



**UNIVERSITÀ
DEGLI STUDI
DI UDINE**

hic sunt futura

DIPARTIMENTO
DI SCIENZE
GIURIDICHE

International Conference
**“Intelligent Transport
Systems: a Tool or a Toy?”**

22/23 November 2016 - Žilina (Slovakia)

«Information Society» and MaaS in the European Union: current issues and future perspectives

Panel discussion:

«MaaS Policy Aspects. New legal Framework and Liability? What are expected benefits for user and local authorities?»

Prof. Aggr. FEDERICO COSTANTINI

federico.costantini[at]uniud.it

<Summary>

MaaS «Mobility as a Service» wouldn't be possible without «Information Society».

Indeed, we should take into consideration not only its theoretical premises but also its practical entailments, and especially the legal ones.

Here I'll focus on some issues arising from the control of information in MaaS with special regard to «data protection» and «open data».

<Summary/>

- (1) Context: “Information Society” and MaaS**
- (2) Challenges: MaaS between “Information” and “control”**
- (3) Tackling the challenges: MaaS and data “sharing”**
- (4) Key recommendations**
- (5) References**

<(1) Context: “Information Society” and MaaS>

- (1) Origin, concept and features of "Information Society" in European Union
- (2) What is the problem with "information Society" in EU?
- (3) ... and with ITS (and MaaS)?

<(1) Context: “Information Society” and MaaS>

(1) Origin, concept and features of "Information Society" in European Union

In order to simplify, we could divide the european history of «Information Society» in three phases:

(1) From the beginning of '70 to the 1993

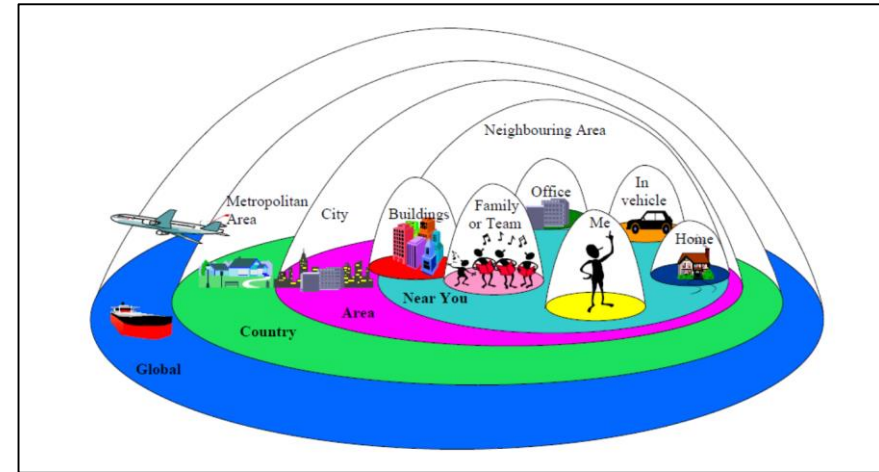
«Information society» means technological infrastructure

(2) From 1993 to 1999:

«Information society» means an economical model based on «innovation» (endogenous growth)

(3) From 1999 until today

«Information society» is a cultural paradigm aimed by the EU in its political activity



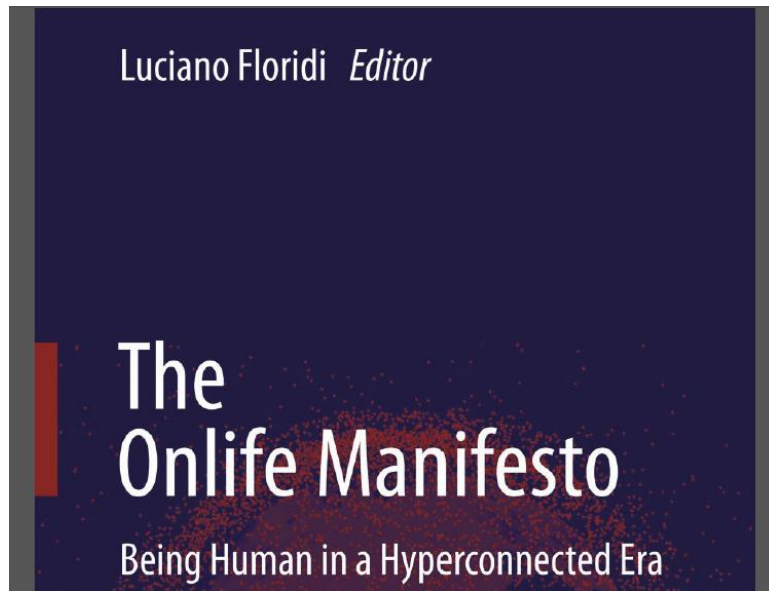
Laurent Beslay, "Digital Territory: Bubbles," *European Visions for the Knowledge Age*. (2007), p. 4

<(1) Context: “Information Society” and MaaS>

(2) What is the problem with "information Society" in EU?

It's not bad that the EU aims to be a «*Data-driven economy*» (COM(2014)442 final), but it has to be still defined what that means ...

(...and scholars are investigating on it)



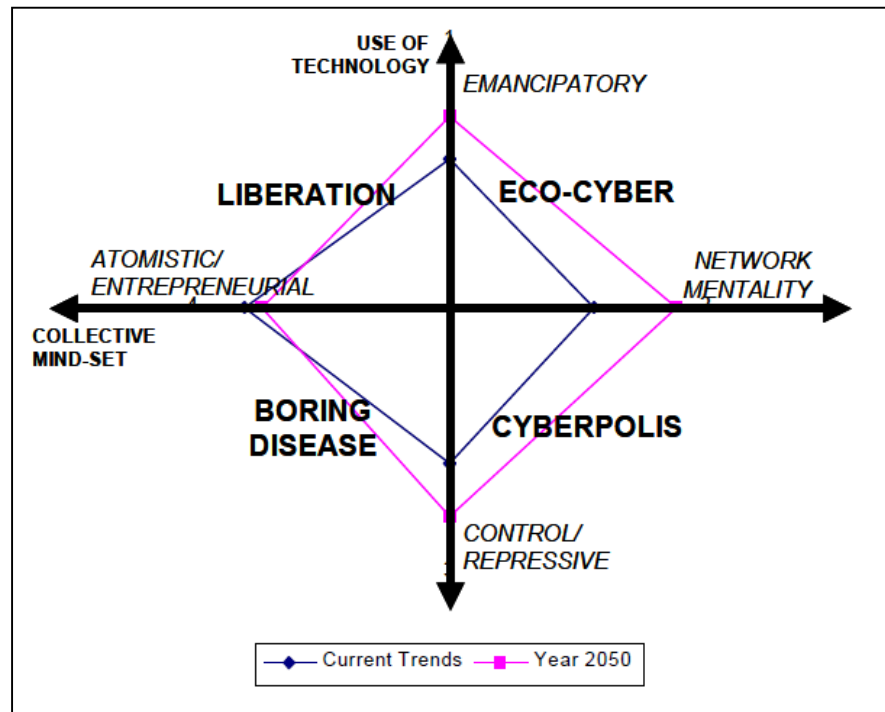
Floridi, Luciano (a cura di), *The Onlife Manifesto. Being Human in a Hyperconnected Era*, Cham, Springer International Publishing (Open Access, 2015).
<https://ec.europa.eu/digital-agenda/en/onlife-manifesto>.

<(1) Context: "Information Society" and MaaS>

(2) What is the problem with "information Society" in EU?

The main problem is:
with so much data, will
it be a «better»
Europe?

(we are not so sure)



<(1) Context: “Information Society” and MaaS>

(3) ... and with ITS (and MaaS)?

(simplifying the evolution in ITS):

FROM a vision focused on the safety of the single «vehicle»

TO a perspective enlarged to conceive «transport» as an ecosystem.

(and data are the key in this vision...)

<(1) Context: “Information Society” and MaaS>

(3) ... and with ITS (and MaaS)?

MaaS could be seen as a «virtualization» of transport technologies (alike «cloud computing» for information resources: IaaS, PaaS, SaaS)

Definition:

“Mobility as a Service (MaaS) is a mobility distribution model in which a customer’s major transportation needs are met over one interface and are offered by a service provider”.

Hietanen, Sampo, 'Mobility as a Service' – the new transport model?, in «Eurotransport», 12 n. 2.- ITS & Transport Management Supplement (2014), pp. 2-4

(theoretical appraisal) Sharma, Sugan, "Evolution of as-a-Service Era in Cloud" <https://arxiv.org/abs/1507.00939v1>

(features of MaaS) Kamargianni, Maria, Weibo Li, Melinda Matyas e Andreas Schäfer, A Critical Review of New Mobility Services for Urban Transport, in «Transportation Research Procedia», 14 (2016), pp. 3294-3303

<(1) Context: “Information Society” and MaaS>

(3) ... and with ITS (and MaaS)?

So, as in cloud computing, there is no functional distinction between hardware and software, fade the differences between:

- Selling a good (a personal-owned car) and providing a service (a car leased or rented);
- Private commercial transport (taxi, ncc) and public transport (bus, metro, tram);
- autonomous individual vehicle, collective transport and parking service (bike sharing)

**This is the «Netflix of the transportation»
according to Hietanen**

<(1) Context: “Information Society” and MaaS/>

<(2) Challenges: MaaS between “Information” and “control”>

So many things to say

... but let's focus on the three main challenges ...

- (1) Quality of information
- (2) «Control» of the data
- (3) Data protection

<(2) Challenges: MaaS between “Information” and “control”>

(1) MaaS and “quality” of information

Information is useless if it is not true, up-to-date, precise, accurate.

If you claim to gain public trust, you have to be aware of that knowledge is a «justified true belief».

And – in principle – you are responsible for the consequences.

CHALLENGE 1:

Who could be liable in MaaS, since information is gathered and manipulated by so many agents?

Woman killed in fiery crash after husband drove car off 40-foot bridge because his GPS didn't know the span was closed

- Zohra Hussain, 51, died of burns after car she was in burst into flames after 38-foot plunge from Cline Avenue bridge in Chicago
- Victim's husband, Iftikhar Hussain, 64, survived drop and was able to escape moments before his car burst into flames
- Police say Hussain was apparently following GPS navigation when he bypassed several barricades on closed road

By SNEJANA FARBEROV FOR DAILYMIL.COM

PUBLISHED: 18:27 GMT, 30 March 2015 | UPDATED: 20:07 GMT, 30 March 2015



Share



2.4k
shares

20
View comments

<http://www.dailymail.co.uk/news/article-3018364/Woman-killed-fiery-crash-husband-drove-car-40-foot-bridge-GPS-didn-t-know-span-closed.html>

<(2) Challenges: MaaS between “Information” and “control”>

(2) MaaS and “control” of information

If «transport data» are a «priority» in ITS, the same issue becomes **critical** in MaaS, since there are many heterogeneous agents.

- Users (private citizens, enterprises)
- Internet Service providers (Hosting)
- Transport provider (people, freight)
- Public authorities (municipalities)
- MaaS Service Provider

CHALLENGE 2: Who is the «owner» of «transport data»?

<(2) Challenges: MaaS between “Information” and “control”>

(2) MaaS and “control” of information

It is argued that «transport data» could be «open data», but theoretically, «open data» only apply to public institutions, so:

(1) What if the «data controller» is a private company or an in-house service provider?

DIR 2003/98/CE -> «open document»

DIR 2013/37/UE -> amendments

(2) What happens when the contract ends (should the contractor just leave behind all its know-how?)

COM(2014) 642: «priority area 1» in ITS: Optimal use of road, traffic and travel data -> «*The re-use of transport data is crucial for developing and deploying the necessary ITS services and applications*»

<(2) Challenges: MaaS between “Information” and “control”>

(2) MaaS and “control” of information

According to EC «open government» rules, provision of public documents cannot be charged (at least, of the expenses).

But «transport data» have an **immense value**.

(and this value is even higher because the complexity of a MaaS)

<(2) Challenges: MaaS between “Information” and “control”>

(3) MaaS and data protection

It should be said that «transport data»:

- could pertain also to freight -> not only «personal data»
- (if «personal data») they are likely to be anonymous -> no big issue

But:

- Technological advancements -> less anonymity for all
- Database integration -> from «personal data» to «sensitive data»
- Sometimes surveillance is «good» -> public security (terrorism)

Rodríguez-Doncel, Víctor, Cristiana Santos, Pompeu Casanovas e Asunción Gómez-Pérez, *Legal aspects of linked data – The European framework*, in «Computer Law & Security Review», 32 n. 6 (2016), pp. 799-813

<(2) Challenges: MaaS between “Information” and “control”/>

<(2) Challenges: MaaS between “Information” and “control”>

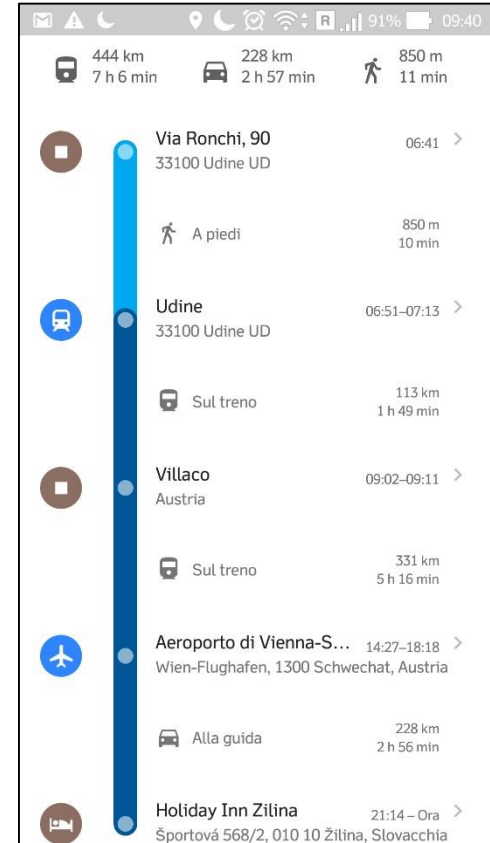
(3) MaaS and data protection

CHALLENGE 3

How could personal data be protected in such a complex integration of databases, given the number of transport providers?

(... what if I used a service reserved to people with disabilities? ... «sensitive data» = written consent)

But I haven't signed anything with Google or with OBB



<(2) Challenges: MaaS between “Information” and “control”/>

<(3) Tackling the challenges: Maas and “Open government”>

Tackle the challenges

(1) Quality of information

(2) Open data

(3) Data protection

<(3) Tackling the challenges: MaaS and data “sharing”>

(1) MaaS and “quality” of information

Hint.

Controlling information should be considered as a «team job».

Everyone should feel responsible not only for his tasks, but also for the way the outcome of his activity is perceived with other agents.

Observation.

The effort in «quality» should be shared by agents.

<(3) Tackling the challenges: MaaS and data “sharing”>

(2) MaaS and “control” of information

Statement

«People, first!»

«transport data» is generated by people, so it should pertain to people.

It should be defined a criteria suitable to distinguish «bad control» and «good control».

-> **«sharing economy» / «gig economy» (Uber)**

<(3) Tackling the challenges: MaaS and data “sharing”>

(3) MaaS and data protection

Opinion of the European Data Protection Supervisor (2010/C 47/02)

-> Privacy by design / Liability by design

<(4) Key recommendations>

Four key recommendations

(0) People

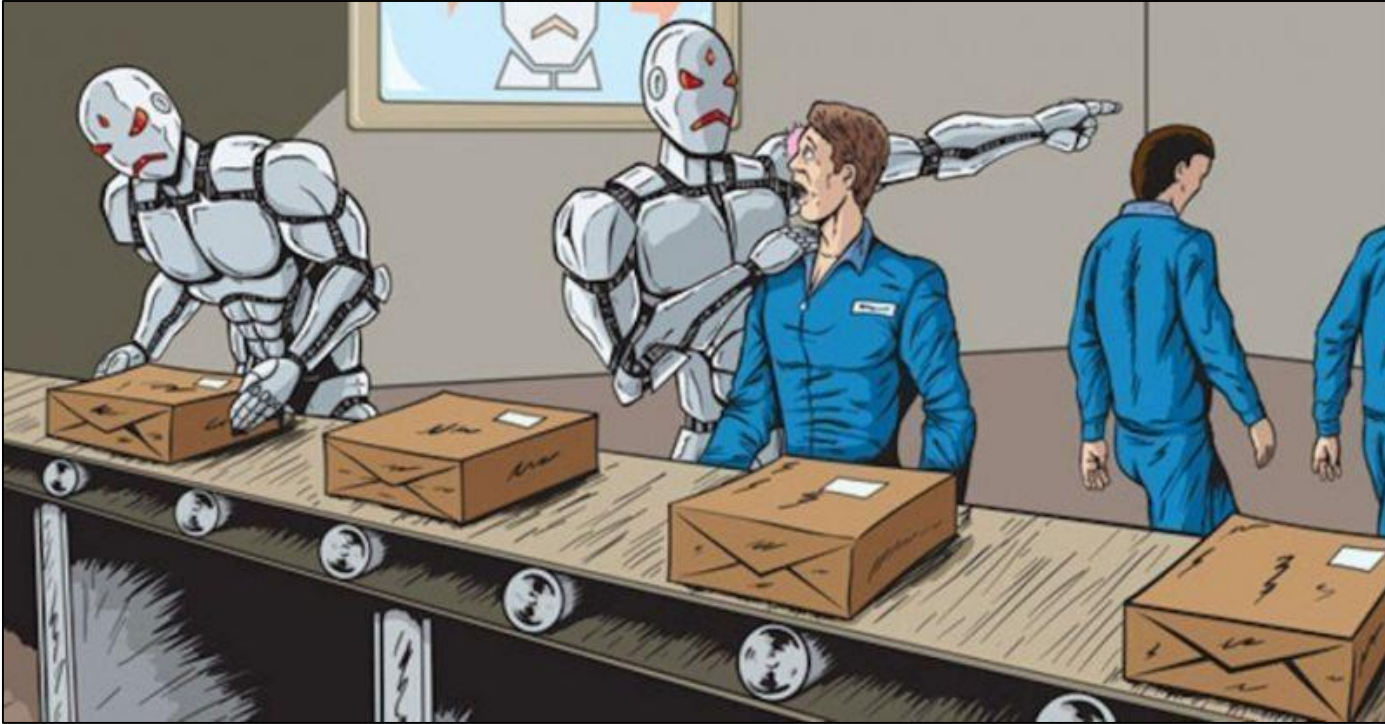
(1) Quality of information

(2) Open data

(3) Data protection

<(4) Key recommendations>

(0) People (Workers?)



<(4) Key recommendations>

(1) Quality of information

In the battle between the «map» and the «territory» the winner is always the «territory».

Sharing **valuable information** should be encouraged or at least a legal provision for participants in a MaaS.

<(4) Key recommendations>

(2) MaaS and “control” of information

Even if those kind of data are not «open data», there should operate the 8 principles of Open Government Data or similar criteria

1. Complete
2. Primary
3. Timely
4. Accessible
5. Machine processable
6. Non-discriminatory
7. Non-proprietary
8. License-free

Advice

Soon there could be some changes in the Directive 31/2000/EC and non-liability of internet provider ... (maybe the «active internet service provider»?)

<(4) Key recommendations>

(3) Data protection

Regulation (UE) 2016/679 on data protection

-> art. 25 Privacy by design

DIR (UE) 2016/680 and «criminal intelligence»

-> data sharing among investigating authorities

DIR UE 2016/681 and PNR (Passenger Name Record)

-> and MaaS?

<Key recommendations/>

<References>

DIR 2003/98/EC(as amended by -Directive 2013/13/EU)

DIR 2010/40/EU

DIR 2013/37/EU

COM (2014)442 Final.

Regulation 679/2016/EU

DIR 2016/680/EU

DIR 2016/681/EU

Cultural diversity and the Information Society. Policy Options and Technological Issues, Working document for the STOA Panel, July 2001 PE 297.559/Fin.St.

Beslay, Laurent, *Digital Territory: Bubbles*, in «European Visions for the Knowledge Age.», (2007), pp. 1-11

Costantini, Federico, *The “Peer-to-Peer” Economy and Social Ontology: Legal Issues and Theoretical Perspectives*, in *The Semantic Web: ESWC 2015 Satellite Events*, vol. 9341, Fabien Gandon, Christophe Guéret, Serena Villata, John Breslin, Catherine Faron-Zucker e Antoine Zimmermann (a cura di), Springer International Publishing (Lecture Notes in Computer Science; 9341), 2015, pp. 311-322

Floridi, Luciano e Phyllis Illari, *The philosophy of Information quality*, Cham; Heidelberg, Springer (Synthese library; 358), 2014

Floridi, Luciano (a cura di), *The Onlife Manifesto. Being Human in a Hyperconnected Era*, Cham, Springer International Publishing (Open Access), 2015

Hietanen, Sampo, *'Mobility as a Service' – the new transport model?*, in «Eurotransport», 12 n. 2.- ITS & Transport Management Supplement (2014), pp. 2-4

Kamargianni, Maria, Weibo Li, Melinda Matyas e Andreas Schäfer, *A Critical Review of New Mobility Services for Urban Transport*, in «Transportation Research Procedia», 14 (2016), pp. 3294-3303

Pagallo, Ugo, *The laws of robots. Crimes, contracts, and torts*, Dordrecht, Springer Dordrecht, 2013

Rodríguez-Doncel, Víctor, Cristiana Santos, Pompeu Casanovas e Asunción Gómez-Pérez, *Legal aspects of linked data – The European framework*, in «Computer Law & Security Review», 32 n. 6 (2016), pp. 799-813

Sharma, Sugan, "Evolution of as-a-Service Era in Cloud" <https://arxiv.org/abs/1507.00939v1> (2015)

www.opengovdata.org

<References/>

<Conclusion>

Many thanks !

`federico.costantini[at]uniud.it`

<Conclusion/>