Framtíðarsýn í samgöngum

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Umhverfis- og byggingarverkfræðideild
Háskóla Íslands

HÁSKÓLI ÍSLANDS
UMHVERFIS- OG BYGGINGARVERKFRÆÐIDEILD

Samgönguþing, 28. sept. 2017

Helstu markmið samgöngubóta

- Bætt samgönguöryggi
- Meiri hreyfanleiki (ferðageta) einstaklinga
- Minni umhverfisáhrif
- Meira einstaklingsfrelsi ?


4,2
m
4,2
m

UM 4.000 ÍBÚÐIR Í SKIPULAGSFERLI OG 8.000 Í ÞRÓUN

Skipulagsvinna hafin við 4.000 íbúðir

Skipulag í vinnslu

Móavegur 2-4	120
Vogabyggð, svæði 2	800
Elliðaabraut 4-12	230
Héðinsreitur	275
Steindórsreitur	170
Borgartún-Nóatún	49
Sogavegur 73-77	40
Keilugrandi 1	78
Frakkastígur 1	26
Sæmundargata 23	220
Nauthólsvegur	65
KHÍ reitur	100
KHÍ reitur	50
Heklureitur	300
Sléttuvegur-íb.f.aldraða.	100
Vogabyggð, svæði 1	230
Úlfarsárdalur - stækkun	500
Sóltún 2-4	30
RUV reitur	360
Vogabyggð, svæði 3	200
Samtals:	**3.943**

8.000 íbúðir á þróunarreitum í skoðun

Þróunarreitir

Reynisvatn	49
Ártúnshöfði	5.000
Skerjafjörður	800
Háskóli Íslands	350
Kringlan	300
Árbær - æfingarsvæði	120
Suðurfell	100
Skeifan	500
Borgarholtsskólareitur	40
Heklureitur	250
Háaleiti	40
Sóleyjarrimi	30
Sléttuvegur	80
Borgarspítalareitur	180
Landhelgisgæslureitur	50
Veðurstofuhæð	300
Stjórnarráðsreitur	200
Samtals:	**8.389**

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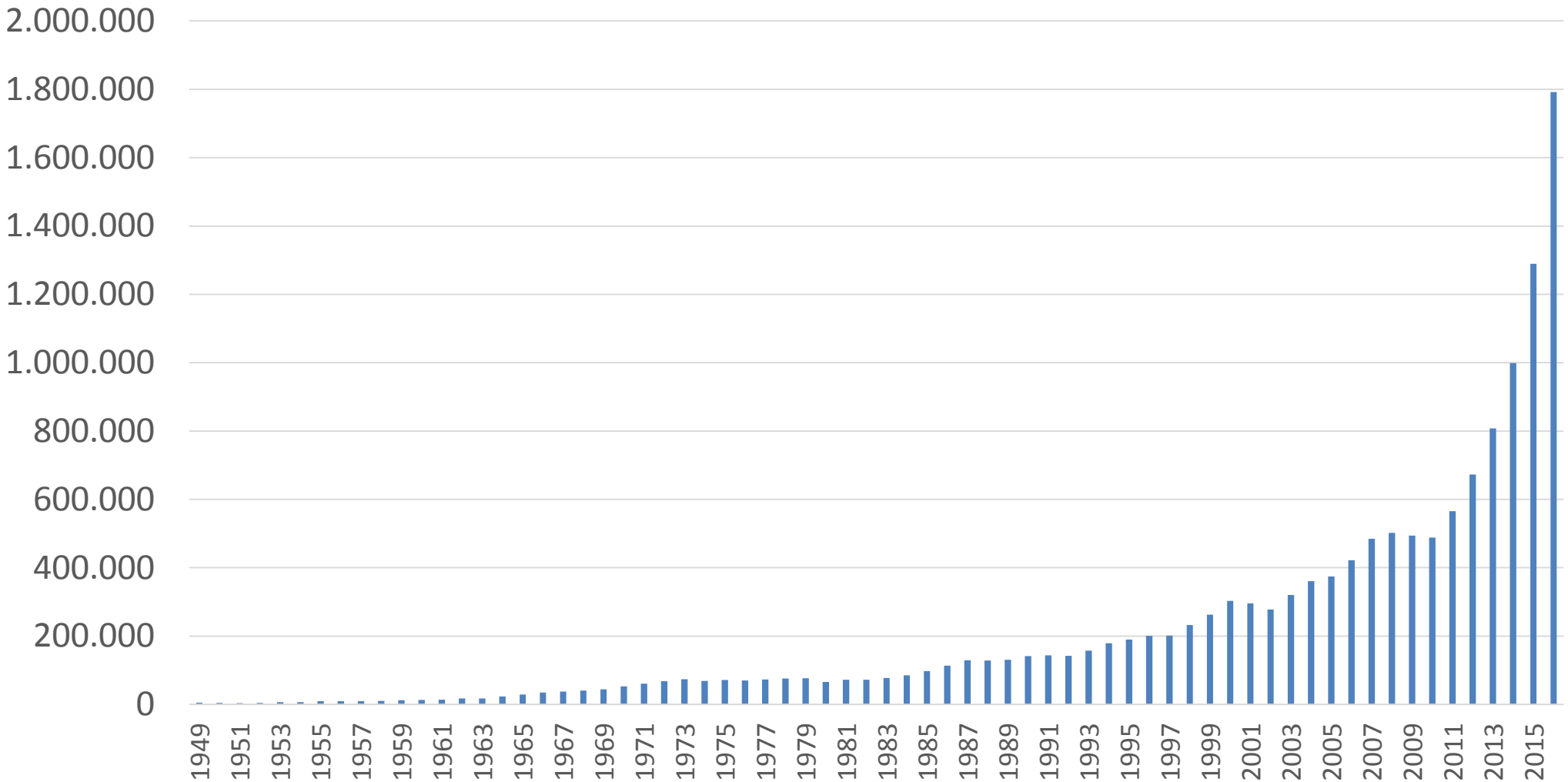
(Dagur B. Eggertsson, 2016: Uppbygging í Reykjavík 2016.)

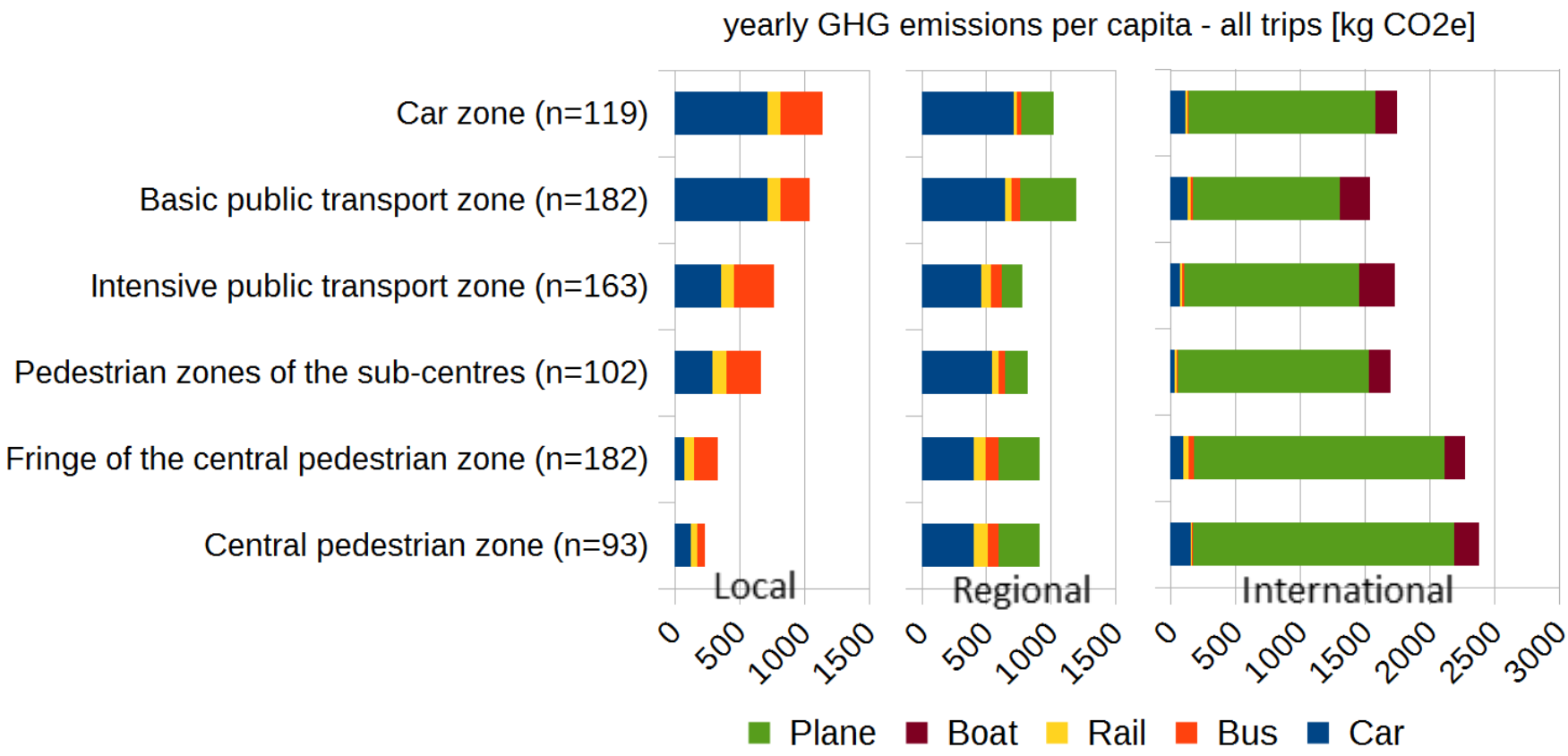
Fjöldi ferðamanna á Íslandi



HÁSKÓLI ÍSLANDS
UMHVERFIS- OG BYGGINGARVERKFRÆÐIDEILD

Gögn: Ferðamálastofa, 2017

Áhrif samgangna á útblástur gróðurhúsalofttegunda



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Czepkiewicz et al., í ritrýni.

Trausti Valsson, 2006: How the world will change with global warming. Háskólaútgáfan.


EIMSKIP


TRIDEL


Myeongdong 8ga-gil
778-7933
THEFACESHOP
Café BANG BANG 4F
UNO HAIR
adidas
Roem
TONYMOLY
new balance
BSX
리안헤어
THE FACE SHOP

Framtíð samgöngutækni

- Jarðgangna og brúargerð
- Háhraðalestir (Hljóðfráar flugvélar?)
- Sjálfvirkir bílar
- Tengd ökutæki
- Sjálfvirkni í ökutækjum til aðstoðar ökumanni
- Samskipti ökutækis og annarra tækja
- Gagnaöflun og notkun

Um tunlarnar

Eysturoyartunnilin

Eysturoyartunnilin knýtir Skálafjørðin og Havnina saman við einum undirsjóvartunli, ið tilsamans verður góðar 11 kilometrar langur.

Les meira

Sandoyartunnilin

Sandoyartunnilin knýtir Sandoynna at meginpartinum av føroyska vegakervinum.

Les meira

HÁSKÓLI ÍSLANDS
UMHVERFIS- OG BYGGINGARVERKFRÆÐIDEILD

http://www.estunlar.fo/

Feb. 29, 2016

RELEASE 16-022

NASA Begins Work to Build a Quieter Supersonic Passenger Jet

This is an artist's concept of a possible Low Boom Flight Demonstration Quiet Supersonic Transport (QueSST) X-plane design. The award of a preliminary design contract is the first step towards the possible return of supersonic passenger travel – but this time quieter and more affordable.

Credits: Lockheed Martin

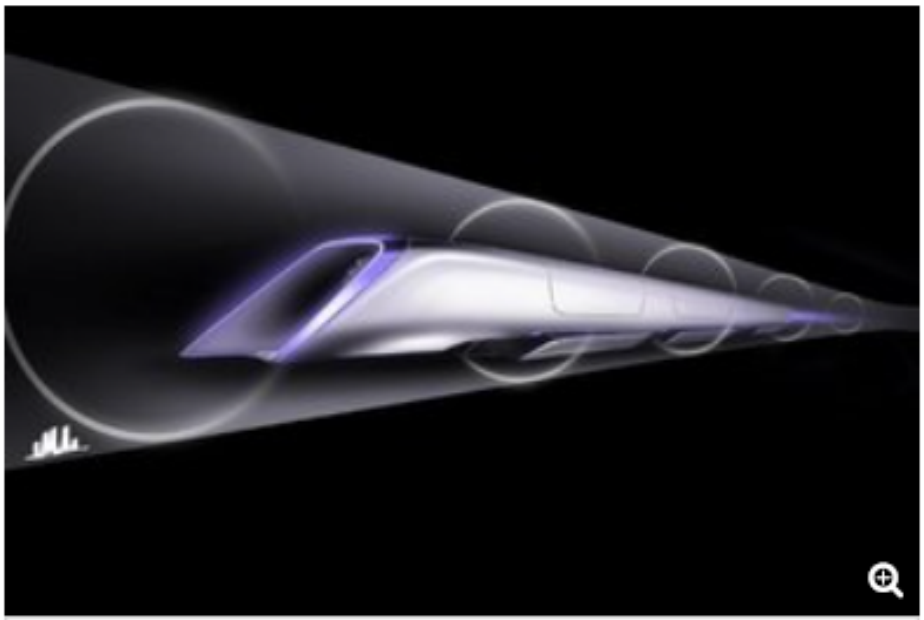
The return of supersonic passenger air travel is one step closer to reality with NASA's award of a contract for the preliminary design of a "low boom" flight demonstration aircraft. This is the first in a series of 'X-planes' in NASA's New Aviation Horizons initiative, introduced in the agency's Fiscal Year 2017 budget.

Eurostar e320

high-speed trains
for Eurostar International Limited

Ultra-Fast 'Hyperloop' Train Gets Test Track in California

By Tanya Lewis, Staff Writer | May 22, 2015 06:40am ET



This image of a Hyperloop capsule is one of many designs that could be put to the test on the proposed Hyperlook track.

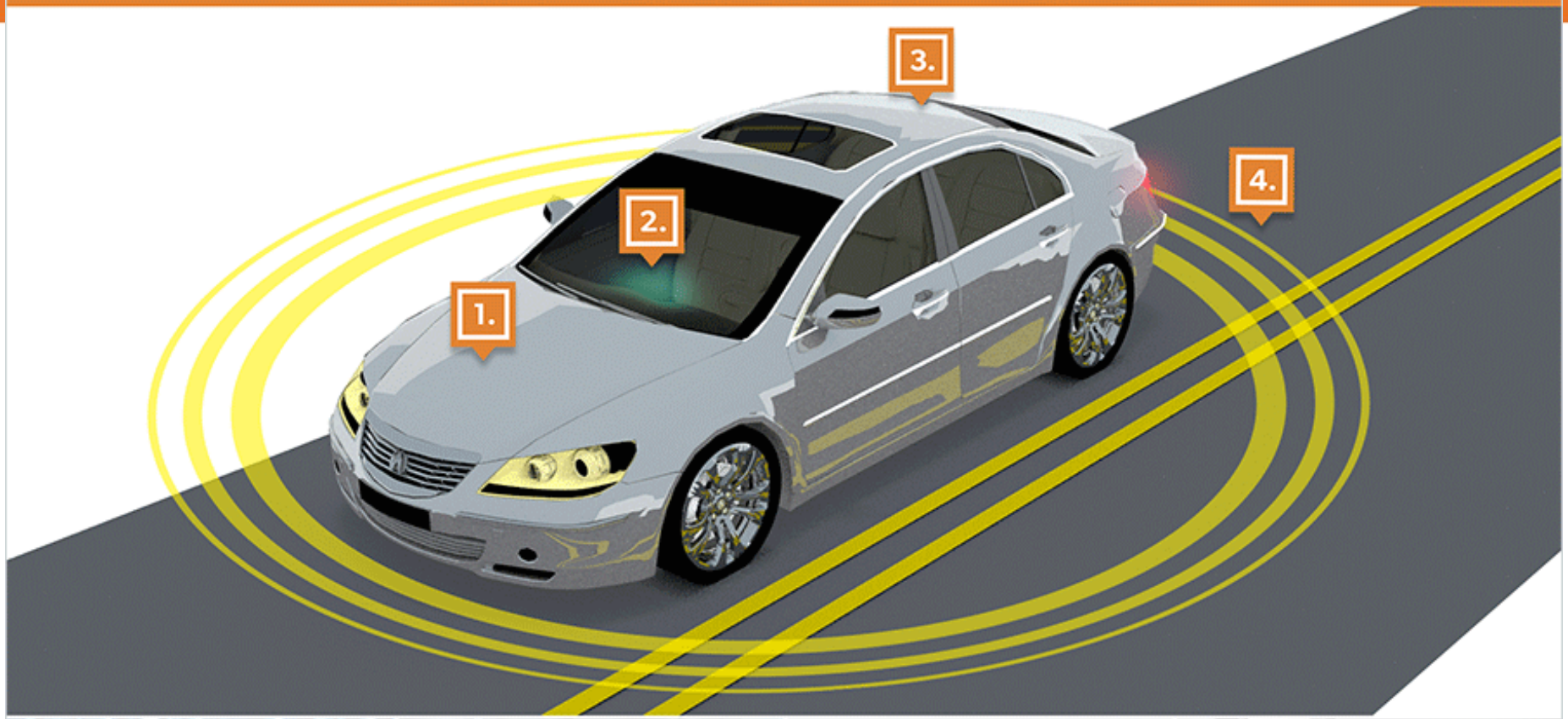
Credit: Elon Musk/SpaceX

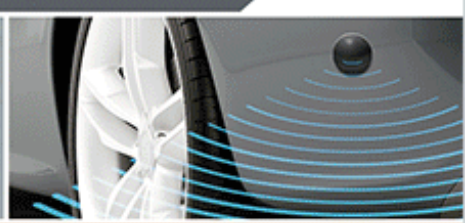
The "Hyperloop," a hypothetical high-speed transportation system that could shuttle people between Los Angeles and San Francisco in only 30 minutes, just sped a bit closer to reality.

First proposed in 2013 by billionaire entrepreneur Elon Musk, CEO of Tesla Motors and SpaceX, the Hyperloop would transport passengers in floating pods inside low-pressure tubes at speeds of more than 750 mph (1,200 km/h).

Grendelkhan - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=566113

INSIDE A CONNECTED VEHICLE





1. An under-the-hood box (a processor with memory) collects and transmits data between the vehicle's onboard equipment (OBE) and between OBE on near-by connected vehicles and safety devices along the roadside.

2. A display panel, sitting in the vehicle's center console opposite the driver's dashboard, displays audio or visual safety warnings to the driver.

3. A radio and antenna, using dedicated short-range communications (DSRC) and a GPS receiver, receive and transmit data about the vehicle's position to other vehicles and to safety devices along the roadway.

4. Sensors collect additional information that improves the accuracy of the data being collected and transmitted by the vehicle.

https://www.its.dot.gov/cv_basics/images/cv_basics_car_viewLarger.png

Vehicle Automation: A Very Important Priority for AI Research

Most of the technologies being developed will help reduce large numbers of traffic accidents, deaths and serious injuries.

By Irving Wladawsky-Berger

THE WALL STREET JOURNAL.

Jul 15, 2016 1:10 pm ET

- Introduction of Cooperative Vehicle-Highway Systems to Improve Speed Harmonization
- Simulation for Research on Automated Longitudinal Vehicle Control
- High Performance Vehicle Streams Simulation
- Partial Automation for Truck Platooning: Port Authority Trans- Hudson Corporation/Caltrans
- Partial Automation for Truck Platooning: Auburn University
- Saxton Transportation Operations Laboratory Task 3: Procure and Instrument Research Vehicles
- Development of a Platform Technology for Automated Vehicle Research
- Vehicle Automation Program Management and Planning
- Human Factors Evaluation of Level 2 and Level 3 Automated Driving Concepts
- Cooperative Adaptive Cruise Control – Investigation of Key Human Factors Issues
- Development of Functional Descriptions and Test Methods for Emerging Automated Vehicle Applications
- Transportation System Benefit Study of Highly Automated Vehicles
- Lane Changing/Merge Foundational Research

https://www.its.dot.gov/automated_vehicle/avr_plan.htm

Samskipti ökutækis og annarra tækja

- Internet hlutanna
  - Getur bætt nýtingu samgöngukerfa
  - Getur bætt umferðaröryggi
  - Hægt að hakka og valda usla
- Bílaframleiðendur og þjóðríki munu vinna að framþróun
  - Söluvara en einnig: Gagnaöflun

https://www.its.dot.gov/factsheets/pdf/V2I_WhatShouldStatesDo.pdf

ABOUT ENTERPRISE DATA

With increased connectivity among vehicles, organizations, systems, and people, unprecedented amounts of data are being generated. New methods to collect, transmit/transport, sort, store, share, aggregate, fuse, analyze, and apply these data will be needed for management and operations of transportation systems.

Enterprise Data Factsheet

Enterprise Data White Paper


Photo courtesy USDOT

The U.S. Department of Transportation (USDOT) will not only continue its efforts in operational data capture from stationary sensors, mobile devices, and connected vehicles, but will expand its research activities to include the development of mechanisms for housing, sharing, analyzing, transporting, and applying those data for improved safety and mobility across all modes of travel. In addition, a focus on open data sources and access will reflect the current state of the field and a market trend toward consideration of open data code development and storage and access. The USDOT is in early discussions with large data management organizations, as well as other technology and data-intensive organizations, to explore the integration of open data concepts and approaches as appropriate in various intelligent transportation systems (ITS technology research efforts.

ABOUT THE ITS STRATEGIC PLAN

The USDOT has long been a leader and strong supporter of research, development, adoption, and deployment of ITS around the nation. Learn more about the ITS Strategic Plan 2015-2019.

https://www.its.dot.gov/research_areas/enterprise.htm

Lokaorð

- Þétt byggð og góðar almenningssamgöngur koma ekki í veg fyrir að einkabifreiðar eru áfram mikilvægar fyrir fólk til að sinna erindum sínum
- Fullkomlega sjálfkeyrandi bifreiðar geta dregið mjög úr þörf fyrir einkabifreiðar

Lokaorð

- Mesta breytingin fyrir þjóðríki, náttúru og einstaklinga kemur frá alveg sjálfvirkum bílum og almenningssamgöngum
  - Mögulega stór minnkun í fjölda bifreiða
  - Mörg störf tapast en önnur störf myndast
  - Minnsti ágóðinn fyrir núverandi fyrirtæki bílaiðnaðar en tækifæri fyrir ný fyrirtæki

Lokaorð

- Aukin tækni í bifreiðum til afþreyingar
  - Aukin slysahætta án virkar sjálfvirkni í bifreiðinni
- Margvísleg aukin sjálfvirkni getur dregið úr slysum og bætt nýtingu samgöngukerfa
- Bifreiðar sem snjalltæki

Frelsi einstaklingsins

- Snjalltæki veita frelsi en það er **dýrkeypt**:
  - Fjárhagslega dýrt fyrir einstaklinga vegna eignarhalds fyrirtækja og sífelldra þjónustugjalda í stað einkaeignar
  - Geysilegt eftirlit með einstaklingum í öllum athöfnum og ferðum


관양4->운동장4
범례
Live
날짜 2016 05 16
현재시각 16 44 44
시설물
서울특별시
광명시
과천시
관양사거리
MODEST

WITH MORE THAN 47,000 STUDENTS AT ITS MAIN CAMPUS ANYANG IS A CITY WITH A POPULATION of 620,000 located 15 miles south of Seoul, South Korea. Its City Hall houses the administrative offices of municipal government and employs approximately 100 in IT. Recently, City Hall launched a major initiative to tackle urban street crime, slash traffic congestion, and beef up the city's disaster response capabilities. The first step was to combine the city's crime prevention and disaster management systems into a single infrastructure, deployed and managed in the city's brand new Integrated Operations Briefing room.

THE CHALLENGE

Conquering urban crime meant deploying a massive intelligent video surveillance system across Anyang's entire 23-square-mile metropolitan area, with hundreds of high-definition digital video cameras linked to scores of servers running network video recording software and sophisticated pattern recognition analytics.

http://www.ddn.com/customers/anyang-city-hall/

Implementation of Smart Safe Return Service Supporting Multiple Users

Lee, Keonbae;

PDF

When user wants to receive a smart safe return service, user sends a service request using a smart device to support GPS location data. After the smart safe return system receives the location of user, it selects the neighboring CCTV cameras based on user`s location information, and controls the selected CCTV cameras to take a picture of the user, and to chase the user automatically. This service can be useful when there is a crime-ridden district on the path to return home late at night. Previous systems can`t provide the smart safe return service to multiple user simultaneously. In this paper, we propose the smart safe return system which can provide the service to multiple users simultaneously.

http://www.koreascience.or.kr/article/ArticleFullRecord.jsp?cn=JGGJB@_2015_v19n4_472


서울
경기도
충청북도
충청남도
9:47
유고상황
교통센터 종합관측용 시스템
충주지사
창원
충주
북충주
양평
중부내륙선 가금터널 228.1