SMART COMMUNICATION FOR INTELLIGENT TRANSPORT

ERICSSON
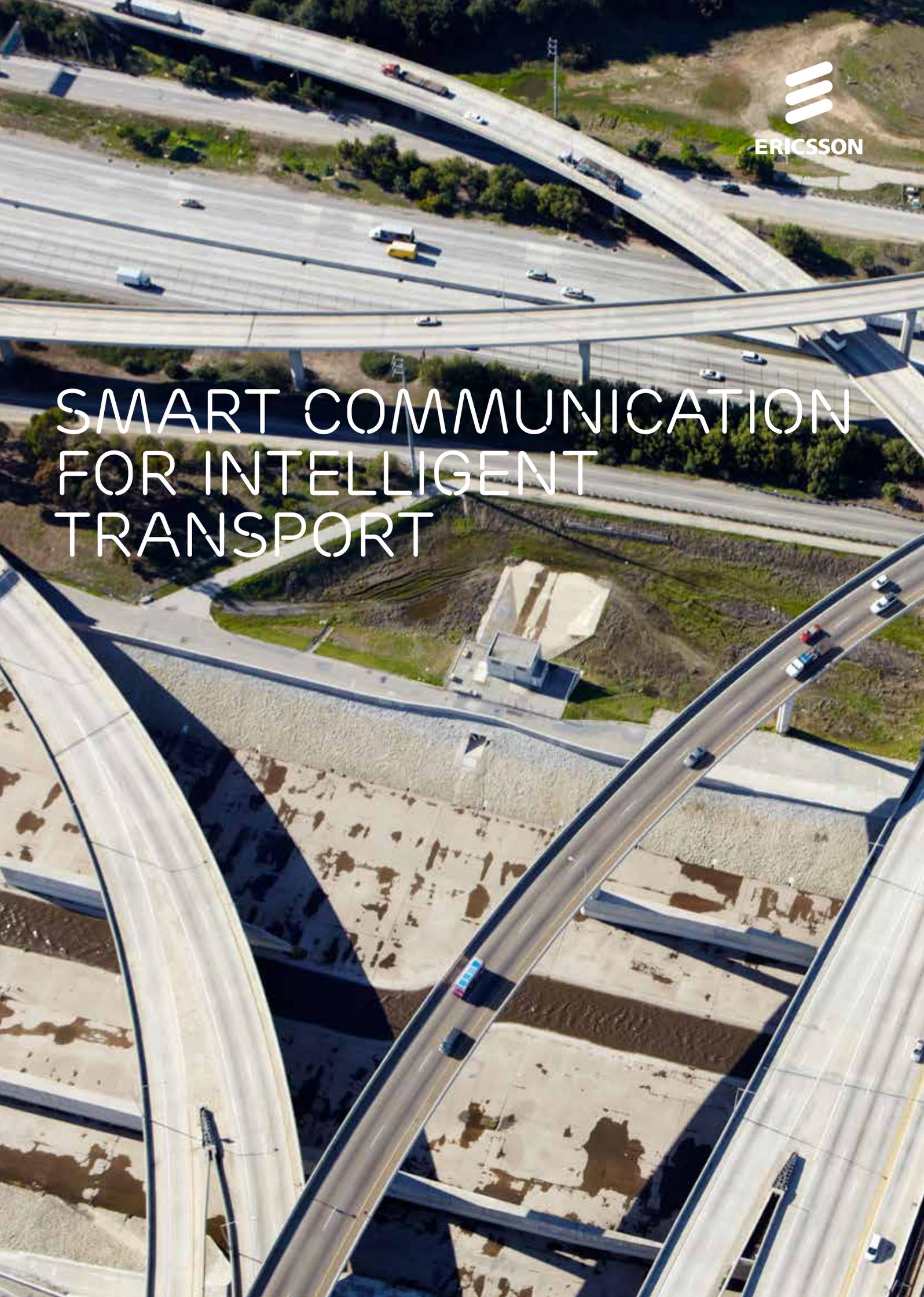
SMART COMMUNICATION + ACCURATE INFORMATION = INTELLIGENT TRANSPORT USERS

Intelligent transport systems (ITS) are enhancing the efficiency, safety and green credentials of the transport sector across the world. We are on the brink of an extraordinary revolution that will change our world forever. In this new world everyone, everything and everywhere will be connected in real time. We call this the Networked Society. It will fundamentally change the way we innovate, collaborate, produce, govern and sustain. The transport industry will benefit from this evolution.

Realizing a truly intelligent transport system is challenging, as it must be aligned with the needs and requirements of a complex ecosystem of users and providers. Information and communications technology (ICT) must be integrated with existing transport infrastructure, vehicles, back-end support systems and end users – including drivers and passengers. Connected cars, buses, trucks, vessels, trains, aircraft, roads and infrastructure are key elements of a Networked Society. Real-time information is a critical requirement for effective usage and operation of ITS for public transport, logistics management, road and rail operations, and management of major transport hubs.

Transport systems feature hubs such as airports, harbors, railway stations and cargo terminals, where many different modes of transport meet. Managing this complexity requires a structured, secure means of communicating and sharing information while on the move.

Designing, deploying and managing ITS services for a multitude of applications, devices and means of connectivity, creates a series of challenges in terms of system complexity and cost of deployment and operation.

Intelligent architecture
Regardless of the connectivity method used, delivery of ITS services requires a well-defined blueprint and architecture. Transport providers will benefit from a common service platform that is based on recognition and understanding of the challenge of matching communications technologies with vehicle product life cycles, and applications with consumer needs and usage patterns. Existing mobile communications systems provide various enablers to simplify and accelerate ITS deployment. Connectivity to commuters' vehicles and traffic infrastructure can be provided, but also specific service enablers such as location, messaging, billing and service creation tools.

The mobile advantage
Mobile communications solutions have two key advantages; a large deployed base of existing networks and users with the economies of scale that brings in terms of speed of deployment, and the ecosystem of application and device developers that already exists to serve the mobile market. Mobile networks based on GSM (2G), WCDMA/HSPA (3G) and LTE (4G) are connecting vehicles, transport infrastructure and travelers. Demanding traffic safety services such as crash notification and road hazard warnings can be rolled out very cost-effectively using existing mobile networks. ITS services that are consistent across all users in a transport system are dependent on effective service enablement and content management tools layered on top of connectivity.

Figure 1 illustrates Ericsson's view of a structure for a connected transport platform and describes how ITS services such as traffic management, trip-related fees and charges, vehicle interaction, traffic safety, infotainment and goods management can share resources
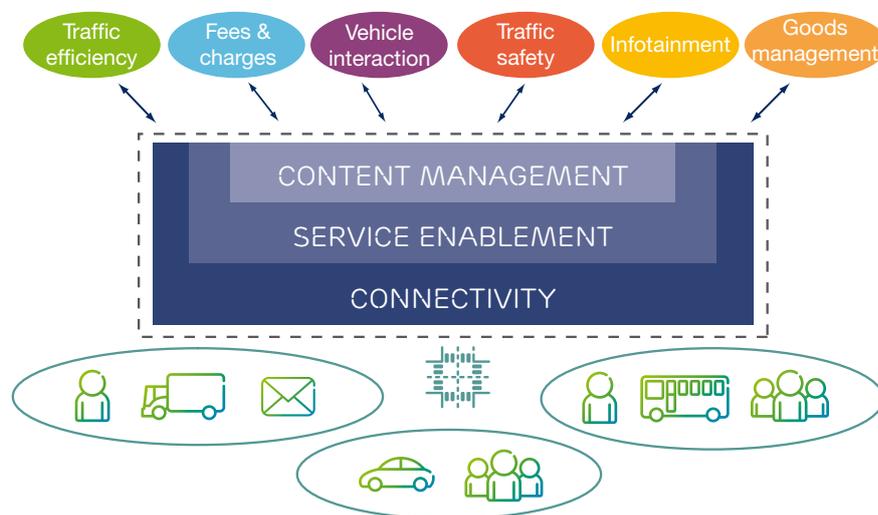

Figure 1: Ericsson's view of a connected transport platform

PACE OF CHANGE

50 billion connected things

5 billion connected people

1 billion connected places

THINGS
PEOPLE
PLACES

Billions
50
40
30
20
10
0

1900   1990   2000   2010   2020
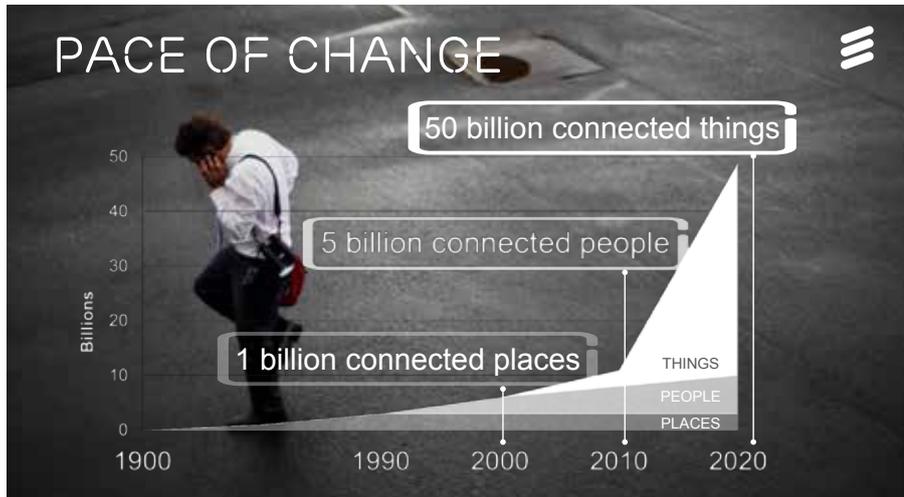
Everyone, everything and everywhere will be connected

through content management, service enablement and connectivity, thereby enabling a more attractive business case per service.

Service layer complexity
It is likely that, over time, the ITS service structure will become as complex as the service layer in the telecoms world – which today enables design, deployment and management of a multitude of applications and services for 5 billion mobile device users across the globe. In addition, mobile systems could be a fundamental enabler for ITS service providers to charge and get paid for the services they deliver over transport systems for goods as well as people via road, rail, air or sea.

A trusted partner to take you forward
Ericsson brings innovative thinking and unrivalled experience in understanding different mobile users and designing, deploying and managing services for the real-time Networked Society. We have the expertise required to design and manage end-to-end solutions ranging from mobile broadband modules built into vehicles to mobile access networks and operations support systems, service deployment platforms and business support systems. We have a track record of building intelligent architectures and solutions that can be adapted to new types of applications and business models.

End-to-end service performance
We help our customers maintain and grow their market share, im-

prove their customer service and enable new business models. Our communications expertise is just one element of this approach – we also provide solutions that exploit data assets and customer relationships, control end-to-end service performance and establish cost-efficient, effective operations. Telecoms operators trust us to manage and evolve their operations across the business process and ICT domains. We manage operations and networks on behalf of more than 100 operators worldwide, serving more than 1 billion subscribers.

Our 61,000 services professionals are based in 180 countries and speak more than 100 languages. Around 16,000 of these employees are consultants and systems integrators who deliver more than 1,600 projects in multi-vendor and multi-technology environments every year.

We have been chosen to manage, set up and maintain systems and solutions in extremely complex and mission-critical real-time information flows. This involves transformation of operations support systems, business support systems and other critical areas of business operations.

As a global market leader in designing, deploying and managing mobile communications solutions, we know what it takes to bring agile, innovative, secure, safe and open new mobile services to market. We are the right partner to take onboard for a successful journey in intelligent transport systems.

Ericsson is the driving force behind the Networked Society – a world leader in communications technology and services. Our long-term relationships with every major telecom operator in the world allow people, businesses and societies to fulfil their potential and create a more sustainable future.

Our services, software and infrastructure – especially in mobility, broadband and the cloud – are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities.

With more than 110,000 professionals and customers in 180 countries, we combine global scale with technology and services leadership. We support networks that connect more than 2.5 billion subscribers. Forty percent of the world's mobile traffic is carried over Ericsson networks. And our investments in research and development ensure that our solutions – and our customers – stay in front.

Founded in 1876, Ericsson has its headquarters in Stockholm, Sweden. Net sales in 2013 were SEK 227.4 billion (USD 34.9 billion). Ericsson is listed on NASDAQ OMX stock exchange in Stockholm and the NASDAQ in New York.

www.ericsson.com
www.ericsson.com/news
www.twitter.com/ericssonpress
www.facebook.com/ericsson
www.youtube.com/ericsson

TRANSPORT AND AUTOMOTIVE MILESTONES – PRESS RELEASE HIGHLIGHTS:

JANUARY 8, 2014
Volvo launches new cloud-based infotainment system for its connected car

JANUARY 6, 2014
AT&T and Ericsson announce agreement for the connected car

NOVEMBER 19, 2013
Ericsson announces key collaborations to improve city life

FEBRUARY 23, 2013
Flexible charging solution puts electric cars in the fast lane

DECEMBER 17, 2012
Connected Car services come to market with Volvo Car Group and Ericsson

NOVEMBER 5, 2012
Smart charging for electric vehicles

JANUARY 11, 2012
Maersk Line and Ericsson bring mobile connectivity to the oceans,

DECEMBER 13, 2011
Smart Transport in Brazil highlighted at COP 17