



Our onboard technologies bring easier mobility and better safety to everyone

SafetyNex, a SmartPhone App that revolutionizes the automotive world : smart vehicle, car insurance, fleet management, digital App for retail Nudge

by NEXYAD

SafetyNex is a smartphone application developed and marketed by NEXYAD and which reduces by 20% the number of road accidents [1]. This application is of direct interest to many application targets.

1 - Driver

NEXYAD is convinced that the applications of vehicle telematics must first target. Driver's satisfaction, and not only businesses that live of the automobile. It is a strong value and belief of NEXYAD: providing tools for masses, involving a high mathematical level, and being useful in the life of every day and easy to use. The high mathematical level (NEXYAD expertise) is a barrier against competitors and allows to offer very intelligent applications.

The fact that applications are useful for everyone is a differentiation of NEXYAD. **SafetyNex** illustrates this: it is an App for smartphone that estimates in real time the driving risk taken by the driver. When the risk is too high, **SafetyNex** alerts the driver a few seconds before danger, letting time to the driver to slow down and avoid the accident.

SafetyNex was developed after 15 years of collaborative research organized by France (Especially PREDIT programs on road safety [2]).

With **SafetyNex**, the driver therefore has a real co-pilot that « knows » the route (through navigation map) and informs of upstream dangers. **SafetyNex** can save the life of the driver, of passengers and of other road users. Risk assessment is performed INSIDE the smartphone, so no indiscreet data (where the driver is, how fast he/she is driving, etc.) are recorded on a cloud. **SafetyNex** is not a spy, unlike all applications that store raw signals on a cloud for post-processing (if you record speed and geolocation,

you can read on an electronic map the speed limit and then be aware of every speed limit offense! **SafetyNex** protects the driver from this use of data.

2 - Car insurer

Car insurer may also see much interest in **SafetyNex**:

- . Customer satisfaction: **SafetyNex** is rightly seen as a co-pilot that is first made for the driver. Deploy **SafetyNex** is therefore an attractive proposition.
- . Reduce accident rate by 20%: maintaining identical premiums, the insurer increases its margins by deploying **SafetyNex**. It's easy, no complex studies for pricing.
- . Pay as you drive: **SafetyNex** records statistics (and only statistics) of usages: number of km, time slots, city / highway / motorway, etc., which, without ever needing to know where and when the driver is. It gives the insurer all the information necessary for pricing a pay as you drive contract.
- . Pay how you drive: **SafetyNex** records risk profiles and "risk classes" (whether the driver takes more risks at intersections, corners, curves, etc.). Note: from those statistics it is not possible to know infringements or traffic violations (to speed limit, etc.)? Car insurer has all the information needed for pricing a pay how you drive contract.
- . Prevention: classes of risk can be used to make a customer segmentation. This allows car insurer to offer driving courses adapted to particular case. Prevention is a key factor in reducing the number and severity of accidents.
- . Silver coaching: monitoring risk over time (several years) leads to detect breaks in risk profile, diagnose it with the aging driver, and take all measures that will keep the driver fit to drive the oldest possible, without exceeding the acceptable risk.

Having one App (**SafetyNex**) letting car insurers address all those strategic issues at the same time is totally disruptive. **SafetyNex** can support the transformation of the business of auto insurance. [3] **SafetyNex**, that fully respects the privacy of the driver, allows the insurer to deploy telematics, being compatible with the rules of ethics, and laws of countries like France (CNIL) [4].

3 – Car manufacturer

Car manufacturer has two time slots of using **SafetyNex**:

- . Short term: smart navigation that helps the driver avoid accident. This is the field of navigation and / or ADAS (driver assistance systems).
- . Medium term, the autonomous vehicle will need a monitoring system in real time that will estimate the risk taken by the auto-pilot!

SafetyNex evaluates in real time the risk of driving: the driver may be human or not. Car manufacturers also have an ongoing debate about auto insurance, and **SafetyNex** is a key element of their future rapid business changes.

NB: For the car manufacturer, some functions may be acceptable on the smartphone, other will necessarily be served by the embedded electronics. In this context, NEXYAD has approached electronics companies of car industry.

4 - Fleet manager

Fleet manager is often its own car insurer for the damage to its own fleet. In this context, the 20% reduction of accident rate is a factual data that helps increase its margin. Moreover, fleet contracts with insurer for damage caused by its fleet to third. In this context, it has two concerns:

- . show the car insurer that process was optimized in order to limit the number of accident and their severity
- . have a real-time dashboard pointing to what vehicle fleet is taking too much risk. This allows either, to inform the customer, and ask him/her to moderate his/her driving behaviour or to exclude or to vary the rental price of the vehicle.

The fleet manager typically plans to use a professional telematics box, and **SafetyNex** can run in aftermarket telematics devices.

5 – Mass marketer

All distribution companies (e.g. Carrefour, Total, Amazon, etc.) have two recurring problems to deal with:

- . reduce the cost of customer acquisition, and acquire new customers.
- . retain existing customers.

Conventional tools such as loyalty card show weakness in many sectors and retailers are looking for alternative or additional solutions. **SafetyNex** estimates the risk taken by the driver and can synthesize it with a "driving profile." Then the distributor may know for sure if someone is a "good driver". NUDGE theory [5] currently in force in Marketing Directions, proposes to bring a real service to consumers while increasing profitability criteria. **SafetyNex** allows it: rewarding "good drivers" by proposing coupons, for example, encourages strongly drivers to use **SafetyNex** and then to drive safer. **SafetyNex** has a strong impact (20%) on the accident, then the distributor acts massively on the declining number of road accidents. In doing so, it also captures the customers who come to use the coupon. It is a "win-win" situation the driver can see his/her life saved by **SafetyNex**, it also increases their purchasing power, and the distribution company picks the customer.

6 - References

[1]: https://nexyad.net/Automotive-Transportation/Papers/04_Smartphone_App_SafetyNex_reduce_accident.pdf

[2]: <https://www.cairn.info/revue-les-cahiers-du-numerique-2001-1-page-97.htm>

[3]: https://nexyad.net/Automotive-Transportation/Papers/03_Deep_changes_in_the_business_of_car_insurance.pdf

[4]: https://nexyad.net/Automotive-Transportation/Papers/02_Onboard_measurement_of_risk_of_accident_with_SafetyNex.pdf

[5]: [Nudge theory on Wikipedia](#)