2016



**PARKING FACILITIES** 



325 WEIGH IN MOTION SYSTEMS



**BICYCLE** COUNTERS



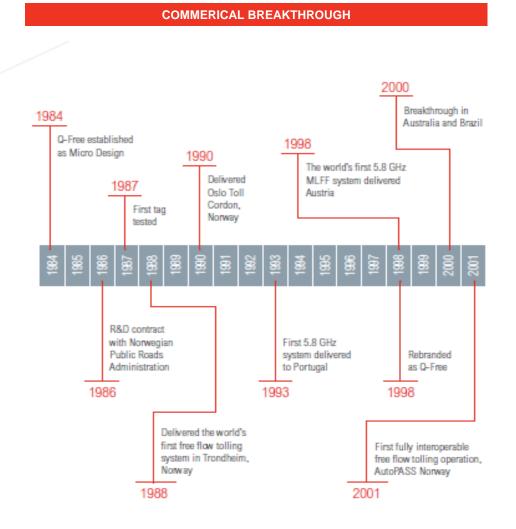


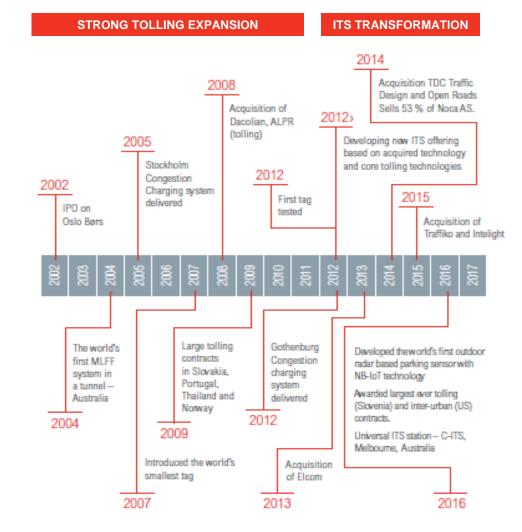






### **COMPANY HISTORY**





# Q-FREE HAS EVOLVED FROM A TOLLING COMPANY TO AN ITS PLAYER



### Complementary technologies obtained through a series of acquisitions







Traffic controllers, VMS

Traffic Controllers









Infomobility solutions

Tolling, parking, traffic management

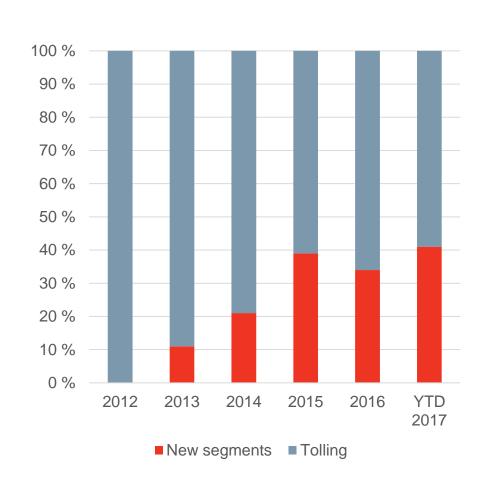
Traffic management

Central Parking Management System

#### Rationale for pursuing new offerings

- Position Q-Free for future growth
- Secure multiple revenue streams from a broader range of projects with different business models and risk profiles
- Leverage key Q-Free technologies in new areas

### **Development in revenues from new segments**Percent of total





# **OUR FOOTPRINT**





### **OUR PORTFOLIO**





# Q

### **Geographical focus**

#### **GLOBAL SERVICE LINES**





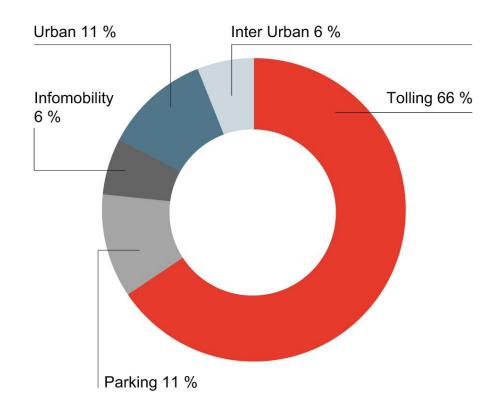


### NORTH AMERICAN SERVICE LINES



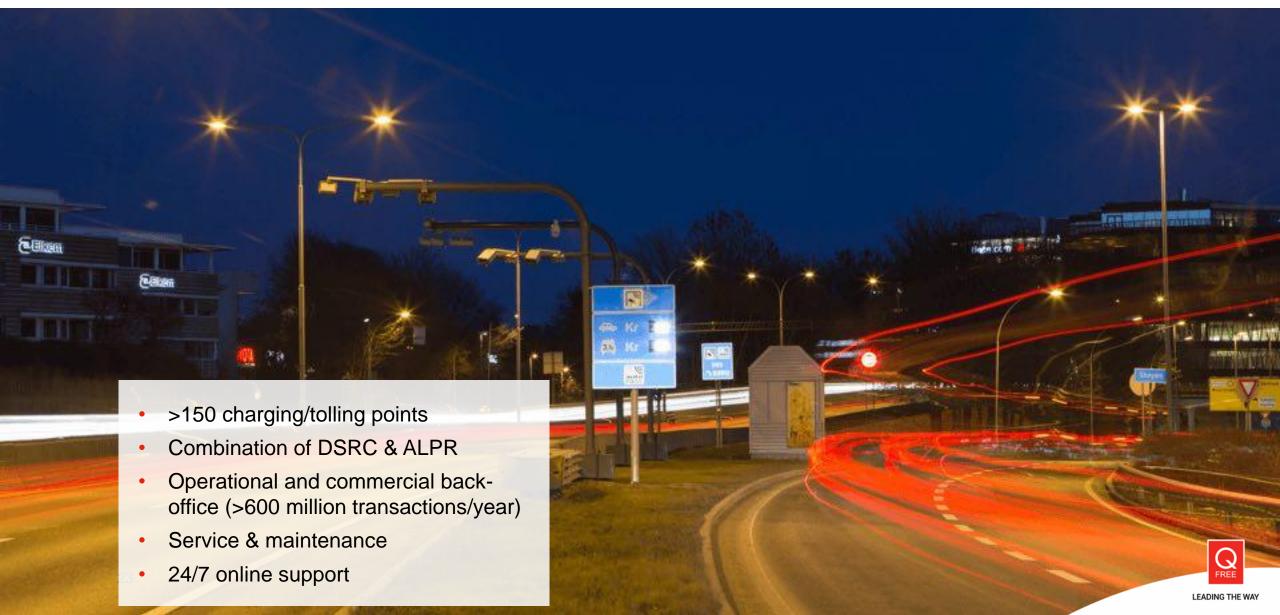


# Revenue breakdown (2016 numbers) NOK million





### **TOLLING SYSTEM REFERENCE: NORWAY**





### PARKING SYSTEM REFERENCE: STOCKHOLM, SWEDEN





## INFOMOBILITY SYSTEM REFERENCE: WIM, SCOTLAND



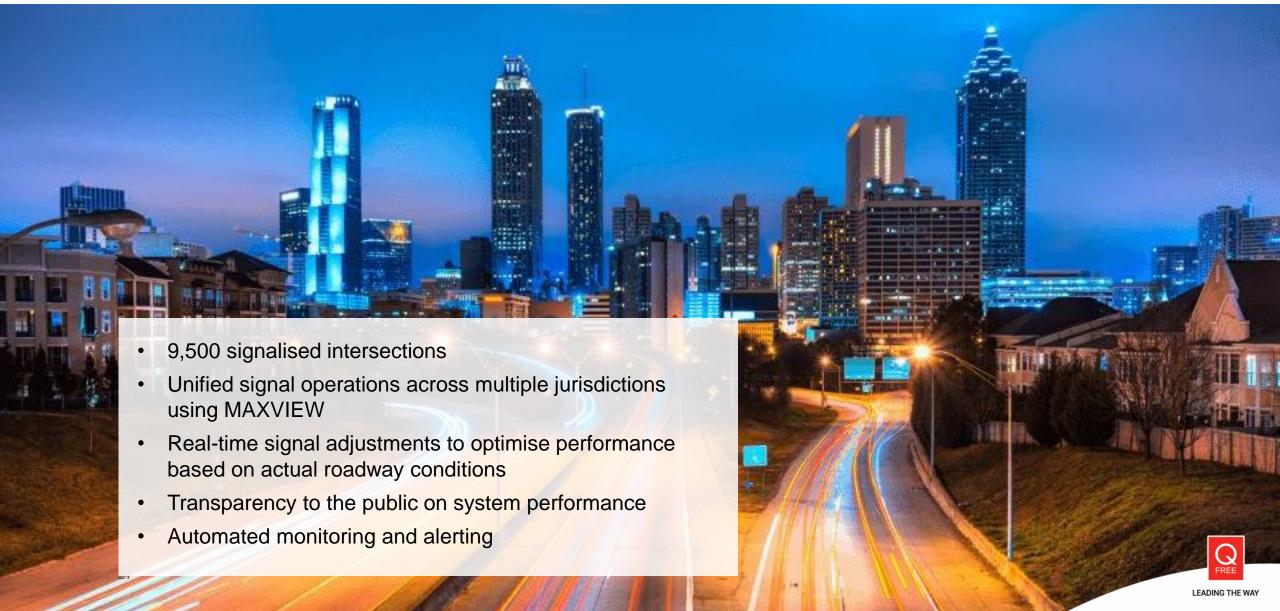


### INTER-URBAN SYSTEM REFERENCE: PENNDOT, USA





### URBAN SYSTEM REFERENCE: GEORGIA DOT, USA





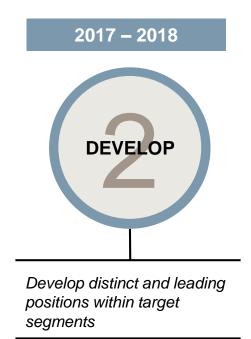


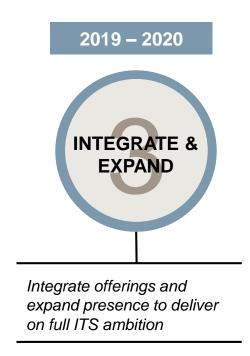




structure and establish

platform for profitable growth







# WE RAISED 134 MNOK IN NEW EQUITY TO IMPROVE OUR CASH POSITION AND CAPITAL STRUCTURE







# **EQUITY RATIO**Percent

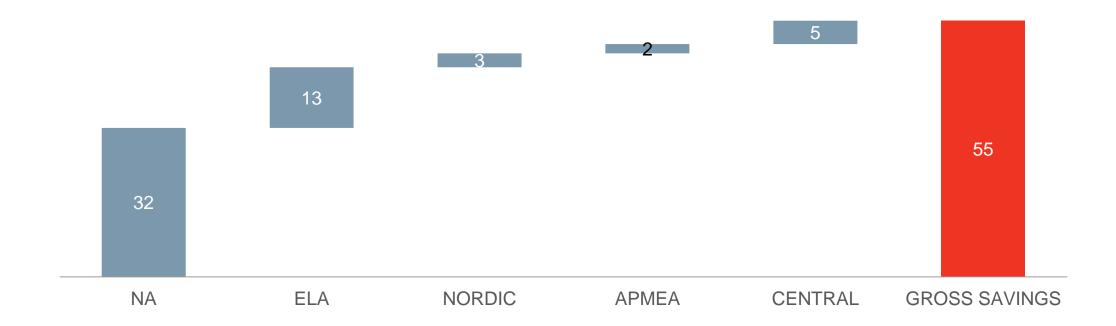


# WE REDUCED OPERATIONAL EXPENSES BY INTEGRATING AND STREAMLINING ACQUIRED COMPANIES



**GROSS OPEX SAVINGS, FULL-YEAR 2017 vs. 2016** 

**NOK** million



# WE REDUCED PORTFOLIO COMPLEXITY TO ALLOW FORCEFUL EXECUTION OF PRIORITIZED INITIATIVES



#### **GLOBAL SERVICE LINES**







- Exited unprofitable markets
- Exited unprofitable/low volume product segments
- Defined clear product roadmaps

#### NORTH AMERICAS SERVICE LINES





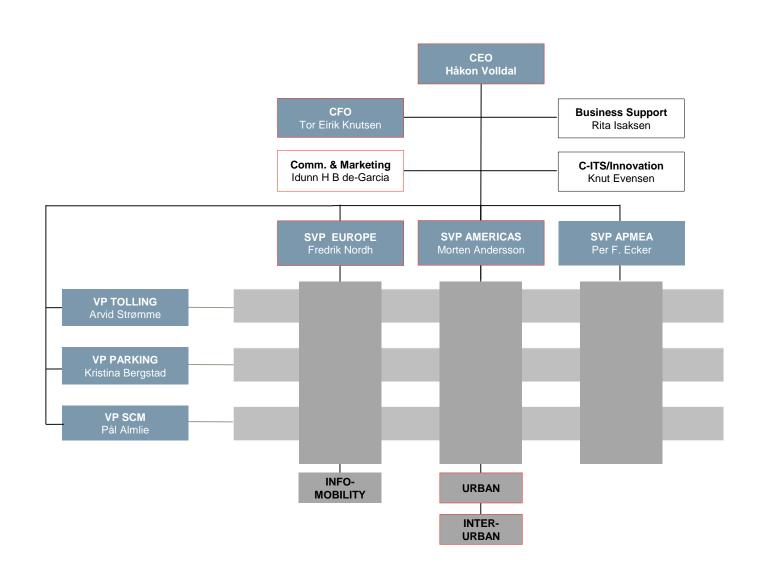
- Focused market development and sales on North America
- Defined clear product roadmaps



**DIVESTED** 



### WE PUT IN PLACE A NEW MANAGEMENT TEAM



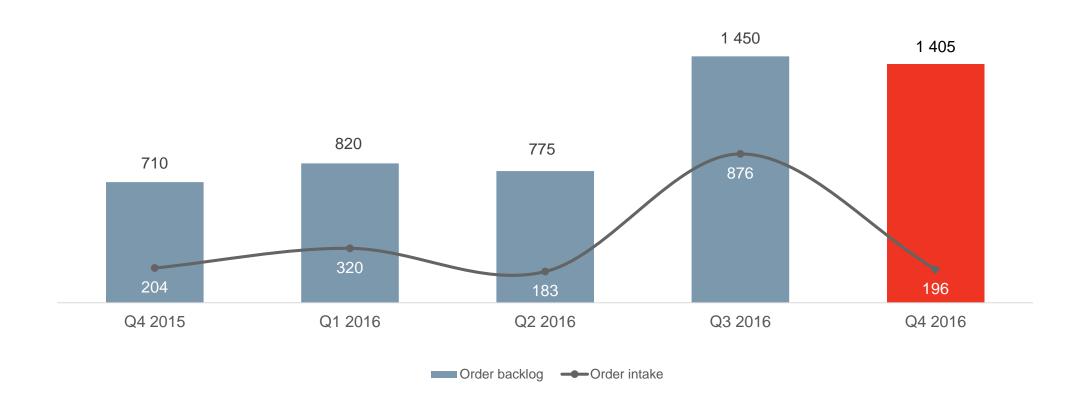




### WE BUILT AN ALL-TIME HIGH ORDER BACKLOG

### ORDER BACKLOG AND INTAKE

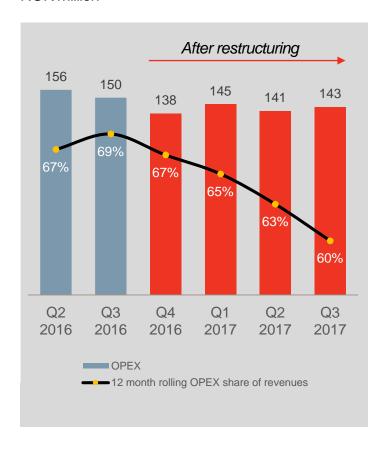
NOK million



# PHASE 1 OUTCOME: A SOLID PLATFORM FOR PROFITABLE AND SUSTAINABLE GROWTH!



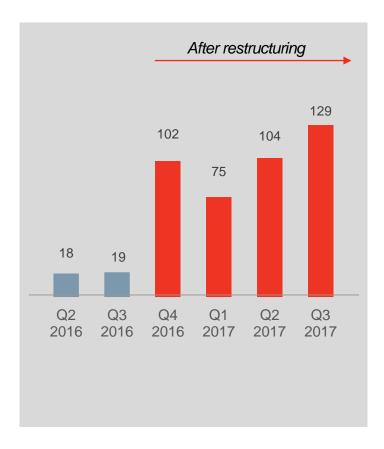
REDUCED FIXED COST BASE NOK million



IMPROVED EBITDA MARGIN\*
Percent



MORE CASH AT HAND NOK million



<sup>&#</sup>x27; Excluding non-recurring items



### **OUR 2016-2021 STRATEGY**



Restore a healthy capital structure and establish platform for profitable growth

- 134 MNOK in new equity raised
- Cash management significantly improved
- ~50 MNOK in gross OPEX savings executed
- Security division divested and Brazil closed down
- New organization put in place
- All time high order backlog of 1400 MNOK end of 2016

2017 – 2019



Develop distinct and leading positions within target segments

- Maintain top 3 position in DSRC tolling globally
- Become a top 5 player in parking guidance globally
- Build a sizeable global infomobility business
- Become a top 3 US provider of intersection controllers
- Become the number 1 TMC provider in the US Mid Atlantic and South East

2019 – 2021



Integrate offerings and expand presence to deliver on full ITS ambition

TRANSFORM

Transform Q-Free through game changing partnerships/transactions

# THERE ARE SEVERAL SHORT- AND MID-TERM OPPORTUNITIES UP FOR GRABS



#### **THAILAND**



- Tag tenders
- Large highway/motorway tolling projects
- · Traffic controller system for Bangkok

#### **INDONESIA**



- Nationwide conversion of manual tolling to electronic tolling
- Congestion charging system in Jakarta
- Parking guidance expansion

#### **USA**



- Traffic management system upgrades and expansions
- Traffic controller system contracts
- · Image based solutions for tolling
- Parking guidance expansion
- Infomobility expansion

#### **NORWAY**



- Tag mini-tenders
- Expansion of roadside equipment in Oslo, Bergen and other cities
- New central system(s) for AutoPASS
- · Roadside equipment for ferries

#### **SWEDEN**



- Service and maintenance contract in Stockholm
- Roadside tolling equipment in Stockholm

#### FRANCE/SPAIN/PORTUGAL



- Tag tenders
- Large highway/motorway tolling projects
- Parking guidance expansion

#### **CHILE**



- Tag tenders
- Service and maintenance contract



### WE HAVE A GREAT STARTING POINT

### Best-in class DSRC tolling technology



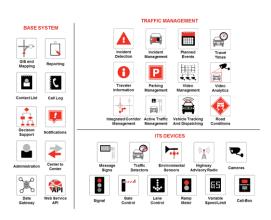
## World-leading image recognition solutions



### Breakthrough radar-based parking sensor (incl. NB-IoT)



### Modular traffic managment system



### World-leading intersection control software



First universal C-ITS station





### VALUE PROPOSITION SUMMARY

	DOMAIN KNOW-HOW	INNOVATION	PERFORMANCE	FLEXIBILITY	COLLABORATION
TOLLING	<ul><li> 30 years of DSRC experience</li><li> Global references</li><li> Strong track record</li></ul>		<ul><li>Highest accuracy</li><li>Lowest leakage</li><li>Highest uptime</li></ul>	<ul><li>Interoperability</li><li>Full or partial delivery</li><li>Local partners/content</li></ul>	
PARKING		<ul> <li>Barrierless, ticketless, cashless parking concept</li> <li>Wireless single space sensor</li> <li>Bi-directional ultrasonic level counter</li> </ul>	<ul> <li>Lowest revenue leakage</li> <li>Level/facility counting accuracy</li> <li>Best SSS accuracy and lifetime</li> </ul>	<ul><li> Open standards</li><li> Modular offerings</li><li> Interoperability</li></ul>	
INFOMOBILITY			<ul><li>Real-time data</li><li>High accuracy</li><li>High uptime</li></ul>	<ul><li>Modular, open architecture</li><li>Interoperable offerings</li></ul>	Local presence     Tight follow up
INTER-URBAN	Unique know-how of the Mid- Atlantic traffic market		<ul> <li>Easy to use ATC SW and customizable dashboards</li> <li>Advanced ATMS features</li> </ul>	<ul><li>Modular, open architecture</li><li>Interoperable offerings</li></ul>	
URBAN		<ul> <li>First to market with ATC platform, embedded web server</li> <li>Real time dashboards, visual replay, historical archive, automatic upload</li> </ul>	<ul> <li>Easy to use ATC SW and customizable dashboards</li> <li>Handles timing of complex intersections with ease</li> <li>Advanced ATMS features</li> </ul>		<ul> <li>Modular and open standard product approach</li> <li>All-inclusive licensing</li> <li>Customers first</li> </ul>





#### **GLOBAL SERVICE LINES**



Maintain top 3 position in DSRC

- Defend and harvest existing markets through cost reductions and new features
- Selectively develop new markets
- Position for future tolling models



Become a top 5 player in parking guidance globally

- Launch and monetize new parking guidance portfolio
- Roll out outdoor NB IoT solution with telcos



Build a sizeable global business (>100 MNOK)

- Consolidate offering and build volume for key products
- Expand and develop distributor network in Europe and North America

#### **REGIONAL SERVICE LINES (NA ONLY)**



Become a top 3 US provider of intersection controllers

- Continue to steer evolution and vision of relevant markets
- Establish position as the #1 SW provider in the US and become #3 in sales (excl. cabinets)



Become the number 1 ATMS provider in the US Mid-Atlantic and South-East

- Maintain stronghold in PA, VI and WV
- Win new statewide ATMS contracts
- Start integration of other QFR offerings (parking, signal processing, infomobility etc.)



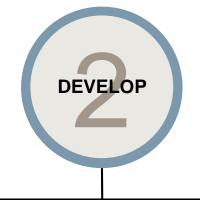
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### 2019 – 2020



Integrate offerings and expand presence to deliver on full ITS ambition

- Expand internationally across all service lines
- All relevant offerings available in public cloud and IoT Hub
- Integrate inter-urban, urban, infomobility and parking offering on overall smart city platform
- Pursue structural partnerships and selected M&A opportunities

### 2021 ->



Transform Q-Free through game changing partnerships/transactions

- Transform the business model to a service-based model
- Consolidate the business and/or become part of a bigger ecosystem

# WE ARE MOVING TOWARDS OPEN AND INTEGRATED SOLUTIONS



### From..













- · Isolated, stand-alone systems
- Separately/independently purchased and deployed
- Local/regional/national product/service monopolies
- No/limited 3<sup>rd</sup> party innovation on generated data

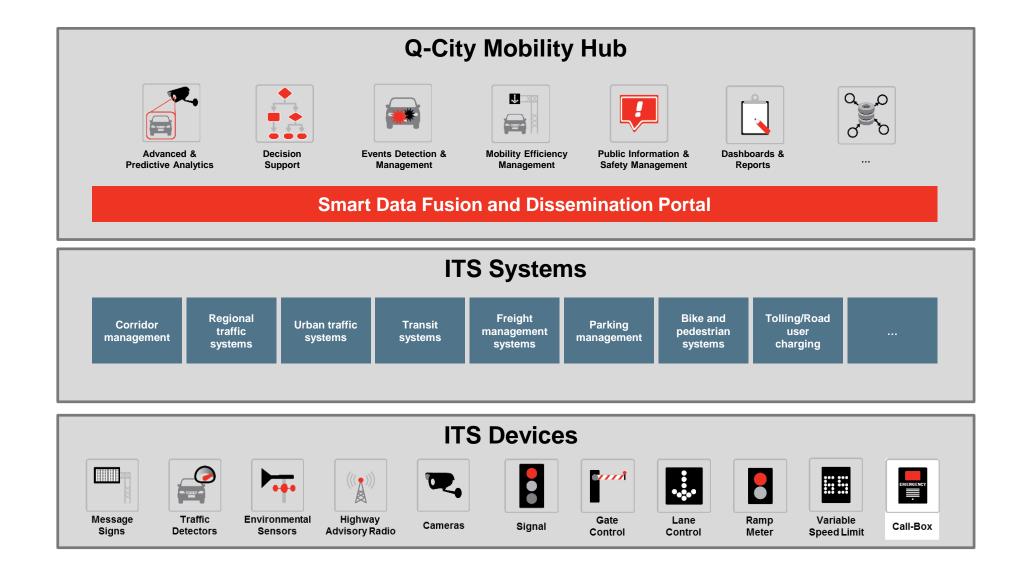
### <u>To..</u>



- Modular, connected systems based on standard APIs and protocols
- More holistic approach to purchasing and deployment?
- · Less vertical integration?
- Data made available to 3rd parties?

# WE BELIEVE IN Q-CITY - A MOBILITY PLATFORM FOR EFFICIENT, SAFE AND CLEAN TRANSPORTATION





# THERE ARE SEVERAL OPPORTUNITIES TO CONSOLIDATE THE MARKET AND/OR BECOME PART OF A BIGGER ECOSYSTEM





- ✓ Vast, fragmented market with hundreds of players
- ✓ Wide range of products and services offered
- No dominant global player
- Very few players able to provide end-to-end solutions = in multiple segments
- = Large addressable market
- Several different offerings/niches that can be targeted
- Opportunity to build global leadership within niches
  - Q-Free has technology, position and references to create market leading offerings within selected segments