# Title: Trends and opportunities in smart city development

Subject: Data Governance

* Data & Tech

Abstract:

Cities around the world are using different approaches to implement smart city projects, employing new technologies to leverage data and engage their residents. Yet these efforts should include policy recommendations regarding smart infrastructure, administrative guidelines and community engagement. What are the best practices and frameworks for the smart city development? What are the lessons to be learnt from the most successful early adopters?

Speakers:

#### Ellis Juan

#### Jarmo Eskelinen

#### Mustafa Eruyar

#### Rajat Bansal

#### Jung Hoon (John) Lee

#### Brian McGuigan

Conference:

[Music]

good morning welcome to this a very

interesting panel on trends and

opportunities for smart city development

we have now the responsibility to wake

you up we have a very diversified panel

today coming from different sectors we

have professor John Hong Lee from the

University of John say from Seoul Korea

we have Jarvis kalanor NGO from UK a

future cities catapult

we have Mustafa Roger who's the manager

of the company that administrates and

develops the smart city for the city of

Istanbul and we have by omegan an IOT a

company Silver Springs network based in

the United States although Brian comes

from Edinburgh she has a couple of

concepts to share with you and to kick

off this panel at least for me my

experience in Latin America a smart

cities is that European space that uses

information technology and the Internet

of Things to be able to provide better

public services and more efficient

public services while at the same time

preserving the physical and

environmental assets for future

generations in this cities the citizen

is at the center of the whole planning

process a second thought is that this is

a process

you don't meet great from traditional

city management to a smart city

management from Friday to Monday over

the weekend it takes a while it's a

process that you need to plan you need

first to have your infrastructure

connectivity but more in place your

fiber optics your sensors your ATVs and

so on and then you need to also choose

and start with the easier applications

the ones that have a higher impact in

the shorter term so you leave your

complex applications like you know solid

ways like to know when the garbage tank

is going to be half or full and you

start with things like changing the

light bulbs in the public lighting

to let technology so that can give you

some energy savings that you can use to

continue with the process of

transitioning to a smart city train of

management so with this we're going to

give the word to Professor John Lee from

University of John say professor

what if you could

good back

well fine okay no one is born

it's not my slide slightly

no it's not

[Applause]

well I tried to begin my speech without

my slide but I hope that it will come

out soon my I've been this is a it's

good to be back it's my fourth time that

I've been here in smart city World

Congress and I've been doing research on

the how the different cities actually

fostering their innovations throughout

the world and this year that I

comparative study of ten cities has been

done

not again so we're gonna change the

order and we're gonna have Jarvis Cardo

system

apparently that technology's not as as

smart as we thought

it's stuck now

yeah that's it is it sorry that we are

changing the order back we start with

this your presentation okay okay

so I'm back so I've been doing this

research for the last five years I'm

good to just shoot a very flavor of the

what's the trend and development in in

smart city right now these are these

densities we've been analyzing we've

been analyzing 676 services with the app

services and infrastructure and we

looking at is the kind of establishing

the open innovation environment here

that we can see the trends of the civic

engagement becoming very very important

asset for the fostering the Smart City

innovation along with open data so the

from simple participation to cool

creations there we see about 10% of the

our analyzed services actually are

providing these kind of services with

the citizen engagement I think it's

going to be more and more will be

enquiries within the open data

I think the is not issue of the quantity

anymore I saw issue of the how actually

data is actually well made and used by

there are other stakeholders for the

creating the new services and business

model unless in citizen experience

through the securing security in the

service diversity and the

interoperability becoming very important

here is the order densities the service

diversity you can see the transportation

is the most richest area to the of the

services with the Intel probability as

well as be some other sectors are

following as well there may be the more

more services will be diverse throughout

some of a leading smash cities around

the world again there will be the

prevalence of the new technologies

especially in AI are comforting with the

food industry revolutions and also the

changing in the citizen behavior

according to the more greener as well

here the we analyzing or about 42% or

11.8% are actually doing IOT and big

data or implementations and in energy

and environment sectors where is the IOT

and

I will be becoming more dominant next

year I think they're going to be more

frequent speaking about the services

based on the AI where is some of our

urban sustainability that a lot of

infrastructures are looking at the

service types in energies and the

environment area that most of our

infrastructure based services but this

service will be actually more handover

to those users and the user can actually

use this kind of a sustainability

services station to be using the carbon

dioxide of course there will be creating

the expanding or open innovation

ecosystems also though they're able

public and private partnerships with the

city to city collaborations here is the

global living labs and the startup

studies

in Asia the Living Lab becoming very

important asset to actually driving this

mass it innovations there are a lot of a

small city collaboration partnerships

are occurring throughout this

collaborative platform

I'm sure the innovation exchange program

will be launching soon with coping with

sharing the platform and sharing the

data with among the different cities as

well one aspect of very important aspect

is the infrastructure integrations with

the small city governance in the future

building the inter profitable the

data-driven city becoming us so

attentions on the small city world we

see a lot of cities this year especially

to actually integrating the urban

platform and providing the civic

platform to engaging with a connecting

with the more and more facilities and

devices we are going to see the more

high level of network effects with the

increasing escape allottee

to deploy in the of this mass city IOT

network and such as the other kind of

the networks will be also coming to the

create in the more high level of network

connectivity also lastly police there

are small city components issues that we

need to actually take care there are

some organizations are some cities

actually doing the leading dedicate

organization to force and Asthma

innovations and this leadership

coming very important also the

deregulating and also creating the

innovation free zones to actually for

fostering this innovation becoming so

essential element of the next generation

of smart city as well you can see all

this report in get smart city in this

report from the following website and I

hope the look for text should have more

discussions and transient and

development of small city thank you

thank you professor very disciplined

with time and now we finally have

Journal from future cities catapult in

UK Germany's yours

hopefully soon okay very good fine

so I'm Jana mascara and chief innovation

integrity officer of the future city is

catapult in the UK we are uk-based

innovation company with the remit to

develop the sector of advanced urban

services the new term which you see

there is kind of smart cities plus so

it's the we understood that smart cities

alone actually doesn't cut it you need

to expand to areas of planning

architecture creative industries etc to

in order to crack the challenge which is

the city basic fact

well cities are the most enduring human

achievements think about that city of

Rome is still there Empire of Rome

vanished quite a while back already

cities tend to stay around and I think

that is one of the challenges which we

see in the smart cities domain when we

want to retrofit cities because City is

fundamentally a layers upon layers upon

layers of unfinished plans no city is

ever finalized novel is it is ever ready

and if it is built at once it's a boring

place we like cities which are imperfect

and awkward and have these layers of

legacy and that's the has been the

problem of the first wave of smart

cities and one of the things which we

now see is a greenfield investing models

for new cities are diverting from

brownfield investing models so existing

cities need to have different business

models opposed to cities which somebody

just starts to build from the scratch so

I think the new trends of Bill Gates

buying a plot of land in Arizona and

wanting to do a smart city there it's

actually valid way to do things when you

I in the business of building new cities

new places but it might be far more

problematic approach for existing places

for the cities which are already out

there one of the challenges of

organization of course is that yes it's

a mega trend word is urbanizing for

but it doesn't open eyes equally so we

have our leading cities the london's of

the world the new york's then we have

lots of cities which actually become

indie pop you list and that is also a

smart city trend an urban trend that

cities are losing people and lastly we

have cities which are only growing

without bringing better quality of life

to people who move there the

fast-growing cities of the developing

countries the the Rio de Janeiro's of

the globe and I think the key to

sustainable smart cities must be

solutions which can be tailor-made for

these different types of cities there is

no one solution or one approach to do it

right but there are some things which

are in common despite all of that and

that's the way we live in cities which

has just been changing lately that's

that's an event in Helsinki my old

hometown and it looks like people

selling food in a park looks like an

analogue event it's called restaurant

day and actually it's a digital event

it's a digital innovation because it's a

day of pop-up restaurants last time it

was counted 1,500 pop-up less

restaurants around Helsinki and the only

way to find those is to use your phone

and the app there to end up in some

random park somewhere where somebody is

selling cakes and that's the way the use

our cities we are in a search mode all

the time and that transform the physical

infrastructure if you're in a search

mode in platforms you don't need any

local shops anymore you can buy Accardo

food at 6:30 in the morning they bring

you your groceries and Tesco is

suffering local shops are suffering

because they can't beat that competition

anything which can be platformer big co2

platforms will be going to platforms and

the main challenge with that is the

challenge of speed that's the main

challenge cities are tackling with we

have just analyzed about 20 global

cities and the

much of the strategies in our global

review it's available as of from

yesterday and there are multiple ways to

do it

you had to top down you can do bottom up

you can actually have a smart city

without a strategy and one of the

leading ones Amsterdam doesn't have as

much of a strategy they still are

considered to be one of the best but the

ones which seem to crack it they are all

able to deal with the challenge of speed

and there are some ways with with which

that can be tackled so why is it the

challenge that's because digital

innovations grow at an exponential pace

when they take off I mean think about

Airbnb envision you birthday went around

just a few years back in a city scale

five years is a short time to turn

things around in a digital domain it's

they're like dog years you know four

equals one normal year it's several

decades of technologies ago and when

these digital disruptions crash to our

cities cities have a tough time dealing

with it and the cities which are the

best smart cities other ones which do it

well and I close with some of the

examples of how what what they do what's

in common first of all they work through

experimentation cities are traditionally

driven by strategies policies and

regulations that's the classical way of

running a city you build your strategy

and start to implement it and that turn

into 832 policies however that's a very

slow route to impact there's other route

to impact which companies use which is

if you have an idea build the first

prototype test it and if it works then

scale it and best smart cities are

working actively and consciously with

urban experimentation trying things out

in practice example from Belfast where

we we have worked with the city which is

their smart city strategy framework yes

it's a multi-year framework but the

trick of succeeding in that this

particular project was that we had

ongoing experiments

while we did the framework with Belfast

greats forecasting over there was a

challenge which they had the city

couldn't collect their business rates

the property taxes only seventy four

percent of those they lost millions

every year what they did was to open the

challenge to data analytics companies

for innovative procurement competition

and they got back two companies one is

there enquiring minds in the pilot phase

they brought home three hundred and

fifty thousand pounds of extra income of

a project which cost the city one

hundred thousand pounds so three times

profit from a short pilot and now they

are turning it into a inter product

common elements in these cities first of

all they combine top-down bottom-up

example there is the participative

budgeting of Paris city of Paris is

using five percent of the budget

localized to boroughs so that people

there can vote propose and vote

initiatives which then are realized with

Paris funding and the trick this that

Paris gives a promise that this will

happen when you join second they use

openness as a competitive advantage hope

my current home damp London has the

London datastore it's an old initiative

and that strategy of data store has

turning from open data to shared data

when you share the value and use it as

an asset for the city fundamentally

meaning that you can do contracting at

the base of the when you when you

release the data and and also

consciously avoiding technology lock in

situations where your data is held

captive by anyone one company openness

goes both ways

third they understand that best

innovators probably don't work for the

city

no offense that's just how it is I mean

in any city you have far more much

bigger amount of innovative people

working somewhere else than in city city

administration unless everybody works

for the administration that's probably

not true so uh active in

the collaboration is also defining

factor example there is my old totem

again Helsinki conceal of developers

program which brings every year hundreds

of developers together with the city to

crack open challenges and every year

launches new companies which are there

to help the city to offer better

services and lastly they use urban labs

to connect the changemakers Copenhagen

solutions lab as an example

Amsterdam models as an example New

York's of his office of data analytics

they are labs which are reach out to

change makers in the administration and

in the companies and bring them together

because change makers often are alone in

their organisations they fell feel

deserted and you can bring their

brainpower together and to increase it

through using a lab based model and that

can be built into a standardized

approach to do cities in which you

select and bespoke components which fit

use it is just the right for your city

that's it for now thank you thank you

general

we're not gonna have Mustafa Edwige our

he's the smart city coordinator from the

city of Istanbul to share with us some

good stories about how you guys doing in

Istanbul thank you ladies and gentlemen

my name is Mustafa forum is back

Istanbul I will talk about big smart

Istanbul roadmap today

[Music]

[Applause]

[Music]

okay

my company spark is an affiliate company

of Istanbul Metropolitan Municipality it

is responsible for developing smart city

technologies and wanting to smudge the

office of Istanbul so I'm representing

now city of Istanbul today to you

Istanbul is at crossroads of Europe and

Asia if with 15 million population it's

the biggest city on Europe and also

because of that population Istanbul has

many challenges because of demanding

population especially on mobility energy

environment so for this demand we

develop smart systems and services as an

example from environment invest

management collection center monitors

each point of waste collection to the

disposal and recycles as energy floating

solar power plant on one of the lake of

Istanbul and other economy R&D; centers

from global companies to support

startups at Living depth which are run

by municipality of course we do not

forget the children for them we develop

dream cart as an IOT cart and you can

access from an open data platform to

this cart to motivate children

programming discard in mobility attacks

management platform I taxi promotes taxi

healing system also taxi cameras and

panic buttons for safe driving also IOT

taxi cab for collecting data from all

over the Istanbul with 17,000 taxis

including all taxis in Istanbul for

safety we have traffic enforcement

systems with 10 types of enforcement

from speed red-light shaded area

violation

also we have mobile traffic enforcement

systems

it's an equipped vehicle with sensors to

detect violations also we have a call

center for all complaints of citizens of

Istanbul called one five three call

center you can call this Center for

every complaints of Istanbul but we have

a lack of collaborative stakeholders and

interoperable technologies like all

cities like my java speakers talked

about we need a unique strategy we need

interoperable technologies among smart

systems and services it is the

motivation of big smart Istanbul now so

how to become big smart Istanbul now we

have smart systems but we have to be

become big smart so we have a motivation

to call it big smart to become big smart

Istanbul we have first node we have to

have not the global with literature

review so we have to know the ourselves

with current state analyzes so we have

to benchmark this with developing

Istanbul smart ste index with the

motivation of this index we have to have

an one vision among all stakeholders and

strategies and just one world map of

Istanbul smarty to have inter probable

systems we have to have an system

architecture for all systems so we

choose to work with global companies at

this stage we worked with first and

Sullivan at benchmarking we worked with

action for the current state analyzes

and we are working with vision we are

working with Ernst and Young for the

vision and strategy and roadmap and now

we are working with Cisco for the smash

the platform

for the literature review we cause the

most important smashed indexes all over

the world we choose 50 cities from this

indexes and according to our parameters

we prioritize these teas to have 10

besties

we call it the Champions League of the

cities and in the current state

assessments we have over 200

stakeholders we met with all these

stakeholders and we analyzed their smart

systems and we have a big report about

current state assessment so we benchmark

with this Champions League with Istanbul

we have the Istanbul smarty index with

our own defines indicators with 60

indicators we within all pillars of

smart city and we understand that we

have a progressive way to be big smart

to be big smart we have to have an one

integrated smart division for this we

developed the purpose vision and values

and mission of the small city and to

have a motivation for the citizens or

also for the runners of the city we

combine this as the manifest of smash

city Istanbul we determine our

strategies the KPIs initiatives and

roadmap projects with persona and

fortunately analyzes of citizens so we

have to have to listen the citizens to

soar better to them at the end to

achieve one integrated ste platform to

have operable systems we have to have

and smash the architecture now we are

working on this architecture with Cisco

so lastly I want to invite to our

worstest Congress in 2018 to have

meetings with you and thank you for your

attention thank you mr. pham very

entertaining now we're gonna hear from

Bryant on this new latest technologies

about G and how to use radio frequencies

[Music]

hi there everyone so thank you for for

being here today my name is Brian

McGuigan I'm from the company Silver

Spring networks and gonna run through

some trends that we're seeing really

having an impact in the way cities are

making the transition to become smarter

so for those that don't know Silver

Spring Networks we provide the

communication and data platforms to

cities and utilities to connect them to

all the IOT devices that they have so

that's to connect monitor and control

all of the assets that they they care

about the company is about 15 years old

and we've been lucky enough to work with

hundreds of cities and utilities across

the world in total we connect over 27

million devices and we manage huge

amounts of data this is not connecting

laptops and mobile phones but instead

connecting all the sensors and devices

and controllers that that cities and

utilities are using to develop these new

new systems and we've often focused on

those applications that really require

and and benefit from high reliability

and resilience we actually very high

levels of performance in the system

typically 99.9 percent connectivity to

all of these assets so when we talk

about smart city I guess we're working

now with with cities across the world to

connect a whole range of different

applications

everything from intelligent street

lighting to traffic management systems a

large number of Smart Grid applications

that cross over into the city domain

environmental sensors etc and and we see

that every new city we work with this

list grows and grows as every city as

different requirements so to write today

I'm going to run through four trends

that we see having a big impact these

aren't necessarily new trends but I

think they're maturing in a way that is

actually making them much more effective

and useful for the cities that are that

are adopting these methods so first of

all we're seeing the kind of the growth

and success of open ecosystem models so

the the smart city that was perhaps

envision 15 years ago when when large

ICT companies proposed this to cities

kind of took the view that a company

would come in and deliver a smart city

in a box for a city and often those

companies would would take the view that

they would build a series of

applications for the first city and

invest there and then be able to sell

those solutions to 15 more cities and

that's kind of how the model would work

but but that quickly fell over because

city number two never really wanted the

same as City number one and that could

be because of legacy requirements it

could be because of local startups that

they want to be involved in the in the

equation or the solution and so instead

we see systems that are more open and

invite partners to work together and

collaborate being much more effective

and clearly an analogy that this relates

to the mobile industry we know that ten

years ago this was dominate order 15

years ago dominated by providers that

had very trusted technology and but they

relied entirely on in-house development

and therefore innovation was relatively

slow and incremental and they've been

now completely overtaken by providers

who enable others to develop on top of

their platform enabling I'm you know we

all have the same phone in our pocket

but there's a hundred different things

for each of us based on our lifestyle

and our requirements and that model I

think fits the smart city market much

better because it allows cities to

evolve and respond to the specific

challenges they have and linked to this

is is up kind of pushed awards open

standards and again this isn't a new

concept and but we are seeing this

coming through but you know we're often

asked as a standards based organization

we're asked what which standard do you

follow and the reality is there are

hundreds of standards that matter in

this space and in every in every cases

where their commitment to having those

one example if we look at smart lighting

that was referenced earlier in the

introduction if you look at the

end-to-end components that are required

to enable a smart lighting system you

could buy these 10 15 years ago from

suppliers but you would be you would

have to buy every component from them

and you would be locked into them for

the duration of your use of that system

and what we've seen know is that

standards have emerged across the

end-to-end system that allow you to

build a solution with the parts that you

want and the suppliers you want allowing

different companies to interoperate and

allowing flexibility over time if

requirements change or or providers

change strategy so that that is I think

really helping accelerate the adoption

of these systems one city that's a good

example of is Glasgow in the UK who ran

the future city demonstrator three years

ago which included bringing a whole

range of systems together with an

underlying ethos that there would be

open sharing of data and integration

between these systems including an open

data platform an operation center and

for demonstrator site sites we provided

a smart lighting demonstrator which

showed how street lighting could enable

different sensors and systems to bring

data together including traffic

monitoring data air quality and noise

and that was provided by a whole range

of different vendors who collaborated

and use these open standards to build

the complete solution and ultimately

share that into the city's open data

platform and they're now really looking

at that as a platform that they can

build future innovations with and extend

the functionality to link in with

emergency services and other systems so

the second trend is that cities are

really working hard to find ways to

break down and work across silos and

sharing can mean sharing anything from

obviously budgets but just sharing

information on the problems that the

departments are facing projects are a

running business case development and

you know creating that crossover and

communication between departments is

obviously recognized as fundamental to

allowing cities to evolve and cities are

taking a wide range of different tactics

here many are forming as was mentioned

kind of dedicated innovation areas the

urban ICT arena in Stockholm for example

which brings together a range of

providers and university partners and

the city representatives to experiment

and share information in a way that will

help foster innovation others are

perhaps being more pragmatic Paris for

example saw that they had a requirement

in peril

for a street lighting control system and

a traffic control wireless system and

they chose to combine those tenders

together knowing that by running one

tender they would arrive with something

more flexible than if they treated them

separately I know they see that they're

able to use the wireless network and the

software platform to connect up a wider

range of infrastructure and they

ultimately see that as a tool for long

term innovation the third trend is I

think cities are know recognizing that

becoming smart isn't a one-time fix but

instead a change in process and I'm kind

of an evolution to respond to the

shrinking of the technology cycle that

that means the innovation is happening

readily and there's more recognition

that we don't know what the requirements

or possibilities will be in two years

time and that means systems are being

planned with the ability to upgrade them

over time and being viewed as something

that will change and evolve and less fix

them previously cities are having to

work hard to change the relationship we

have with technology providers and

suppliers of services in the way the

contract and procure those to make sure

that they can evolve as efficiencies

improve etc one example of that we're

working with the city of Copenhagen to

connect 20,000 new streetlights across

the city with the initial major target

of reducing energy and carbon but quite

quickly after deployment Lee realized

well actually they could use this system

to improve cycle safety and so by

partnering with the traffic the the

pride of the traffic management system

we've been able to build a system or

they've in fact been able to build a

system that links the traffic and the

lighting to increase the lighting at

junctions for cyclists with an aim of

making them more visible to reduce

accidents that said we think that

certain aspects will need to have a of

central planning aspect to be successful

I don't think everything can just evolve

freely security is a great example and

we are seeing increasing incidence of

IOT systems being compromised and I

think that will only increase as we

as we see more and more IOT systems

being deployed and security really is

something that has to be planned upfront

and applied to each application in

parallel consistently to make sure that

the overall the system is secure and

it's often said but why would someone

choose to hack a weather station or a

street lighting system or some other and

perhaps innocent system and the truth is

people will find a reason even if just

for their own entertainment so the final

the final trend is again that we're

seeing citizens really firmly being put

at the heart of many of these leading

initiatives and that can be exploited in

their needs again if we talk to

Copenhagen about their street lighting

program one aspect they always highlight

that they're proudest of is that after

awarding the contract they walked every

street in the city with the provider

they'd selected to see well what else

could we do for these local communities

for these retailers for these residents

to use lighting to improve the system

rather than just the energy saving and

that identified a range of other

benefits cities are changing the way

they communicate with their citizens

through more dynamic interfaces and the

reference earlier of Paris you know

allocating budget to actually target

prioritized applications I think we'll

see growing and even the the kind of who

qualifies as a citizen we're seeing

evolving we're involved in the largest

intelligent lighting program in the

world in Florida this is half a million

lights being upgraded and yet within

that enormous program we spend a huge

amount of time talking about seven

hundred and thirty seven of those which

happened to be in turtle breeding areas

the problem here being that hatchlings

follow the moon to find the sea when

they're born and if the street lighting

is too bright they instead follow that

and end up on the road which doesn't end

well and so in this case they were able

to build a special application that

would give the environmental services

the ability to program in the dates of

turtle breeding in that particular area

and control the lakes accordingly so we

see that every city is having these

bespoke requirements that need tailoring

the final thought is that we are seeing

a kind of ongoing view the cities have

to be fun you know very few are

interested in living in the dystopian

view of futuristic cities that we see in

many sci-fi films and you know a great

example of this is one a project

playable cities initiative who in this

case hijacked a number of streetlights

around the streets of Bristol and

replaced the lights with the projector

and a camera that would record the

shadows of people to walk by and then

replay them for the next Paris in the

past and what they found was that as

well as creating a lot of confusion

initially they then quickly found that

people were communities were gathering

in these dark alleys that previously

been quite uninviting and playing games

and dancing and really really changing

the perception of what this

infrastructure could do for those cities

and what role it should play so that is

everything today so thank you very much

and looking forward to questions thank

you Brian

very clear it before we get to our last

speaker we're gonna have probably time

for two or three questions a the

application system is not working today

so I encourage you to use the micro and

now we have my advanced AI from the city

government seed of rightful India

treasurer if you could make it in eight

minutes really appreciate it

[Applause]

a very warm good morning I'm Raj Bansal

from the city of Raipur in Chhattisgarh

state of India I'm sure all of us would

know a little bit about India India is a

country which right now has the second

largest telecom connectivity and the

internet not with number of Internet

users in the world and we when we talk

about smart cities in India we don't

talk about technology we talk about

people just to give you a little

background about the place from where I

come from I'm the Commissioner of raipur

city which is around has a population of

around 1.6 million which is

approximately the same as Barcelona the

size of the city as well is the same as

Barcelona but in terms of population in

India the city is around 45th in rank so

we are talking about a large number of

people here and being a democracy being

the kind of a chaotic democracy as we

call it as someone might have visited

also so being a democracy like that the

main challenge in our smart city

projects is not technology it's the main

challenge is the people whether the

people are able to use that technology

whether they are able to connect to that

technology whether they start finding

value in that technology so when we

started the smart city initiative in

India in raipur per se we talked about

people powered approach in this in our

Smart City project we have projects like

infrastructure projects hard core

infrastructure projects which are

redevelopment involves a large number of

shifting of people then we have core

technology projects I TMS the

surveillance system projects the traffic

management projects and a mixed bag of

all these projects but the main

challenge that we had was how are people

going to receive these projects and how

are people going project so we started a

kelabra collaborative approach wherein

people became our focus points in even

in our infrastructure project we started

taking our drawings and our designs to

the people started taking their feedback

and used a collaborative model using

open-ended

platforms internet-based platforms for

their inputs and then those designs

which were then finalized through

people's inputs then actually came in to

ground

that that is the way in which we could

solve problems of projects which were

stuck still still in 20-25 years so to

give you another example we also have

experimented so to say with technologies

like geo tagging technology we in in our

effort to make our city green we wanted

to plant more trees as you know India so

we spend lakhs and millions of rupees

every year to plant more trees where do

where the trees goes it's a question for

all of us but how do we monitor that and

how do we more than monitoring how do we

make people sort of own that tree so

that the sustainability of that plant

that tree is is taken care of so using

that that kind of a thought in us we

went for a geo tagging approach for our

trees and our plants we told the people

that you can take the plants for free

from the government you plant a plant

them wherever you want just geo tag them

and then later on after a few months we

then got a drive created in which a

person has to go back to the plant and

take a selfie with the plant so with

that little little ownership that we

created to a throw very my new

technology we could actually achieve a

lot of our objectives and more

importantly we achieved a sense of

ownership in our citizens so this is the

kind of smartness that we are talking

about in our cities the work that we do

work we do as a government but using

technology to connect to the people to

actually connect the bridge between the

government and the people so I'm here

the reason why I don't have a

presentation here is because I don't

have many jargons here I am actually the

consumer of the smart city technologies

that most of you are interested in or

are working to produce so as the

consumer I would want technology which

helps me the government and especially a

government like the governments in India

where the system is still a little

feudal where there is a lot of gap

between the the people and the

government it's not like the Western

countries where the government and the

people are much more in an engagement

perspective so as a consumer of these

technologies I would want you to come up

with solutions where I can

use that technology to help connect with

my people better and inculcate a sense

of ownership amongst those people so in

our smart city program our approach is

to create a more ripe or a sense of my

iPods so when we do that when we make

each citizen feel that the city is his

or hers that is the time when we can

actually make a smart city so that is

our belief and thank you thank you for

giving me this opportunity thank you I

get very disciplined okay so we have

here two representatives from two very

large cities Istanbul and tripod we have

a professor from the University of John

say in civil we have a think tank from

UK and we have a private sector company

provider of IOT solutions we have time

for three questions or four please use a

microphone oh you have something here

sorry okay so the system was working

after all with a question for Gemma

what do you think is the best business

model for greenfield smart cities well

that's a that's a tough one best mr.

Greenfield smart cities hmm I would aim

for uh for the stage public-private

partnerships so about what I I think

which dangerous ideas that if you strike

a deal for 30 years we don't want

provider for anything nowadays it's a

bad deal for the for the city so but I

think we still that frequent Greenfield

of course is the amount of capital which

is needed so any sort of a life life

cycle based staged public-private

partnership model can be the one which

is sustainable for for that and which

doesn't pretend that it knows where the

city ends which kind of has the check

points possibility to change direction

and prioritize differently over the

timespan of the project Thank You Jo

any other questions using the microphone

if not since we have some time is still

I'm going to give the rest of the panel

a one minute one minute and a half just

tell us in your own opinion what is the

most important trend that you're seeing

today in the smart city development and

shared with the audience happy yeah

thank you having a comparing with the

ten cities I think the most kind of

trendy is the actually we are actually

talking to the data-driven smart city as

well so in order to creating this useful

data of course there are you need to

have a very integrated platform so in

order to build it this platform

obviously you need to have a very good

governance systems that the department

with a different Department with

different agents you have to be

interconnected as well so based on this

interconnected kind of infrastructures

and along that side increase the network

effects of the course you need to have a

private sector engagement reserves the

citizen engagement to actually

developing the new kind of services as

well so I liked what when Jeremy was

mentioning about the urban

experimentation things that there Laurel

Korean cities and trying out these kind

of experimentations and there will be

the feasible business mode that we need

to take away there will be the kind of

regulations the

laws and policies that we need to

regulate as well so there are some

theory that kind of testbed or

innovation freeze earnings that may be

required for that this next generation

of a small city thank you Mostafa one

single trend

as I said in my speech the collaboration

of organizations and technologies ISM is

very important I think in the next 10

years the cities will develop its own

smarts the indexes to benchmark itself

and also collaboration all organizations

to achieve one vision because each

organization has its own vision so it's

having some interferences each other so

one vision one road map is very

important for also interoperable systems

we have to have one platform Portsmouth

City I think it's very important to have

interpolation all the systems thank you

Thank You mr. Farr Brian I suppose one

trend that I'm seeing in relation to

this event itself I think is very

positive over the last few years there's

been a it's very encouraging to see the

growth and representation of cities and

countries attending and and taking a

space in the floor here and I think that

is very helpful for us as providers to

get better picture on on what matters to

these different cities and I think it's

also helping to really reinforce this

view that the smart a smart city won't

be delivered by one provider or indeed

just by large providers it will be

including medium-sized and startups as

well and I think the presence and

promotion of those companies at the city

level is very important to that thank

you Brian right yet I think the main

challenge today for us is to use the

data that the government already has and

use it in a way to that the bridge

between the government and the people is

divided is gapped and also the the

communication that the government has

with the people should be customized

using that data and the data analysis

therein so the kind of course the kind

of communication I have as a government

that should that should make people

believe in me so that kind of the trust

deficit that we have in specially in the

urban India that can actually be

addressed through the data we have and

that is the challenge we have right now

thank you right and one last comment

German

need to mention something which hasn't

been mentioned here yet which is the one

city is not the market so I think one of

the trends we will which we will see is

the networks of city cities joining

forces which is kind of a demand driven

development of a larger marketplace than

than one city

there has been supply driven development

but should be also demand driven that

supply and demand meet in the middle

thank you you've been very disciplined

audience we had a very disciplined panel

please join me in a round of applause

for this disabled panel

[Applause]