# Title: Common Standards Boosting the Digital Transformation of Cities

Subject: Data Drive cities

* Data AndTech

Abstract:

Data analysis and ICT are improving the way cities operate and creating stronger civic connection with citizens. Yet they also bring some complexities. While there is a different route for each community, a common language is essential in providing better services. What are the standards to be put together to fulfill each city’s vision? How to ensure that common standards are adopted to effectively respond to urban challenges and enable replicability?

Speakers:

#### Dimitri Zenghelis

#### Miguel Gamiño

#### Sajeesh Kumar

#### Theo Blackwell

#### Tim Turitto

#### Martin Powell

Conference:

good morning and welcome it's good to

see a packed room on the first day of

the smart cities Expo here in Barcelona

my name is Martin Prince Cove I'm your

moderator and host for today and I'm

quite excited to be here with the

colleagues to be discussing one of I

think the key if not the key to

unlocking the values and overcoming the

challenges in this digital

transformation so as you I believe would

all agree being here the smart cities

Expo cities actually have a crucial role

especially when we decide what works and

what doesn't work

so before we go into any more detail

please come come to the forefront I

think there's still a couple of seats

seats left let me just give you the

practical context for our one-hour

session today you all have the app right

so this is an interactive session we

will get some interventions from our

speakers and then we would like to have

a conversation with you so please ask

questions using the ask and vote system

or you can just essentially raise your

hand and walk to their sides where their

microphones we can still do like the the

non digitally facilitated version so

this is my ambition that we can have

some key positions from the speakers and

then a conversation because that's

actually what we need right we don't

need more standards you all know you

know all the gazillion standards that

are out there trying to croc what is a

city what is a region what is the

relationship between the big global

digital dynamics and the action on the

ground the local economic development

the identity

the connections between regions nation

states we have it all so the task for

the standards should be to unlock all

the potential that is in there without

completely removing all the fabric or

the cultural the geographic the economic

fabric that cities and regions and

societies they manifest so I'm very

happy to invite our speakers on stage so

please they may have son son there mara

Maya please come on stage we have here

David osmotic from Etsy Saco from NIST

Tilo from Roland Berger and just so I

don't forget anyone kwang-ho

from the fire foundation so I think a

perfect line up when you want to talk

about who will come together to make

this happening its global it's from the

demand side so the Civic side the city's

it is from the supply side from the

companies clearly the idea is to create

a market but on which terms and for whom

so let's have some positions here excuse

me and let's have a conversation

thank you very much and let's welcome

onto the stage the mayor of Santander

please

[Applause]

poor boy Werner Diaz muchisimas gracias

a poor our loss la oportunidad Selassie

de santander de estar en este press

tears open le de poder tambien explicar

nuestra experiencia de ciudad y como

alcalde suppose manifest our mishear tow

des conocimiento de la tecnología

Anabella street Ament a tecnico pero si

la seguridad de que puedo a port are a

defender el papel que los gobierno slow

calles tienen en el desarrollo de

cidades intelligente sell pop el que

tenemos la transformación digital la

conciencia fiown a low speed add a nose

también y ella optimisation del oro

cursos oh la mejora de la calidad de

vida de los Santander Dinos que es lo

que NOS lo que no so Koopa tambien me

gustaría habla es un poco de Mesilla

das en primer lugar Santander es una

ciudad que está al Norte de d'espagne

es una ciudad se cos Terra que estaban

ya de por una de las leyes mess mia's

del mundo al prestigious okhla Cunha

comment' a / 10 Sen Tian cuenta cidades

Cuyo plan a strategy co nos dicen que

son dos lo se pilaris fundamentals

gracias Odo's las oportunidades de

negocio una es la innovation la otra la

cultura con la innovation hemos

intentado a estar en un momento de

crisis economic an Espanola estaba

cambion dole Modelo productive oh no

somos posición Oddo como la tour

laboratorio or bono

y como do busca Mo's la mejora en los

servicios alsa da da no tambien vamos a

mencionar los aspectos caved in da la da

fiown destined raise abierto x' FM

playas ando los desde lambie toda la sto

no allistic adel acid add a comparison

con los datos P up tenemos de la ciudad

Santander como digo es una few death and

donde los sonidos como smurfy t.server

Montana Lana dos mil EF gracias Aldous

Arroyo del proyecto que tiene como

objetivo crear una infrastructure ax

única para la experimentation a par at

stre valid our technology Isuzu

soluciones del internet de las cosas en

el ambi toda la ciudad es la experiencia

smurfette inácio nelio goes mildy air

con una Fortaleza junto con la una de

Universidad de Cantabria donde NOS

posición ahmo's como laboratorio Urbano

yen donde poco a poco introduce emos la

tecnología

en los diferentes servicios esto NOS de

una obtain sein de datos nos da una Rick

essa te conocí Mentos pero es cierto ya

dia de hoy estan totalmente a lado son

vertical A's

el reto que tenemos actualmente El Paso

que tenemos actualmente es ella

plataforma es Marcy t ake we're a Mose

integra todos los servicios queremos

tener una una Co repository o de datos

para que me Deonte los cuadros de

contrôle podemos ayudar Oh nos podemos

ayudar assess E&R; estas decisiones a dia

de la ciudad Santander como Diigo como

laboratorio or bono somos capacity a

actualmente de tener permeabilities M

Barrios M pocos pero en varios de estas

vertically spora hemp lo tenemos un

proyecto el synchronicity donde su Mo's

capacitor dispiay del tráfico ro dah

doe infusion de tres para metros ya que

pueden ser la congestión de el propio

tráfico

las say Misiones desi dos o el ruido

también tenemos otra aplicación en la

ciudad en donde la la recogida day

recede Oso Ladouceur Bono's también el

stock rusada con el tráfico Cola

temperatura econ nivel de nada por ESO

podemos Optimas are estos DOS servicios

con men seed O's de Gras transformación

digital de las t da days es complicado

aboard our la de una sola des Santander

nd hace años que Mo's comenzado a promo

Burrell adoption de las tecnologías de

la información en las comunicaciones

Ella Mae or parte de los servicios de

nosotros en la otro smelter sa entrance

emos Anoop leo

municipal el de la recogida diverse egos

cubanos VII intrusion de la tecnología

sin embargo todos estos s for foes

Cimmerian de poco

samasya den player la tecnología no

cigar antes hace que esta bah a facility

la interaction de los diferentes process

OHS yah gente zkk a participant al

ecosystem Urbano una de las cuevas es la

nación de estándares komen meant a

acepted OHS interoperable z-- k facility

n el des Vanessa me n toda Rose

traditional ceelo's Kyong characterize

ah de nuestra cidade ew servicios estas

de menos de una de cada hora mismo

santander tenemos transformed odd oh

yeah la mayoría de los servicios de la

austin del agua la st own de recede OC

limpieza v area los parque say Hardiness

la energía la gestion del tráfico y

semaphore iike la gestion de los

apartamentos de los servicios de

emergencia todos ellos con una visión

de poder en el futuro real-life Arunas

gestion integral de la ciudad gracias

esse plataforma s Marcie TK Lisa dicho

en la pelea de santander de la mano de

telefónica in ech a comenzado la

implantation de su plataforma smurf ET

que permitted a really fair una sto no

allistic a de la ciudad y discipline

forma estaba sada impressed and our dia

existences la intervation de los datos

de los servicios e system s municipal s

SE está allá fondo utilize on domo de

los de datos communes basado en caso

relays hey Alma sonam en tow

analytical a esta información nos per

meter on un futuro implement our la

inteligencia de la ciudad

pudy endo realizar nuna gestion messi

siente de los servicios de gestion

global de toda ESA información relative

a los para metros de operación de los

servicios say present era conveniente

mente informa de cuatro de mandos Cano

objeto de caelo responsibles motif into

municipal a's podamos toh Marla's

decisions Meza propiedad en función de

las necesidades de rigueur Tso's de cada

momento otro aspecto fundamental

relative a las ventajas que nos Bryn de

los estándares Javier toes y que decir

destacar en este intervention amana del

papel que debe who are los datos y la

maleta say she owned a los mismos en el

ayuntamiento de santander a pasta Mo's

clara meant a por las políticas de

datos abierto x' muchos de esos datos

kane principio

son de consumo inter no para los

servicios municipal ace Devon server

tambien para stimula le cose sistema de

em prenda me ento para que con la

utilización de los datos se puede

conseguir nuovo smo de los de negocio y

desarrollo ago sir me coz aplicaciones

yes Ervin demo tour de crecimiento

Assamese MOCA be pensar que es a

cantidad sin gente de datos debe servire

para mobilizer una economía enter no

allah scanty dades massive 'as de

información que se general en el dia

dia y para contributor tambien a

rentable azar las inversiones cinephiles

case elevado cabo en este sentido lado

she owned estan trays interoperable see

abierto x' debe ser para consul adano

Sukho sistemas de innovation fatty list

and hola co-creation en el sentido mess

am priyo si promo viendo las actividades

ligado x' al temp rendimiento renter r

el papel clave a de las ciudades el

beneficio TI en dia nadie se questi ona

case in reducir la tecnología que NOS

de fe ciencia efficacy ax y que además

nos da a cierto en la toma dead officio

nays el cambio de LC you da da no

intended Oh Dez de las administratio nay

say locales que ya no es un consumidor

de políticas sino que es por los

humidor a la vez consume a produce a yas

del Lobo que él los datos chaser genera

en una ciudad el analysis des owes datos

y la Rica's adesso conocimiento tiene

que llevar knows a go Dennard una manera

predict eva por ESO si el defense hora

en el ayuntamiento de santander del

assess Marfa tease pero feel defense or

itami n de estos foros de kono Femi ento

ident enemy ento para llegar al knows

Carlos Universalis muchas gracias

super thanks which better way to start

than with a poster child of how to do it

a mayor who gets it and you know a full

ecosystem wanting to look beyond the

city borders so David here's a city that

cares about common standards why should

the stos why should the standards

development organizations care about

cities so perhaps you can give you a

position on that

good morning ladies and gentlemen first

of all I just like to do a quick survey

how many people in the room represents

city municipalities and this other thing

just raise your hand about half of the

room and how many people represent the

world of telecommunications ICT vendors

and operators

okay so 5050 okay of course and probably

most of the people on that on the podium

today I'm not going to bore you about

the the world of standards I'm going to

try and do the link between cities and

standards obviously Etsy hopefully all

of you know who we are where the

standards people based in Europe but

obviously with many projects all over

the world I was very pleased to see

Santander calling out successful

standards such as fire way of 1m 2m and

IRC sim which are relatively new

developments it's very refreshing to

have cities who are tech friendly and

tech savvy what we also have to deal

with our number of cities who don't

really know what they want don't really

know what they need and have to have

some sort of dialogue with technology

people and standards people so what I'm

going to try and do here is do a little

bit of the over the missing link if I

can down the temple to find the down

page there you go so today I'm trying to

translate what we've heard from cities

as they're mainly needs have a quick

overview of smart city standards and

there are many there are hundreds there

are thousands there are millions some of

them competing some of them completing

so when you say to a city have you

bought your standards today they'll say

what is a standard why does it interest

me and where do I get them from very big

problem very big problem I'm going to

give a very brief overview so I only

have six minutes of some of the work

happening in Etsy some of the standards

bodies working on smart cities and then

possibly how we can work quicker and

better and wiser and save our time so

we've had recently Etsy is all about

telecoms ICT connectivity we worked on

2g 3G 4G 5g radio technology all the

basic you know telecom standards this is

where we come from and recently we've

seen a lot of our applications changing

more automotive companies coming to us

aeronautical industry coming to us and

say we need the connectivity to help us

with scenarios with salute

with applications so Etsy standards

world of Santa's I said well is moving

up the pipe moving towards the

application moving away from just the

lower level of protocols in those

advancements we actually go out and talk

to our end-users that and some of those

now being cities and we say what do you

need what do you what do you have to

have and many of them need the one thing

that comes back is education we need to

understand why we need standards we need

to understand what standards are we need

to understand the language you are using

if I go into the depth of these slides

you're going to find lots of horrible

acronyms that nobody understands apart

from me and my colleagues cities don't

need to know that they need to know what

is the value of a standard how will it

help them deploy quickly how will it

help them save money or spend wiser and

how will it help them be better than

their competitor which may be another

city it may be another region so it

really is about what is the advantage of

standards also what are the main use

cases so a city a town a rural area a

farming district we can all call them as

smart zones or smart areas is not just

about cities with 1 million population

plus plus is about the small town it's

about the towns that are linked together

to make a Metropole all of these want to

be smart possibly I should stop stop

using the word smart all of these want

to be connected and deployed digital

services to their citizens because at

the end of the day that's what it's all

about make your city digital deploy

services to your existing citizens

attract other citizens and attract

industry you know you want investment in

your town in your city in your farming

area it's all about being better and

more interactive than the neighboring

town and also making your citizens feel

feel at ease being able to get some form

of KPI and we've already talked about

the work happening in izo cities need to

know how well they're doing compared to

before the digitization and also

compared to other cities so what are the

key performance indicators or the

measures to say this was a good

investment is it a success it was a bad

investment it's only saving me 5% and I

could have done that by changing my

processes also where can we be sure that

the stand or the technology will work

other technologies so interoperability

at several layers already in the city

can my my dustbin refuse collection my

energy my water my transportation data

be shared can i connect those networks

together so already interoperability in

the city or in the town and then between

cities can I connect to my neighboring

city just down the road with a bit of

fiber-optic how can I expand how can I

grow if they have a different data

platform to me it won't work if they use

different data semantic structures it

won't work so it's really seeing and

translating the ambitions of cities and

helping them to understand where

technology and standardized technology

can help so it's really giving a road

map also um how to use the best use

cases so for some cities it will only be

about energy saving for someone it all

be about traffic for some it all be

about tourism but in at the heart of

that there is a core set of technologies

and standards which need to be deployed

with different priorities so helping

cities to define their priorities and

also how to allow acceleration so if you

don't want to have the whole set of

technologies maybe you just want a

profile to enable you enable you to

quickly deploy some technologies so

having some standards profiling for

refuse collection for energy savings for

transportation that would be very useful

for cities so those were some of the

initial dialogues we had I'm not going

to go into these slides and details but

these are a few of the technologies that

a city may have and they're probably out

to date because there are new radio

technologies every week there are new

communication technologies the core

network is evolving from 3G to 4G to 5g

we're going to be slicing the core

network we're going to be giving cities

their own network slice to do things

that the technology roadmap is changing

very quickly but this at least Maps some

of them and when you go up to us up to a

city and say what have you thought about

your your ADSL and your your plastic

optical fiber they say just just just

give me a service they don't want to

know about the technology so again it's

all about trying to translate this

horrible spaghetti of technology into

something that cities can use inside

Etsy we have all of these groups working

on technologies which are deployed in

cities and I won't go into them but you

can see it's a massive amount of

that's work being done inside Etsy

already which can be used in a standards

environment this is probably I have one

minute left I'm just going to leave this

slide up there and talk to you about

this

it's brand new it's got a red sticker on

it we've just created an is G an

industry industry specification group

inside Etsy to reply to this problem the

problem statement being there's no one

place inside Etsy si being an official

standards body where cities can go and

talk to somebody they don't know who to

talk to if they go to a 3gpp meeting

there's going to be a thousand delegates

saying why are you talking to me they

need a translation function to help them

really express their needs in ICT

express the problems they've had

expressed the solutions they've found

and share that between cities so all

this group really wants to do is engage

with the cities to ensure that they can

come together with a standardized ICT

roadmap and then help each other to

deploy quickly smart solutions in the

city and hopefully I'll leave that one

up there and I'll end 30 minutes early

for any questions thank you very much

[Music]

thank thank you David if not 30 minutes

in at least 30 seconds so really really

interesting to see here on stage

actually those who get it

mm-hmm excuse me and then the actual

problem being how to share that

knowledge so it becomes suddenly the

technology is back rounded right so even

though it's it's heavily depending on

technology roadmaps actually the

education around this seems to be a key

so so cool from the American perspective

or the North American aspect perspective

I believe we have some of the kind of

the same ambitions going on so perhaps

we can return to how to we can then

converge but perhaps first give the

perspective from your side

hello everybody nice to meet you by the

way the picture I had over there look

time very slim I'm not that's lame by

the way as you can see so I am sorry I

wore for National Institute of Standards

and Technology which is part of the US

Department of Commerce and we specialize

in measurement science and also we

specialize in standards now we work on I

owe tea and smart cities obviously as a

part of our efforts before I start

talking about smart cities I want to

talk about IOT a little bit because

these two feels or these two expertise

are closely related from smart city

experts perspective IOT is a piece of

equation from IOT perspective smart city

is a one large application example all

right so if you apply IOT to public

sector that becomes a smart city IOT is

a lot more than just connecting devices

I mean probably a lot of you might think

that IOT is about connectivity

connecting sensors together that's just

small piece of it IOT is about

collecting data analyzing the data and

tech action for data and then bring it

down to actuation so that the whole

feedback loop is completed that's what

IOT is and then if you overlay or

superimpose that concept onto a city

that becomes a smart city and now when

you talk about feedback loop

it could be autonomous feedback but it

could also be human in the loop maybe a

person can make a decision or person can

actually participate in the data

collection process there was a long

introduction to say to talk about the

problems of smart cities as we have

today we talk about smart cities and

smart communities a lot but it's the

extremely fragmented market and as you

can see many cities are doing their own

development deep deployments custom

solutions custom tailored projects but

after the project is over many these

projects are not very sustainable and

that's a big problem for smart city so

in few

we were promised to see exponential

curve okay exponential meaning like this

like hockey stick in reality what we are

seeing is more of an incremental

improvements it's getting better it's

not like a we're seeing the overshoot

okay why we believe the problem of those

incremental improvement is because lack

of replication everybody does their own

thing but there is no clear agreed

consensus on the best practices so if

it's a worse situation for cities they

cannot leverage each other's investment

for companies they cannot create a

product that can sell in millions all

right so this is a deadlock situation so

what do we need to do this is has been

working on a program called the global

city teams challenge with a goal to

demonstrate three things replicability

solutions that can be replicated in many

cities not just one not just two but

hundreds of cities around the world

second scalability you want to create a

solution that can go and deploy in

real-world environment not just in the

lab third sustainability this is more of

a business case problem but if you have

a funding to deploy sensors that's great

good for you but after the funding is

over cities has to take over that the

problem that system and if you do not

have a sustainable business model behind

it you wanna go go for 50 years you're

not gonna go for hundred years so we are

trying to identify those best practices

that can be replicated and scaled with a

skilled and sustainable that provides

tangible benefits this is important you

can do whatever you want to do for fun

but at the end of the day if the

solution does not give you the real

tangible benefits that you can feel then

that solution is not gonna be able to be

sustained on long term cities will not

gonna like it at the end of the day

cities are their city government is

there to help the citizens now we also

want to tackle cyber security and

privacy issues very seriously

that's why this is partnering with the

US Department of Homeland Security

Science and Technology Directorate to

tackle this as a first-order concern not

something that you add on later because

you can add on later when's that

something already goes wrong you heard

this scenario so many times probably so

how do we do this it's easier said than

done this is how we do it instead of

each city working with each company one

by one we want to bring in multiple

cities from all the world and we also

want to bring in companies universities

nonprofits that can provide a technical

solutions and coalesce them around the

common shared topics of interest

autonomous vehicles traffic congestion

issues renewable energy and public

safety issues in water and energy and

waste management issues whatever that

comes out of this process will naturally

be replicable

because that is agreed on multiple state

by multiple cities at least they was

developed with a collaboration of

multiple cities and will be sustainable

because it will you know at the end of

the day it will have to be beneficial to

the to the general public now this

cannot be done just by the US cities

obviously there are a lot of cities

outside of the US a lot of population

living outside so we has to be done

globally so once we have these teams of

the projects we want to create something

called the super clusters it's a

coalescing these different different but

to share the projects into certain

sectors and we want to create something

called the best practice blueprints

which is going to be able to provide a

jumpstart to the cities who are trying

to do smart cities but doesn't know do

not know where to start since 2014

global City teams challenge has

incubated over 200 action clusters

across the world and over a hundred 60

cities and over 400 companies university

of participating now there are seven

super clusters as you can see a

transportation this is this is pretty

well known sectors in smart cities and

public safety utility wireless city data

to more important supercluster data

governance and privacy data governance

and exchange it's becoming more and more

important and also agriculture and rural

area by the way when I talk about smart

city it doesn't necessarily mean large

cities there are a lot of people a lot

of populations still living in rural and

area with a lot of agriculture

applications this smart solutions where

the talk will be able to apply to those

communities as well so as I mentioned it

is important to look at privacy and

cyber security issues as a main issue

now it's extremely important to look at

this as a first order concern not as a

later add-on because if you keep at try

to add cyber security layer it's not

gonna be complete you're gonna you're

not gonna end up with the best products

the problem is not many players are

aware of how to get involved so we

partnered with the DHS S&T; NIST G CTC

community brings in cities and the teams

already incubated DHS has a lot of cyber

security and privacy experts to bring

that in and we are creating a new

challenge called a smart and secure

cities and communities challenge which

is gonna kick off on February 6th at in

Washington DC and you can find more

information about it contact information

you can send me email if you have any

questions and you can go to website

right on time is that so cool so we

moved from the ground to the standards

to the global now I have a question for

the audience while mrs. L gets gets up

to the podium how many in the room are

involved in standards development all

right how many are from cities involved

in standards development one two three

four five six

not seven eight not too bad I I know of

very few cities who have a department or

even have you know know who who's the

standards person because usually it's

it's connected to the clusters is

connected to the verticals but in fact

what we're facing now is you know the

convergence of all of this you mention

it as as your one big application or you

could say one big concern right one big

mess so so how actually does it from the

city side so you were the Etsy ambition

also to address this and we're clearly

seeing okay there's a mismatch of the

organization around this and the job to

be done right so one of the people who

actually are consulting and you know

helping to understand how can you then

move forward from each side is you Tito

so please your position and join the

conversation thank you yeah thank you

good morning everyone thanks Martin for

the kind introduction and the organizers

for the invitation so my name is still

had said I'm a partner with Ron Berger

some of you might know the company we

are the the largest consulting firm of

European origin in Europe I'm focusing

mainly on work with government and

government bodies for the last couple of

years and there are in this field mainly

on digital strategies and digital

transformation of government bodies on a

strategy site we have been working with

national governments regional

governments and also city and community

governments on their digital strategies

and that's obviously a topic which is

very strong we just did a survey in

Germany overall communities down to very

small communities like a few thousand

people only and 80 percent of those came

back and said look we need a digital

strategy so there is a big understanding

globally and and in Europe as well on

what we need a couple of four players

that we can let's say learn from but our

question was since a lot of companies

and also cities are addressing us with

your question okay this is a complex

issue how do we address this and so it

all starts with a strategy and then

turns into at some point a business

model so for example we are now advising

a couple of companies as well who are

providers of services in their market

approach to smart cities we're also

advising that say government-owned

companies sometimes even national

telecoms and on their strategy to turn

actually actually actually countries

into smart city hubs and develop this

and today I will talk to you about some

work we've been doing in the let's say

more city oriented context and this

study I brought also a couple of

printouts little bit old-fashioned so we

printed only I think fifty-one or fifty

of them so a couple of us still there

there everyone else can download it from

our website

and we did this survey last year with

the simple question and see look

everyone talks about smart city but what

are the actual approaches that cities

take to smart city so we compared about

90 global smart city strategies I show

you the picture right away I hope is

readable so we actually looked what kind

of smart cities are out there and try to

analyze them in a more systematic way to

learn from them to see where are good

practices best practices maybe and what

can be lets say derive from that kind of

analysis obviously as we are consultants

we use the framework to do that and so

we build what we call the Roland drug a

smart city strategy index which is built

and based of some work we did with

research institutes on a systematic

let's say analyzing of smart city

strategies down to large 70 or 80

criteria in this free field so strategic

planning action fields IT infrastructure

the action fields can then again be

broken down into six or seven different

fields we're all basically all the smart

city applications and services you might

want to have find their focus so what

came out of this analysis and this is

the overall result globally so we put

this into an index and said analyze the

strategies in terms of how far are you

addressing all these issues which are

basically set in this index and the

overall result was that out of this 80s

seven strategies only let's say couple

of them cut through a level of above 70

most of them showed significant room for

improvement in getting up to the par

let's say of addressing the key issues

that you need to address in terms of

smart city strategies we do not publish

the full list of rankings because if

this work was not about being ranking or

showing ranking

and showing who was better who's worse

we only show the top three results which

are quite interesting for several

reasons Vienna Chicago and Singapore you

will find more details on the website

and also in the study about why

specifically those three cities stand

out and I think Sunday I did not so bad

either in the list I can say to the

mayor next to me what is interesting

just to give you a couple of insight the

coverage of action fields is very

different globally so most studies focus

on mobility energy and environments and

some on government key aspects for city

like buildings education health are

typically not addressed or quite let's

say limited in their reach yet so that's

something we need to work on yeah

also we asked do you need to be big or

do you need to be let's say rich to be

beautiful in terms of your strategy the

answers mostly no so you see that there

are cities which have quite good

strategies and are not typically a very

big city or are typically rich cities so

it doesn't need to be a big or very rich

city to have a decent strategy here well

the best practices are then broken down

into the action fields and into the

different segments of the of the index

so you can in each let's say field and

and even criteria find cities which are

let's say in our view best practice

examples you can learn from if you want

to build a smart city

strategy some conclusions I have three

minutes left so from a best-practice

perspective we draw like say 10

conclusions on how a smart city strategy

should be developed first of all in the

course of developing a strategy this the

role of the city and its administration

and its services should be reevaluate we

re-evaluated meaning maybe you should

not ask what is the standard process and

what is the digital version of that but

what kind of services do you want to

give to your citizens in the future and

how can that be addressed by your smart

city services second point is involve

citizens business and other stakeholders

it sounds simple but most people don't

do it today you know so many start by

talking to your stakeholder community

talk to your community and also to the

citizens itself so vienna has now

sending a track record and specifically

that aspect and I think it's very

necessary in order to have a strategy

that works out and is accepted also by

your local community Third Point don't

think only about a government we seeded

specifically in Germany and also some

other country that the digitalization

strategies of cities focused on

e-government solution that's typically

not a very useful use case so think

brought you think about the six actions

fields we presented and can cover them

as well as you can because there you see

a lot of value added from such

strategies now encourage self sustaining

business models and I could now have a

separate speech on business models alone

that's basically most of the work we're

doing right now for example in in

Darmstadt which you know is the the

winner of the the German contest on

smart cities last year that we support

in exactly that question they have set

up a company basically taking care of

smart city activities and the question

is what kind of portfolio do we develop

and what kind of business model do we

run for smart cities services some are

profitable some may be breaking even

some may be something we have to sponsor

as a city and how to orchestrate that

how to build a business model that has a

portfolio approach here is something

which is I think reasonably reasonably

new and the city arena to think that way

and that's something you have to develop

and the same holds true basically also

for the private side the private sector

parties which come to us through

questions okay if I am energy producer

how can I develop my own smart City

business models and they shouldn't

underestimate that in developing such a

strategy okay data strategy data

platform I think a couple of people have

said and touched on that it's reasonably

new to to to to have that and to look

into that I'm sure is doing it something

there I just learned it's doing that but

it's still not a standard to say great

we need this platform and we also need

let's say data security cybersecurity

right from the start otherwise it would

not work

finally involve your infrastructure

operators is also not seems easy but a

lot of cities don't know to not do that

right a lot of public companies are

there they have their own budgets their

own business cases that can be applied

and finally gain political backing and

integrate public feedback into your

activities and finally establish a

coordinating body which has its own

budget its own let's say strategic also

input it can go into the diverse aspects

that a smart city strategy has to cover

I think that's it for today you can

download the study you can do a self

assessment if you want on your own

silhouette city strategy if you want

more than 1,000 people have done so

already thank you very much for your

attention super super interesting to see

I would say this universe of case

studies of course the question then begs

what is the role of standards to align

all of these things and we can come back

to that convergence point so also

interesting to see how many these are

the numbers there's about what half a

million cities out there but how many

are bigger than 100 thousand four

thousand more less right so I mean then

they're not so many in fact so so by far

the majority are not right so by far the

majority of cities and communities are

small and probably not the frontrunners

so how can you even when you you know

see the convergence in this landscape

think already about how does this

connect to these these let's say yeah

other areas one for one of the persons

who have actually then tried to put

together an ecosystem that not only

joins the different verticals but also

works across different sizes and

different geographies so from the fire

web foundation give us your position

having heard in a way the background so

how do you operate in this space Thank

You Martin

so well this is the last presentation so

I really focus it in a way that could

work even as a wrap-up of some of the

points that have already been mentioned

before what is the path for success in

boosting standards and so on well our

vision is is summarized in these three

main concepts and I think that is the

important message that I wanted to

deliver to you in this presentation

first we need a vision second we need to

move that vision into execution that is

critical and last but not least we have

to be able to consolidate results

because otherwise we are not evolving

over time so what about the vision well

good news is that if we take into a

consideration Q quite relevant

initiatives in smart cities one led by

series or driven by cities like the open

and agile smart cities initiative

another one more driven by industry or

at least engaging quite a number of

industry companies they have we are

starting to you know this style a common

vision on how a smart city should be and

what kind of standards can be adopted in

order to create this common market

enabling Portability and

interoperability of solutions so the osc

initiative is an initiative that is

currently engaging more than 100 cities

in more than 22 countries all over the

world green on adopting a minimum set of

common mechanisms that would enable

Portability and interoperability of

solutions

tn forum driving a reference

architecture that aligns with those

principles by the way the same that were

defined by OSE may be moving a little

bit step farther

bringing concepts like support to the

data economy and the notion of city as a

platform what is common to both and I

think this is kind of working as a glue

is that fiber is route there as a

technology that can be actually put in

place to implement those principles what

are those and the mission well first of

all we need that cities bring

infrastructure where data can be share a

common space where you can break the

silos of information because many cities

today already have a lot of systems

deployed solving problems specific

challenges like waste management like

traffic management and so on but those

are better gas silos of information did

it have to break those silos create a

common layer well all these information

share and then governance systems can be

built on top so one of these mechanisms

that cities are looking for and industry

are looking for within the two

initiatives that I mentioned about

creating the standards for this common

information layer and that is what fibre

is bringing and these initiatives are

adopting also common information models

because we need to come up with the same

vision of what we mean when we are

talking about the streets about traffic

about the pins about the people that are

living in the city and creating this

common lingua is essential for the

portability of solutions so we need to

move

into the path going towards definition

of common information models which will

ultimately lead and allow Portability

and interoperability of solutions

the third element ingredient is that of

being able to publish information

because I think the value of an smarts

it is not just a city that contains the

data for the better management of the

services it provides is about bringing

part of this data and make it available

to third parties so that they can create

applications and run innovative

solutions so data publication platforms

and moving the open data approaches into

right time open date approaches where

you can release information but in real

time about what's going on in the city

become essential and creating common

mechanisms common standards for cities

in how this can be done is the way to

move forward last but not least cities

have to recognize that when describing

what's going on in the city they do not

have all the data some parties may have

that data so how we can stimulate them

to release that data and share it for

the benefit of those who are creating

solutions for the citizens for the

business well that has to do a lot with

the data economy of concept allowing

companies organizations to release part

of the data and why not monetize that

data and even the cities may wish to get

something in return of the data they

they offer so bringing technologies to

enable this becomes also a part of this

vision towards a journey that would

allow cities to evolve from where they

are

mostly today which is an area where yeah

they are improving they're bringing

efficient solutions but they have the

opportunity to move towards the

humming engines of growth enabling

creation of innovative solutions this is

the vision the vision is there now what

we need is to move move into execution

and for that we need to create what I

call a Bertos simple a little simple

where more and more cities are becoming

part and adopting these mechanisms this

extracting solutions providers to create

solutions based on these common

mechanisms and the ability of having

many different solutions based on this

common mechanisms competing will drive

to creation of high quality solutions

and those high quality solutions will

move and create the incentives for more

cities to join and this is the beautiful

we need to create and where we are now

and for that we need leadership

leadership of cities that share that

vision that have the resources and want

to move into execution and lead the path

C it is like Santander like malaga like

bristol like Uhtred several cities are

already in that move and together with

the inform fibre foundation is launching

this smart city s power Congress and

initiative we call from run our smart

cities looking for this series which are

willing to lead the path so an

invitation for you to worship that the

improvement and ourselves running this

Thursday there is information as a side

event and website and those that want to

learn more are invited to join

finally ensure consolidation of results

and this is where finally standard

bodies like acting like itu-t come into

place it's not only standardization

bodies I think also is responsibility of

organisations like the European

Commission which are now creating

recommendations about for instance what

are the building blocks that are

required for creating the connecting

Europe facilities of the future this is

the step that will come afterwards that

we have to you know go step by step

through the process I have just

described in touch

thank you thank you thank you very much

ha also we have actually the whole I

would say the whole universe here we

have the people on the ground we have

those who try to specify a standardized

who who integrate and connect those who

advise and those who try to actually

build ecosystems around and I could say

that there could have been other

representatives but but this is the kind

of stakeholders who are trying to make

this happen so now let's have a

discussion of how how do we connect

these things how how do we get a

convergence right so send your questions

here we have 10 minutes for the for the

dialogue and I'll take the first one

here from Philip Pullman from a

governance perspective which institution

or organization is most suitable to set

and oversee common standards ah ok so in

fact I mean we do have the UN at some

point they even have a focus group on

dated processing and management for IOT

in smart cities it takes all these

streams in so maybe a question to go

through the panel here and while you put

more questions here or you can also

raise your hand or go to stand before

the microphone how do we get this

convergence I mean from the city's

perspective how do we get the market

organized so you making your life more

easy more efficient when you want to

deliver good services to you to your

citizens how so maybe you can there's a

handheld mic yes you know yo creo que

quieres de lo que se LOC TiVo final es

que el Sodano Tenga cada vez mejor

servicios yo creo que las ministration

que los bomberos locales es el mejor

laboratorio OS la mejor puesta Westin

kagune lo que tenemos que tratar de lo

que nosotros como ciudad se estamos en

nuestros momentos es que todos los datos

que por ser de una de las cidades

intelligent Espeon eras po Santander

loss position ahmo's como la verdad

Terrier mano meda Mo's muchisimas cosas

pero la necesidad factual SKS's cosas

que pueden interrelation are una Cano

Trejo siempre led volos Medanos que lo

que sería maravilloso es que position

di una Phua en el servicio de

de agua de hasta cemento de agua

inmediatamente los same afros say pong

Gannon amber inmediatamente el tráfico

say des via protract IA Nvidia Tom Entei

el transporter bono tampoco pasa por ahi

le puede Mandarin mensaje todos los

llanos diciendo que vão ver un Corte de

agua por avaria para ESO para para que

eso Elsa da da no lo puedo ver lo que

necesitamos es que todas estas vertical

A's habla en el mismo idioma como si

adichie Aki yo Eden interrelation r SE

hace adonde que de mecir yo quiero poner

en frente de los llanos diciendo que con

el internet de las cosas que con la

plataforma ET con la interpretación de

los datos puedo ser predict eva puedo a

del ant army a los problemas que tenga

lasse acento SE creo que las

ministration low-cal que los

sentimientos que las NTAs locale en our

cidades

el mejor laboratory orchid are very good

so passing the microphone to today with

just reflecting so I mean one thing is

to get all the mayor's on this level so

you from the table you can you can

organize on orchestrate it all I would

say that's that's a good start so David

Etsy a European organization how can the

CDP and and the other initiatives how

can you help support this convergence

upwards and downwards and to the sides

willing to answer to that very very

frequent question there is no one

standards body that will define a smites

smart City for a municipality or a mayor

or for a metric on there are multiple

standards bodies Malta before multiple

technologies so you have eyes oh I I tu

an IEC

send sound like Etsy you have fire where

you have GSMA you have TM for that I

have a lovely slide that shows a few of

those standards bodies and the cities

don't know who to talk to

so the the the role of intelligence down

as bodies is to simplify the language to

water the city and also to ensure

absolute corporal cooperation and

collaboration between the standards

bodies so Etsy is working with sin and

sin like Etsy is working with eyes oh I

see

and ITU we're working with fire in

sapphire where inside is juice in so

it's forbid duplication and go towards

collaboration cooperation

once you have that simplified standards

landscape you give it to the cities and

them in a language which is simple to

understand and that is the solution very

easy to say almost impossible to do

thank you so so the other side of the

Atlantic could we please do the same or

so a couple points that I want to make

it very important points here first the

problem is not the lack of standards

there are so many centers out there

almost too many the problem is the

adoption of those standards okay so

that's really important point to

understand second smart city center is

not same as other standards cities are

deploying solutions with or without

standards anyway right and they've been

doing this for a long time so you cannot

create a standard in a conference room

even if you bring in 200 experts from

the world but they think they are the

experts in the Smart City standards

whatever comes out of it will not gonna

be adopted unless cities and companies

and universities decide to adopt them so

instead of trying to come up with the

artificial standards you'd really have

to look into what is being successfully

deployed today and try to extract a

common we call it distilling process you

have to extract the commonality

successful commonalities out of that and

document them that's the way to do the

standards in smart cities specific and

IOT in general that's prima that's the

message I have so which conference party

should take care of it great question

and then maybe to do miss the Celt how

long do we have to wait I mean so so how

do you where do we go if we want it now

there's a big process going on in

standardization and it's useful and we

need to do it it's going to be a

bottom-up process it will it will take

time we don't have it yet and there's no

single standard that you could apply is

the trickles down into different action

fields so that's why we need to work

with heuristics for the time being

that's one reason why we set up this

strategic aspect and their strategic

framework because for the time being as

long as we don't have standards you need

to orient yourself towards the best

practices you need to see what segments

do you need what need what do you need

to cover what you could look at in terms

of good examples and then you can be

reasonably sure that you don't make a

big

mistake let's say yeah and this was this

situation I think we'll take a couple of

years until the standard bodies have

done their work which is a which is a

needed and serious work which will take

some time until we can come up if some

probably will not be one but a couple of

standards that step are stable enough to

be applied to someone who wants to

address this as a new project right so

from your perspective one we're trying

to get the convergence how do you

converge all the convergence efforts

well I think so we mentioned something

that is important which is adoption big

what are the candidates standards that

get adopted and there is where

leadership is needed because we need the

cities the cities that really go and say

okay I will take the risk of adopting

and betting on this particular standard

and this is what we are indeed trying to

do with initiatives like OLC withing TM

phone with the support of Phi where we

are betting on one way whether we will

see it or not let's see but you have to

go and and do this without waiting for

the standards to come then following

this driven by implementation approach

we need to consolidate the results in

the standardization bodies which is by

the way something we are also doing with

that G or idea T I think that is the way

so so there is there is a few one ways

which I mean so essentially what you're

saying is it has to be driven by people

doing things we cannot wait for the stos

but then maybe that's not just one way

as you said there there are certain ways

to do that so hopefully they also at

some point converge or we will have

let's say a market where there are

several ways while all the half-million

cities aren't similar right so maybe we

may even have different styles but at

some point we might find the Wi-Fi or

the USB or the simple ways to loosely

connect some of this myths so that it

won't just be a big concern but in fact

be something that is improving our lives

so those words I would like to ask you

to give a final hand for the panel thank

you for your participation and for

sharing

[Applause]