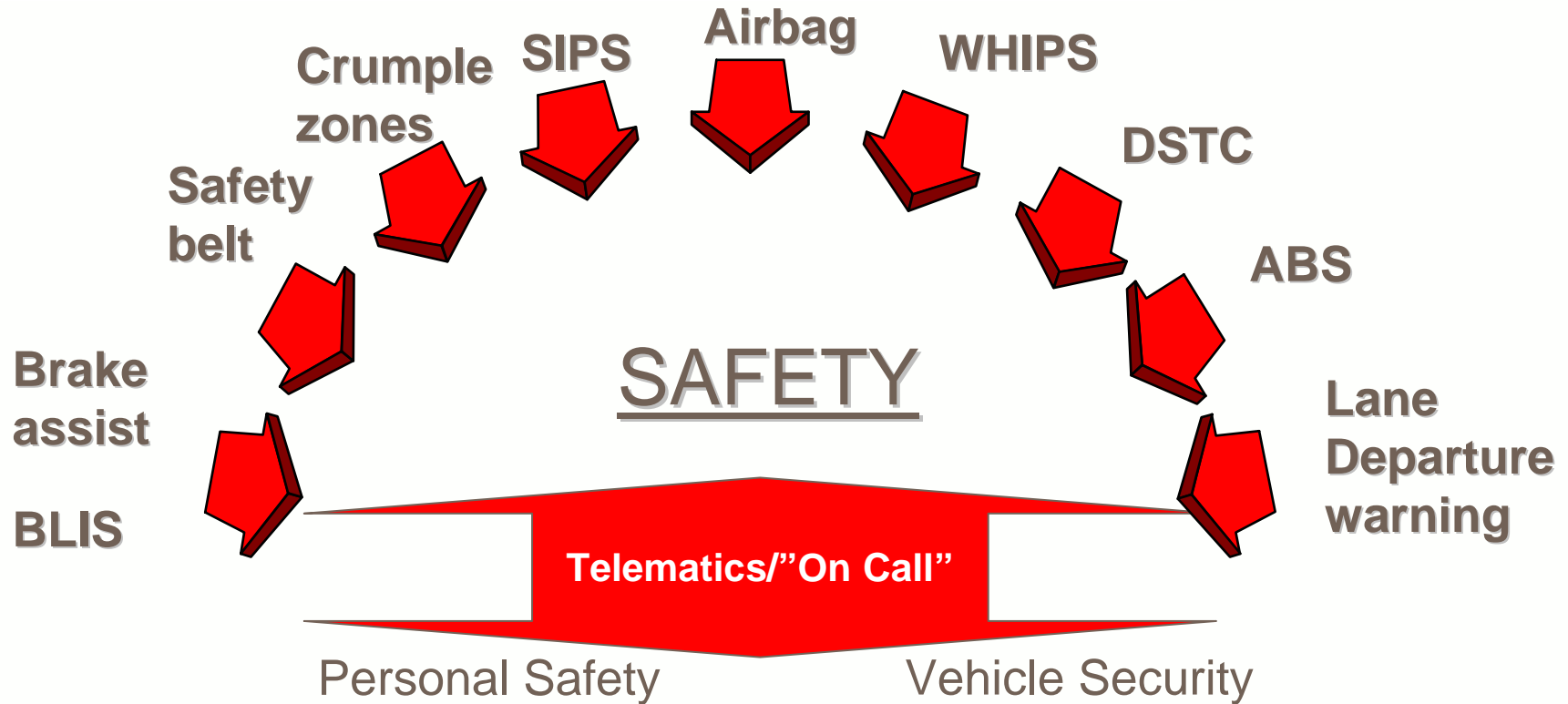


Volvo On Call

An OEM view on
European eCall



Volvo On Call Strategy



- In-vehicle system
- Supporting infrastructure



Volvo Cars View on SAFETY

Pre-crash

Prevention

- ABS
- DSTC
- BLIS
- IDIS
- Brake Assist
- Driver alert
- Lane departure
- ...and more

Crash

Severity Mitigation

- Seat belts
- Crumple zones
- WHIPS
- SIPS
- IC (Infl. Curtains)
- ...and more

Post-crash

Mortality Reduction

- Volvo On Call
 - Automatic activation of emergency services
 - Manual activation of emergency services using the SOS button



Volvo On Call In-vehicle Hardware

- Available on all Volvo models
- Communications
 - Integrated phone for telematics and private calling
 - Embedded SIM for all telematics functions
- System Design
 - Back-up battery
 - Back-up GSM antenna
 - Slot for private SIM-card
- GPS receiver, button locations vary with models
- Integrated into the electrical platform



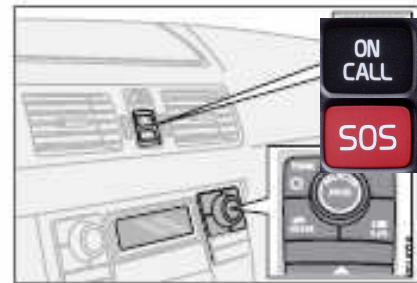
„Volvo On Call“-Taste/Telefontasten und Display im S60/V70/XC70



„Volvo On Call“-Taste/Telefontasten und Display im C30/S40/V50/C70



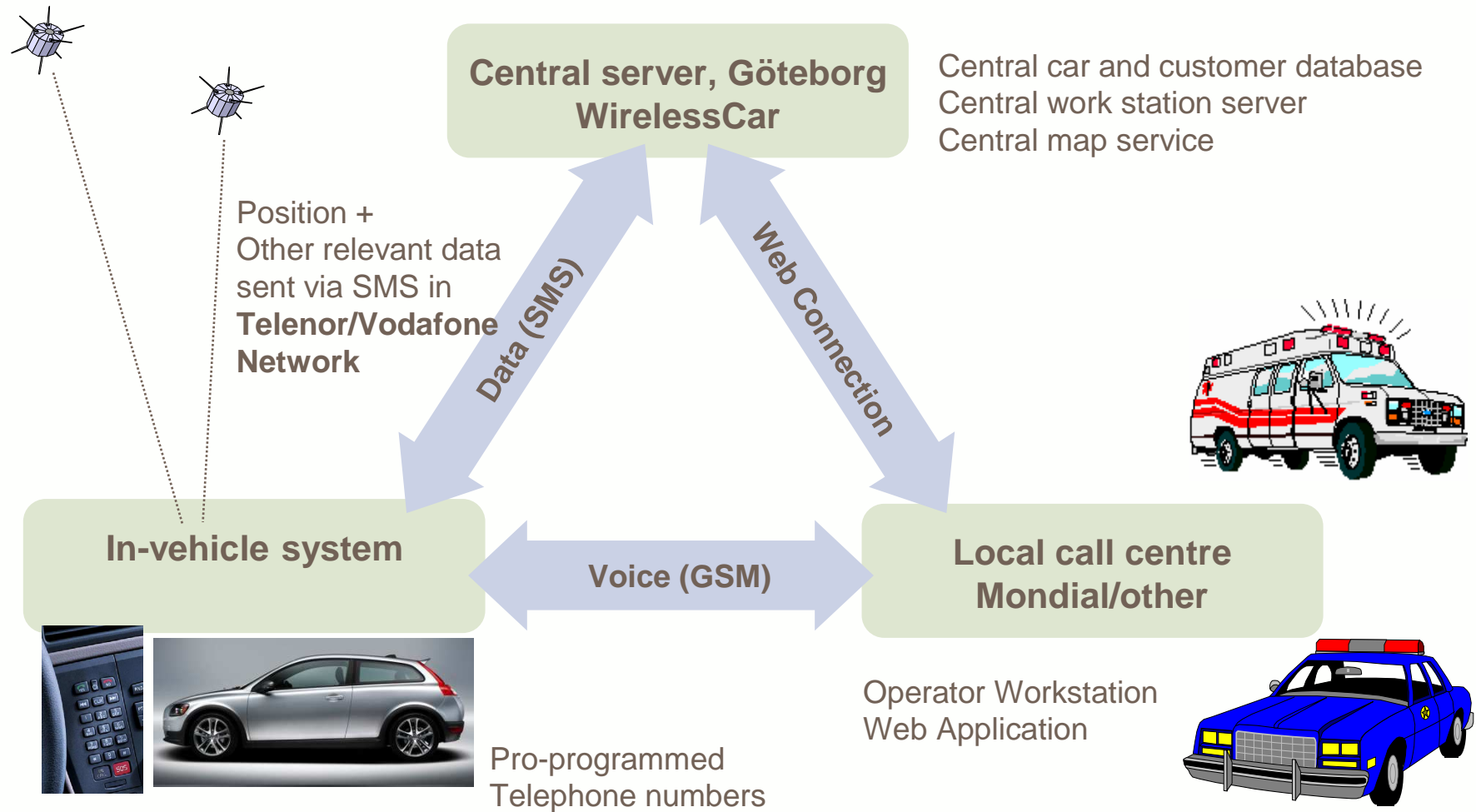
„Volvo On Call“-Taste/Telefontasten und Display im S80






„Volvo On Call“-Taste/Telefontasten und Display im XC90



Volvo On Call Infrastructure



Volvo On Call: Service Support

-  = Market selling option
-  = Cross-border service
-  = No services as yet

- Sold in 11 markets
- Service available in 14 markets



Emergency Services Today

- Public service:
 - Dial 112 with voice call only
 - PSAP may or may not have possibility of obtaining a general position of the caller using the cell ID of the call

- Private service with Volvo On Call:
 - Voice call and/or data sent directly to private call centre
 - Data message includes position
 - Call centre filters out non-emergency calls and contacts proper emergency authority in accordance with an agreed procedure
 - Service for life of vehicle is provided with purchase of system



Emergency Services Proposed by EC

Public service:

- Telephone and positioning device installed in vehicles, along with a method of sending voice and data over a voice channel
- System automatically dials 112 in case the crash sensors are activated or when someone pushes an SOS button
- Voice connection is made to the PSAP and a minimum set of data (MSD) is delivered along the voice channel
- The PSAP separates the data from voice, geocodes the position data and delivers the service
- EC to decide on technology
- Authority responsibility to define standard



Worldwide Approaches to eCall

	Europe	US	Japan
OEM Engagement	Four engaged Others watching and waiting	All engaged GM Heavily	All engaged
Telematics Service Providers	ATX WirelessCar Telecom Italia	OnStar ATX	HelpNet by Japanese OEMs is a central TSP for all cars equipped with telematics
Emergency Services	No real coordination or consistency in procedures among countries, and little, if any, cross border cooperation	All in agreement •6124 PSAPs working together with the TSPs	All in agreement •Screening saves 90% of calls
Government Involvement	Trying to implement a vision •eCall by 2010 Stakeholders not totally engaged nor in agreement	Assisting the private sector by implementing infrastructure and letting the private sector work together with the PSAPs	Working with the private sector •CarWings •Gbook •InterNavi



Emergency Services Issues

- More than 90% of 112 calls arriving at the PSAPs today are not emergency calls.
- Experience with Volvo On Call in the UK, where SOS services are delivered directly to BT999, is that most calls are for roadside assistance which do not require intervention by the emergency authorities. Drivers are simply told that they must re-initiate a service and are told not to use the emergency button.
- In all other markets, the Volvo On Call operators can direct all true emergency calls to the proper PSAP, and redirect roadside assistance and other non-emergency calls to the appropriate service provider.
- Even more importantly, every country has its own procedures, its own structure and infrastructure. Volvo adapts to the local situation in every country.



Emergency Services Proposed by Volvo

Co-existence of both public and private services

- Volvo prefers to have a private call centre to screen calls
- For automotive companies that wish to have a stand alone-eCall option for their customers, they can implement a single-function eCall system
- PSAPs can define the format and the delivery method for the data that they wish to receive and the voice call, and both the private call centres and on-board systems should provide the data and voice according to this format and delivery method.





Get your car connected with Volvo On Call

