

et stort steg for digitaliseringen?

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regjeringen.no Regjeringen Stoltenberg II Departementene

SAMFERDSELSDEPARTEMENTET



Bokmål | Nynorsk | Sámegelella | English

Tema A-Å Nettstedskart Hjelp Kontakt

Søk hos Samferdselsdepartementet

Søk på hele regjeringen.no

Del/Tips Utskrift a a a Lytt til teksten

Departementets forsida

Aktuelt

Tema

Pressesenter

Dokumenter

- ▶ Statsbudsjettet
- ▶ Proposisjoner og meldinger
- ▶ Lover og regler
- ▶ Rundskriv
- ▶ Høringer
- ▶ NOU-er
- ▶ Rapporter og planer
 - ▶ **Rapporter**
 - ▶ Planer
- ▶ Veiledninger og brosjyrer
- ▶ Andre dokumenter
- ▶ Bestilling av publikasjoner

Om departementet

Lyd og bilde

Dokumentarkiv

Rapport, 19.01.1996

Rapport fra Statssekretærutvalget for IT

Den norske IT-veien. Bit for bit.

[Vis detaljert innholdsfortegnelse](#)

Forord

Den norske IT-veien. Bit for bit.

1. Revolusjonen vi lever midt oppe i
2. Muligheter og perspektiver
 - 2.2 Hva skjer med avstandene?
 - 2.3 Kultur og media i ny drakt
 - 2.4 Den globale grendeskole
 - 2.5 En enklere hverdag for alle?
 - 2.6 Personvern og sårbarhet
 - 2.7 Offentlig sektor - fremtidsrettet tradisjonsbærer
 - 2.8 Bedre organisering og mer samarbeid i helsevesenet
3. Bedre utnyttelse av informasjonsteknologi i Norge
 - 3.2 I tospann for fremtiden
 - 3.3 Fra visjon til verdiskaping: Hvordan stimulere utviklingen?
 - 3.4 Spillet om spillereglene
 - 3.5 Lære for å bruke - bruke for å lære
 - 3.6 Norsk språk og kultur i de digitale rom
 - 3.7 Informasjonsteknologi i arbeidslivet
 - 3.8 Offentlig sektor og informasjonssamfunnet
 - 3.9 Nettverk for et bedre helsevesen

Fremskritt med ny teknologi:

Den norske IT-veien

Noen viktige ord og uttrykk

Sammendrag av politikk-punktene:

TEMA

- Telekommunikasjon

“

“Den teknologiske utviklinga vil halde fram i raskt tempo, i minst 10 år til.”

”



St.meld. nr. 17

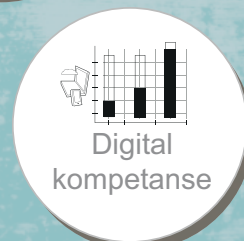
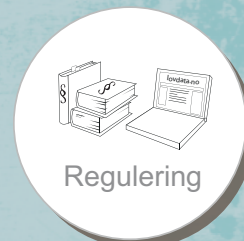
(2006–2007)

Eit informasjonssamfunn for alle



NOU Norges offentlige utredninger 2013:2

Hindre for digital verdiskaping



“

For a moment, **nothing happened.**
Then, after a second or so,
nothing continued to happen.

Douglas Adams

”



Fv158

Holveien

E16

Ulvøya

Merkgonga

Sundvollen

Åsaveien

Dronningveien

E16

Holveien

Krokkleiva

R

Golfklubb

E16



Meld. St. 23

(2012–2013)

Melding til Stortinget

Digital agenda for Norge

IKT for vekst og verdiskaping







Torgeir Waterhouse @tawaterhouse

1h

bare meg eller får andre også "Det har oppstått en feil i vår sentrale database" ca 1/3 ganger ved forsøk å kjøpe flybilletter fra @SAS?



SAS @SAS

1h

@tawaterhouse det felsvaret dyker upp ibland, kontakta kundservice så får de hjälpa om det är möjligt



Torgeir Waterhouse @tawaterhouse

1h

@sas har ikke tid til å sitte på tlf... når har dere fly fra SVG til OSL ca 13.00-14.00 28. februar?



SAS @SAS

1h

[@tawaterhouse](#) Sry,vi kan inte svara på detta här via twitter. Du hittar våra avgångar och priser på sas.no
//NW



Torgeir Waterhouse @tawaterhouse

1h

@sas nei, jeg finner ikke avganger på sas.no fordi "Det har oppstått en feil i vår sentrale database"...



@tawaterhouse skicka en felrapport till oss då sas.se/s/kontakt/form...

26/01/15 18:40



Torgeir Waterhouse @tawaterhouse

24m

@sas jeg har fortalt dere om det her, regner med at det holder?



Torgeir Waterhouse @tawaterhouse

4m

oh & btw @sas you guys just made a spot for yourselves in my next couple of talks about the Internet & stuff...

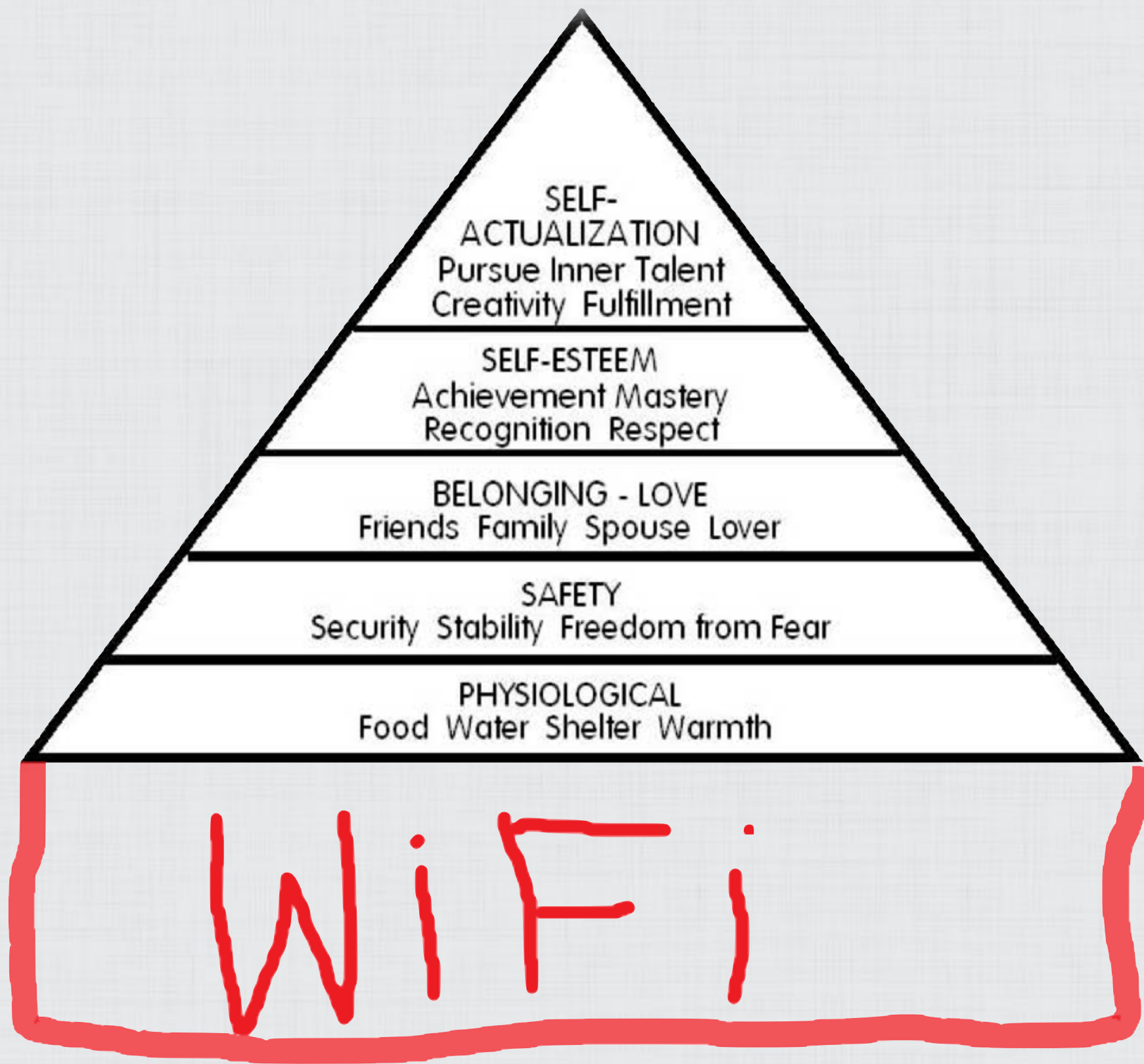


Ditt fly er kansellert
SK4022 28JAN15
Stavanger
Oslo Airport
Avg: 1300
Du er booket om til
SK4014 28JAN15
Avg Tid: 0935
Vennligst sjekk inn på din
nye avgang .
For mer info se [https://
ci.sas.mobi/fi/
cancelmsg.aspx?a=no](https://ci.sas.mobi/fi/cancelmsg.aspx?a=no) Mvh
SAS

Tue 15:41







api

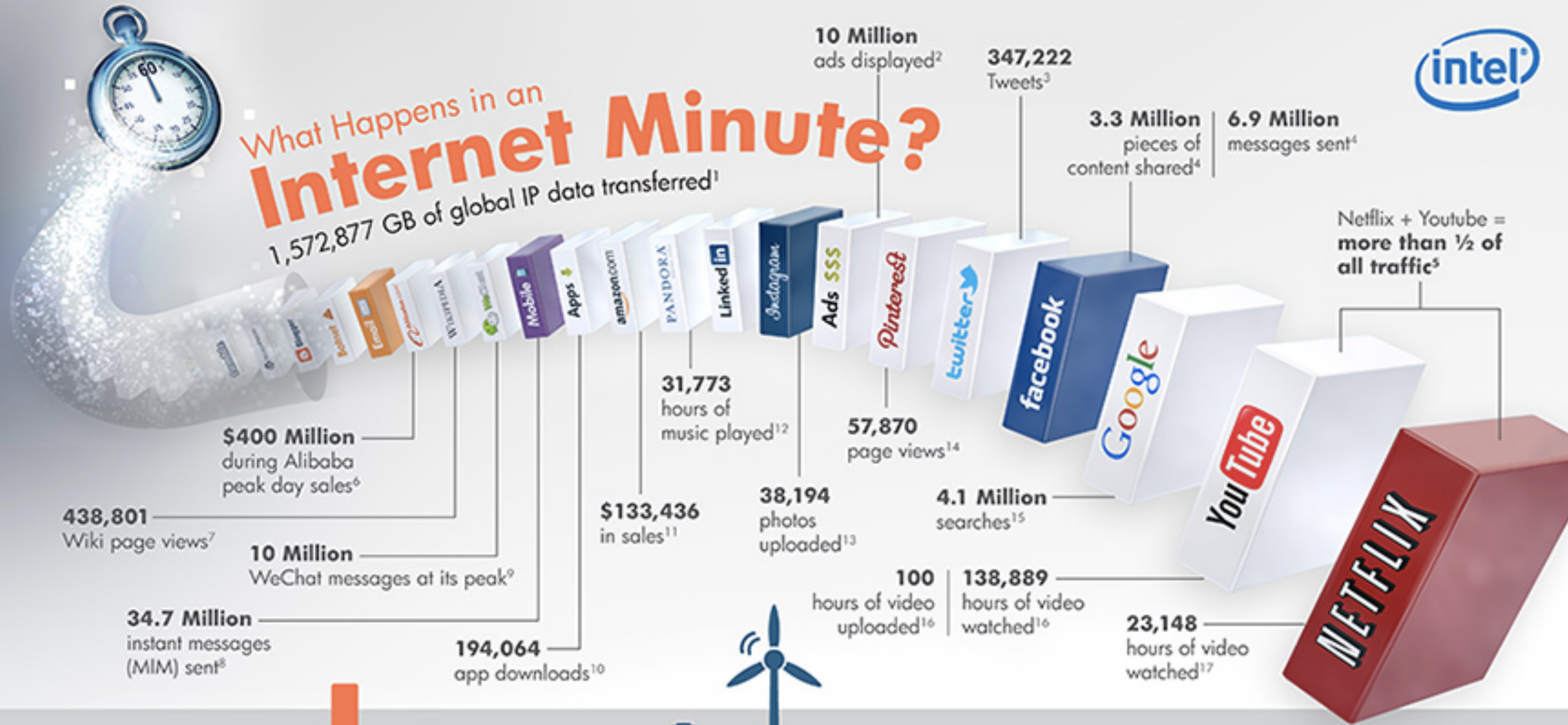
aka offentlig sektor 2015+?



There are **known knowns**. These are things we know that we know. There are **known unknowns**. That is to say, there are things that we know we don't know. But there are also **unknown unknowns**. There are things we don't know we don't know.



<http://www.brainyquote.com/quotes/quotes/d/donaldrums148142.html>



And Future Growth is Staggering



In 2017, there will be **3X** more connected devices than people on Earth¹

All digital data created reached **4 zettabytes** in 2013¹⁸

“

we are now collecting more data each day, so much that **90% of the data in the world today has been created in the last two years alone**. In fact, every day, we create 2.5 quintillion bytes of data — **by some estimates that's one new Google every four days**, and the rate is only increasing

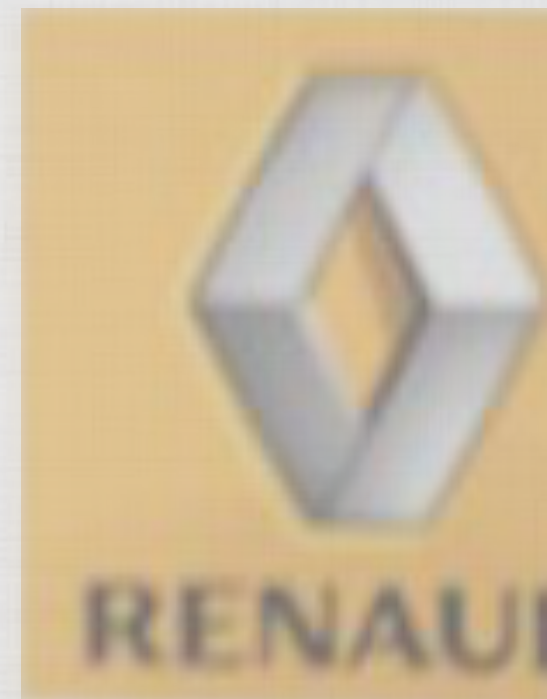
Peter Levine, Andreessen Horowitz

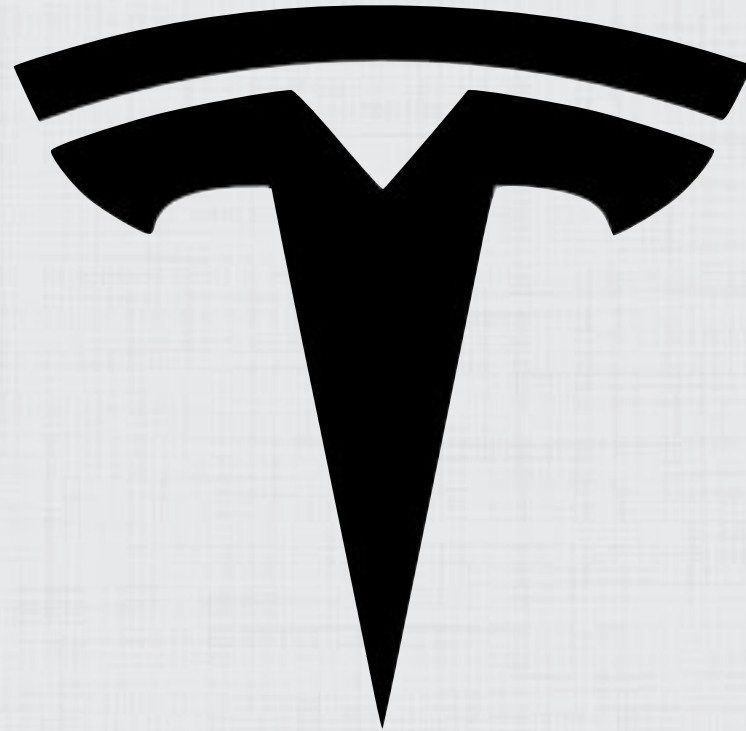
”



Apple and Google cars aren't a threat

Carlos Ghosn, CEO Renault-Nissan



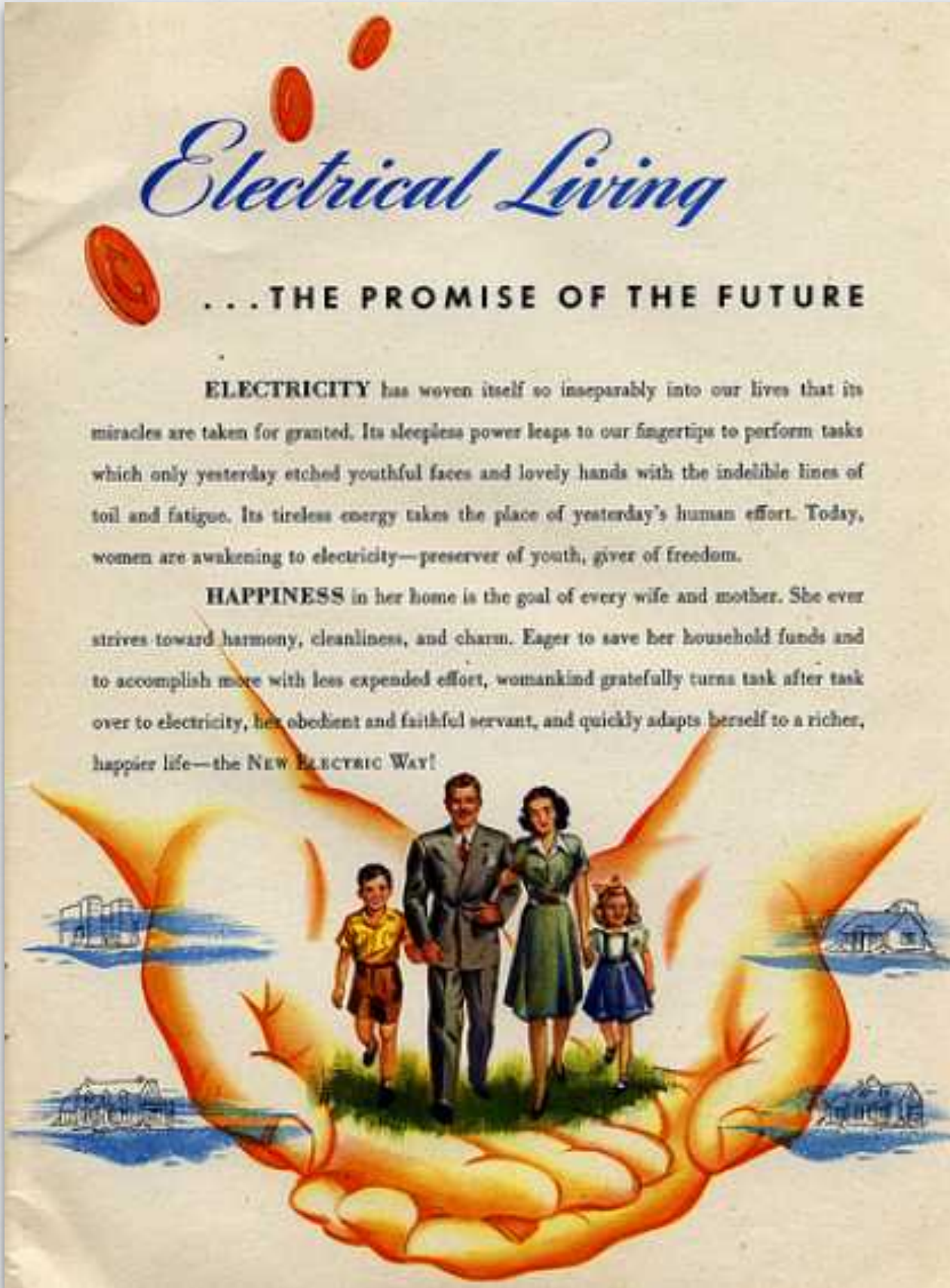


Electrical Living

... THE PROMISE OF THE FUTURE

ELECTRICITY has woven itself so inseparably into our lives that its miracles are taken for granted. Its sleepless power leaps to our fingertips to perform tasks which only yesterday etched youthful faces and lovely hands with the indelible lines of toil and fatigue. Its tireless energy takes the place of yesterday's human effort. Today, women are awakening to electricity—preserver of youth, giver of freedom.

HAPPINESS in her home is the goal of every wife and mother. She ever strives toward harmony, cleanliness, and charm. Eager to save her household funds and to accomplish more with less expended effort, womankind gratefully turns task after task over to electricity, her obedient and faithful servant, and quickly adapts herself to a richer, happier life—the NEW ELECTRIC WAY!







“What will
the telephone
be like
when
I grow up?”

It's hard to say, young fellow,
but you can be sure there are
great things ahead.

Today we telephone from
moving automobiles, trains, air-
planes and ships far out at sea.
And radio microwaves beam
telephone calls and television
programs from tower to tower
across the country.

The day is coming when you
will be able to reach any tele-
phone in the country simply by
dialing a number.

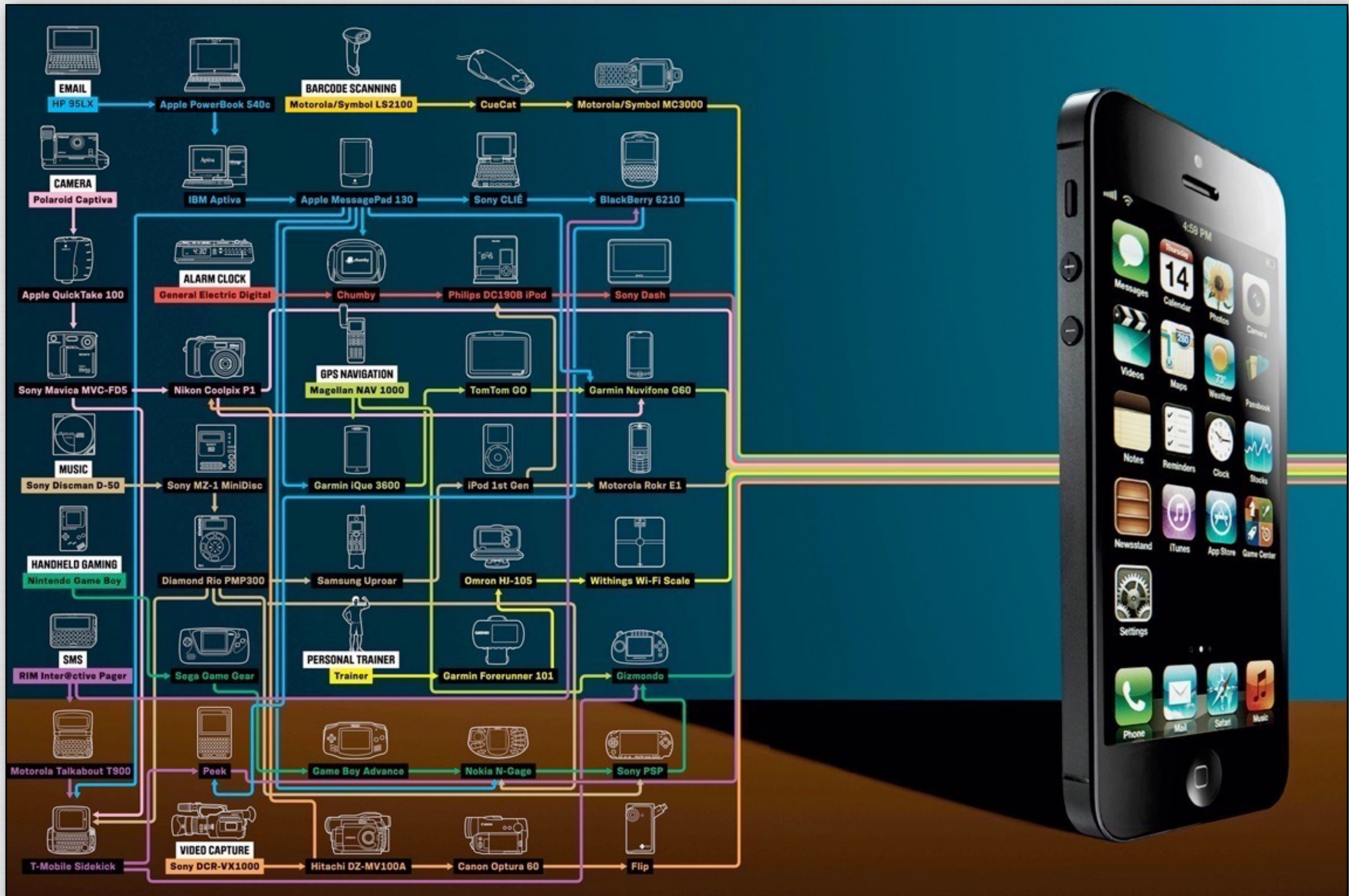
Perhaps some day in the fu-
ture you may just speak the
number into the transmitter and
get your party automatically.

BELL TELEPHONE SYSTEM

The Best Possible Service
at the Lowest Possible Cost



How Over 40 Gadgets Converge Into the Tiny Device in Your Pocket





Users carry out 221 tasks per day on their smartphones,



“

compared to just 140 on a desktop or laptop

”

“

the average user pick ups their phone more than 1,500 times a week

”



The average owner uses this device for three hours and sixteen minutes each day



“

- or the equivalent of almost one full day a week.

”

humans + tech = internet of everything

& everything gets SMART
og bare innen for Norges grenser?

“

- **Digital kompetanse** blir bare viktigere og viktigere. Det er ikke oljekrisen vi bør være mest bekymret for. **Den viktigste omstillingen i Norge vil ikke komme i oljen, men på grunn av de voldsomme endringene i teknologien, sier Nag.**

”

Disse har søkt på nyhetsdirektørjobben i NRK

1. Morten Arne Alsos (36), Horten
2. Alexandra Beverfjord (38), Oslo
3. Trukket
4. Frode Nielsen Børfjord (52), Austre Gausdal, Seniorrådgiver
5. Thorbjørn Gaarder (60), Oslo, Chief credit officer
6. Trukket
7. Veronika Ingebretsen (24), Bjøneroa
8. Kvinne (56)
9. Trukket
10. Trukket
11. Kyrre Nakkim (49), Oslo, Redaktør
12. Mann (40)
13. Eirik Nødset (36), Oslo Chairman and general manager
14. Andreas Olaussen (32), Sarpsborg
15. Mann (41)
16. Prodromos Zachariadis (45), Os, Project Manager



chris dixon
@cdixon

Following



The worst app on my iPhone is this thing called "Phone" where you have to speak synchronously with other humans.

 Reply  Retweet  Favorite

IRIL

AERK



Parking Spot Finder

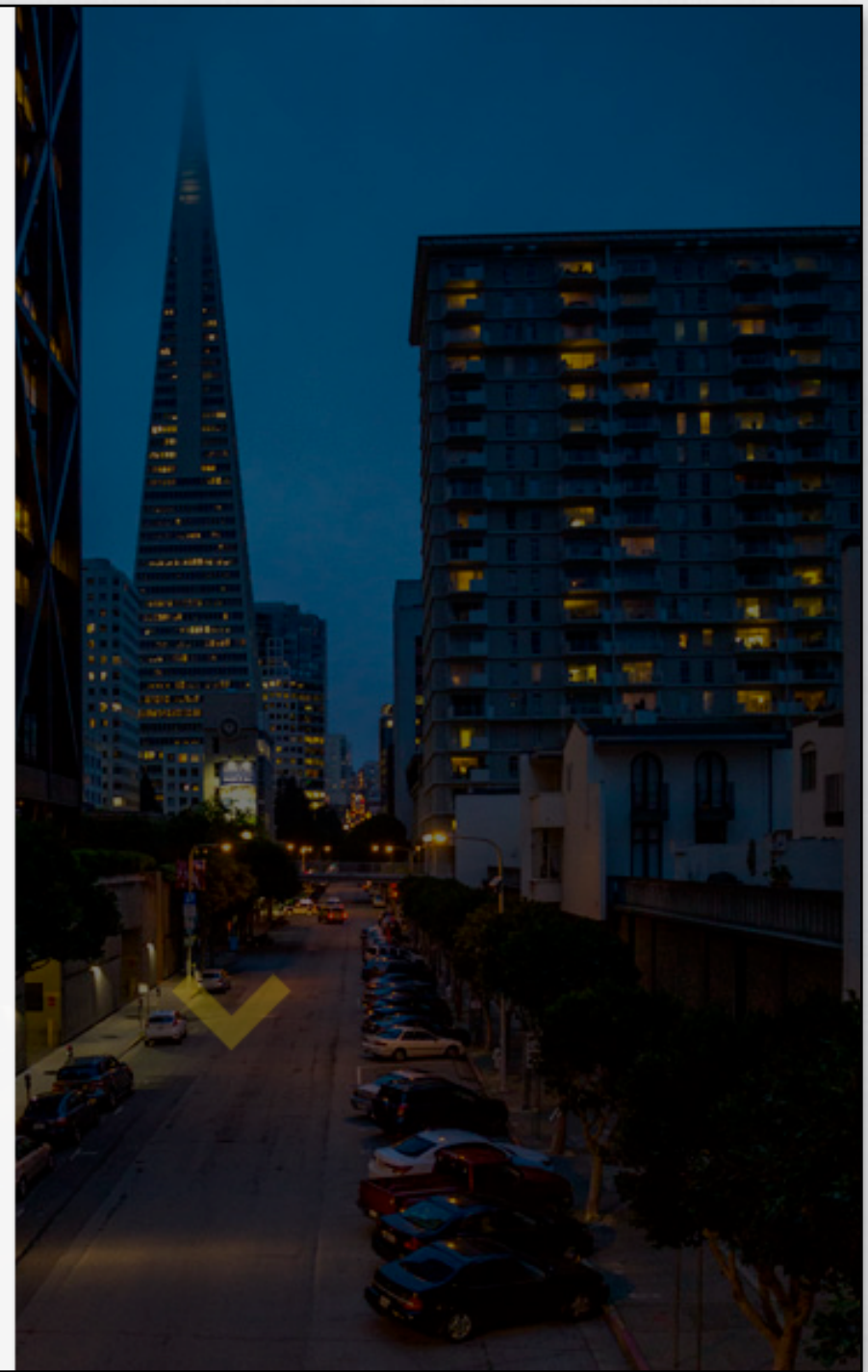
LOCATION Washington Street, between Battery and Davis, San Francisco

COORDINATES 37°47'46" N, 122°23'57" W

SENSOR TYPE Magnetometer

DATA Location of vacant parking spots

It's estimated that one in three drivers on the streets of San Francisco is searching for a parking space. Enter SFpark, a federally funded initiative that aims to solve this problem by gathering parking data and then tweaking parking prices. The pilot program employs several thousand in-ground sensors from an outfit called StreetSmart Technology. The ultralow-power mesh network magnetometers (which have been running nonstop for more than two years) are embedded in some of the most congested neighborhoods. They detect whether a car is directly above them and make that data available to smartphone users looking for a spot. The city uses this info to adjust meter rates and garage pricing to match demand (more demand = higher prices). Increasingly, the stored data is also being combined with citation stats, sales and parking tax data, fuel prices, and even pricing elasticity models to gauge the project's influence on everything from public transit reliability to economic vitality.



- Fremtidig verdiskaping bygger på IKT
- Digitalisering frigir ressurser og effektiviserer offentlig forvaltning
- Digitalisering frigir ressurser og bidrar til å bedre konkurransekraften i privatsektor
- Digitalisering skaper bedre brukeropplevelser

Statens utgifter i 2012?

1 % ?

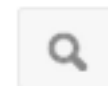
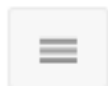
12.524.810.000,-

internett?

3



and the internet will connect
everyone & everything



A 21st-Century Migrant's Essentials: Food, Shelter, Smartphone



Afghans used a generator-powered charging station this month at a camp in Calais, France. The camp's inhabitants hope to cross the Channel to Britain.

PETER NICHOLLS / REUTERS

INTERWET

KILLED

THE

VIDEO STORE?



“a set of rules that describe our reactions to technologies:

1. Anything that is in the world when you're born is normal and ordinary and is just a natural part of the way the world works.
2. Anything that's invented between when you're fifteen and thirty-five is new and exciting and revolutionary and you can probably get a career in it.
3. Anything invented after you're thirty-five is against the natural order of things.”



– Douglas Adams, *The Salmon of Doubt*



user centric by design



Simplicity
that matters.

privacy, safety & security by design



“

**Samsung says all its products
will be connected by 2020**

”


```
if ($internet = 3) {  
    $iot = "internet of things = 4!";  
}
```

I sense

2 communicate

3 analyze (& decide)

4 (decide &) act

“

I can bring up a web browser, and take photos inside grandpa's house. **Has he moved his coffee cup today? Is the telly on? At least then we'll know he's okay.** And I can even type messages” - she changes focus to a textbox inside a web form - “that show up on top. We used ImageMagick for that part...here, you can see it in our code.

”

if you can **flowchart** it, it will **become automated...**

STIFTELSEN FÖR STRATEGISK FORSKNING

*Vårtannat jobb
automatiseras*

inom 20 år

- utmaningar för Sverige



Sannolikheten att yrken tas över av datorer under de kommande 20 åren

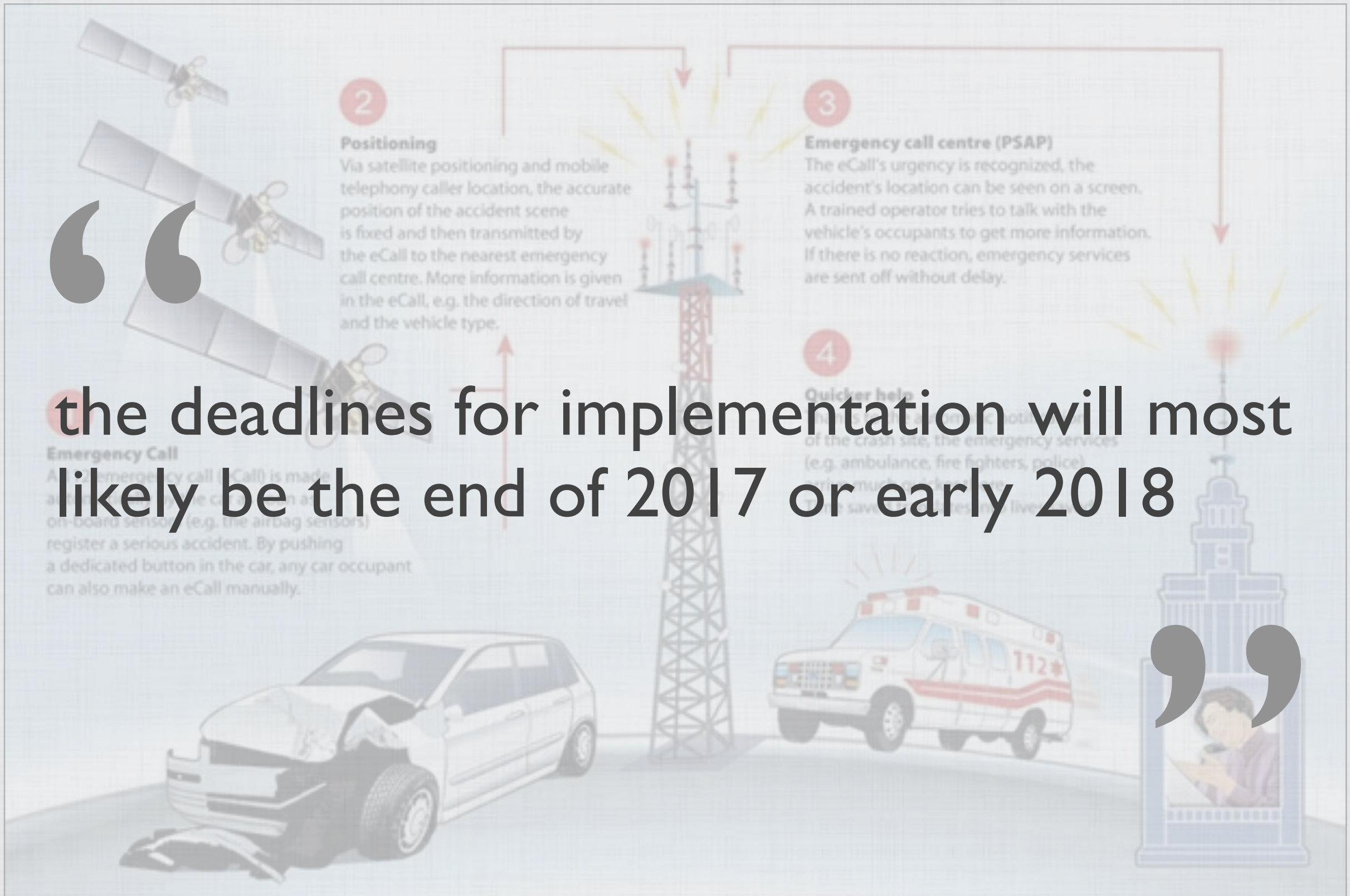
Yrkeskod

521	fotomodeller m.fl.	98,0%
412	bokførings- og redovisningsassistenter	97,0%
824	maskinoperatører, trøvaruindustri	97,0%
414	biblioteksassistenter m.fl.	96,6%
421	kassapersonal m.fl.	95,3%
921	medhjelpare inom jordbruk, trødgård, skogsbruk og fiske	95,0%
829	øvrige maskinoperatører og montører	94,8%
522	førsøljere, detaljhandel; demonstratører m.fl.	94,4%
911	torg- og marknadsførsøljere	94,0%
419	øvrige kontørspersonal	94,0%
915	renhøllnings- og återvinningsarbetare	93,0%
411	kontørssekretterare og dataregistrerare	92,2%
828	montører	91,4%
833	maskinførare	90,2%
823	maskinoperatører, gummi- og plastindustri	89,8%
831	lokførare m.fl.	89,6%
343	redovisningsekonomer, administrative assistenter m.fl.	89,3%
812	processoperatører vid støl- o metallverk	89,0%
913	køks- og restaurangbitråden	88,6%
512	størhushølls- og restaurangpersonal	88,4%
742	møbelsnickare, modellsnickare m.fl.	87,9%
722	smeder, verktygsmakare m.fl.	87,1%
741	slaktare, bagare, konditører m.fl.	87,1%
811	malmførsødlingsoperatører, brunnborrare m.fl.	86,8%
822	maskinoperatører, kemisk-teknisk industri	86,2%
815	processoperatører, kemisk basindustri	85,0%
931	grovarbetare inom bygg og anleggning	84,8%
721	gjutare, svetsare, pløtslagare m.fl.	84,1%
813	processoperatører, glas og keramiske produkter	83,3%
342	agenter, førsømediare m.fl.	81,7%
834	døckspersonal	81,2%
825	maskinoperatører, grafisk industri, pappersvaruindustri	81,1%
732	drejere, gløshytttearbetare, dekorationsmølere m.fl.	80,6%
832	fordonsførare	80,1%
614	skogsbrukare	79,8%
413	lager- og transportassistenter	78,8%
415	brevbæreare m.fl.	78,6%

821	maskinoperatører, metall- og mineralbehandling	78,4%
933	godshanterare og expressbud	77,9%
827	maskinoperatører, livsmedelsindustri m.m.	76,8%
826	maskinoperatører, tekstil-, skinn- og læderindustri	75,7%
714	mølere, lækkerare, skorstensfejere m.fl.	75,5%
814	processoperatører, trø- og pappersindustri	75,0%
914	tidningsdistributører, vaktmøstare m.fl.	74,6%
734	grafiker m.fl.	74,5%
422	kundinformatører	73,4%
712	byggnads- og anleggningssarbetare	73,0%
711	gruv-, bergarbetare og stenhuggare	72,2%
341	søljere, inkøpere, møklare m.fl.	71,2%
919	øvrige servicarbetare	71,1%
932	handpaketerare og andre fabriksarbetare	70,3%
324	biomedicinske analytiker	68,7%
723	maskin- og motorreparatører	66,7%
743	skråddare, tøllskårare, tapetserare m.fl.	65,5%
515	søkerhetspersonal	65,4%
912	stødare m.fl.	64,4%
816	driftmaskinister m.fl.	63,7%
612	djuruppfødere og djurskøtare	63,4%
613	vøxtodlare og djuruppfødere, blandad drift	63,4%
615	fiskare og jægere	62,4%
511	resevørdar m.fl.	62,3%
611	vøxtodlare inom jordbruk og trødgård	61,1%
724	elmontører, tele- og elektronikkreparatører m.fl.	57,2%
311	ingenjører og teknikker	56,4%
243	arkivarier, bibliotekarier m.fl.	50,4%
744	garvare, skinnberedare og skomakare	50,3%
713	byggnadshantverkare	49,5%
241	føretøgsekonomer, marknadsførsøre og personaltjønstemøn	46,2%
731	finmekanikker m.fl.	42,4%
315	søkerhets- og kvalitetsinspektører	40,5%
733	konsthantverkare i trø, tekstil, læder m.m.	37,2%
313	fotografer, llyd- og bildteknikker, sjukhusteknikker m.fl.	36,6%
817	industrirobotoperatører	36,0%
322	sjukgymnaster, tandhygienister m.fl.	35,8%
513	vørd- og omsørgspersonal	34,1%
344	tøll-, taxerings- og sosialførsøkringstjønstemøn	33,0%
314	piloter, fartøgsbeføl m.fl.	32,1%
312	datateknikker og dataoperatører	30,2%

514	frisører og annan servicepersonal, personlige tjønster	29,0%
244	samhølls- og sprøkvøtare m.fl.	25,5%
247	administratører i offentlig førsøvaltning	23,0%
248	administratører i intrøseorganistationer	23,0%
123	chefer førsø særskilde førsøktioner	23,0%
347	tecknare, underhøllare, professionelle idrottsutøvere m.fl.	22,8%
211	fysiker, kemister m.fl.	21,4%
245	journalister, kunstnære, skødespelare m.fl.	18,9%
212	matematikker og statistikker	17,7%
345	poliser	13,9%
122	drift- og verksamhetschefer	13,0%
332	andra lærare og instruktører	13,0%
131	chefer førsø mindre føretog og enheter	12,1%
213	dataspecialister	11,7%
346	behandlingssassistenter, fritidsledare m.fl.	11,2%
242	jurister	8,0%
232	gymnasielørare m.fl.	6,4%
222	hølsø- og sjukvørdsspecialister	6,0%
233	grundskøllørare	5,6%
331	førsøskøllørare og fritidspedagoger	5,2%
214	civillingenjører, arkitekter m.fl.	4,9%
221	specialister inom biologj, jord- og skogsbruk m.m.	3,0%
249	psykologer, sosialsekretterare m.fl.	3,0%
348	pastører	2,5%
112	chefstjønstemøn i intrøseorganistationer	1,5%
121	verkstøllande direktører, verkschefer m.fl.	1,5%
111	høgre ømbetsmøn og politikker	1,2%
234	speciallørare	1,1%
235	andra pedagoger med teoretisk spesialistkompetens	0,9%
246	prøster	0,8%
321	antmøstare, skogsmøstare m.fl.	0,8%

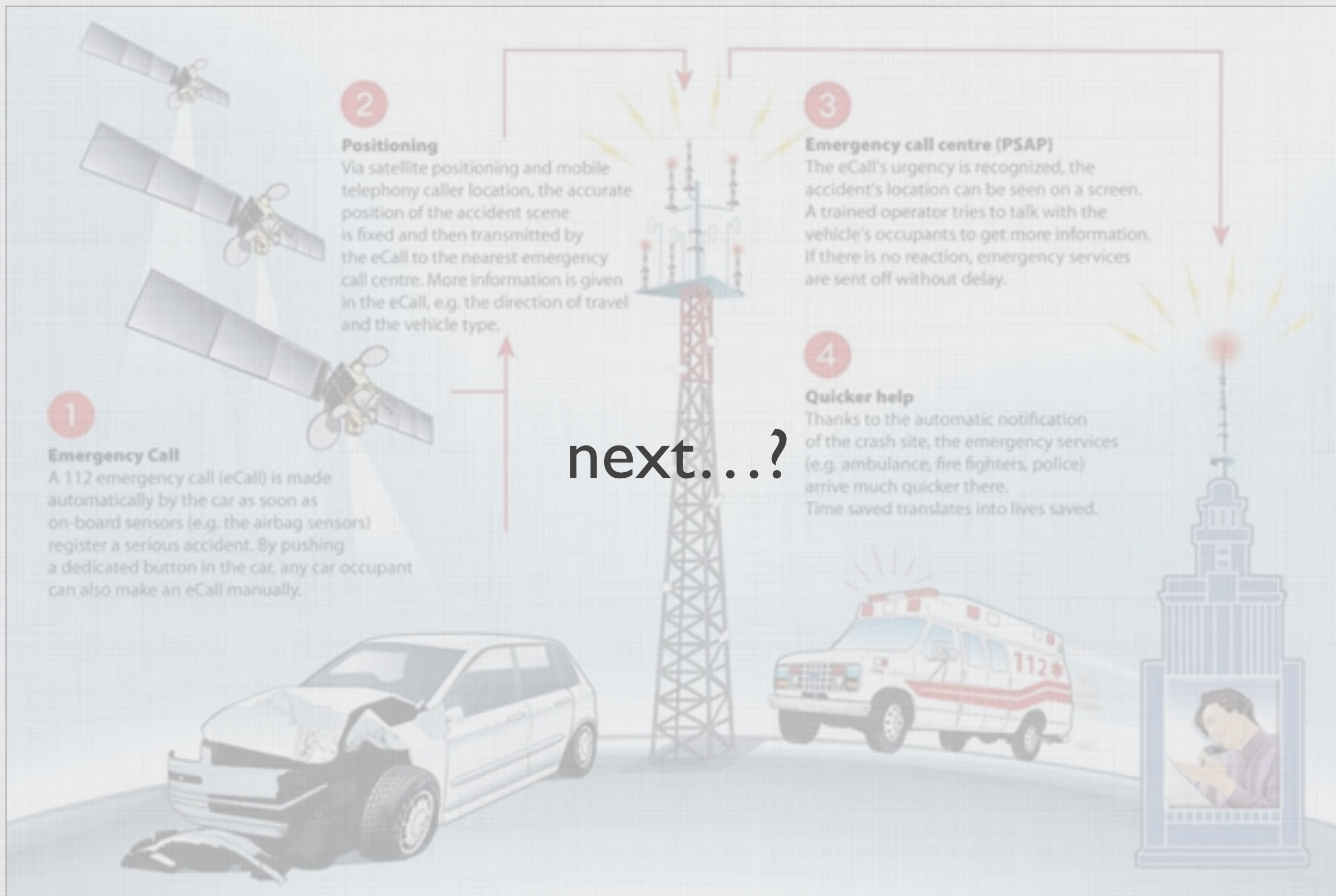
jurister 8.0%
prester 0.8%



“

the deadlines for implementation will most likely be the end of 2017 or early 2018

”



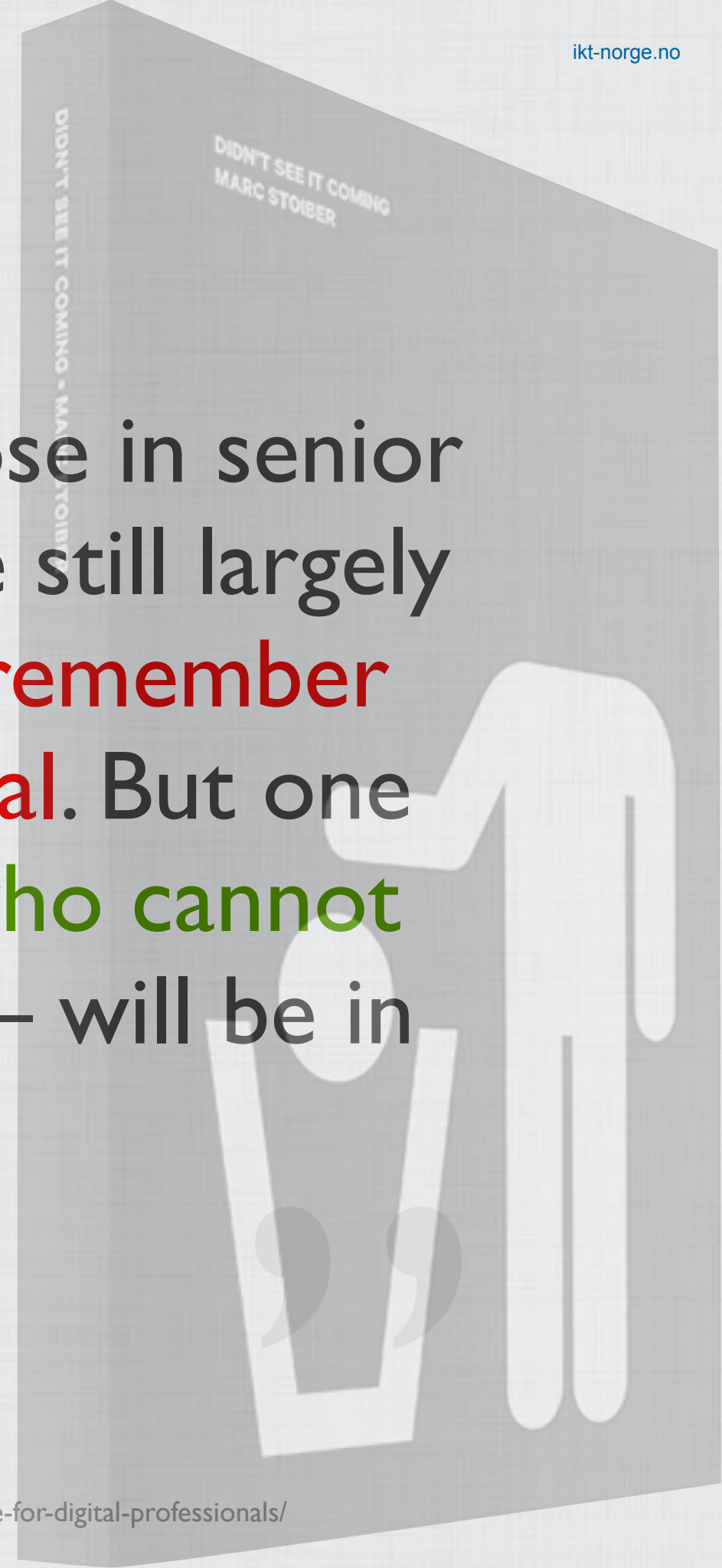


The Cybernetic Human

1. Brain implants augment memory and provide access to the internet
2. Wearable exoskeleton boosts strength and endurance
3. Internet-connected spinal implant stimulates genitals for long-distance sex
4. Interchangeable limbs match capabilities to tasks
5. Access-control chips replace keys and passwords

“

Workforces — especially those in senior management positions — are still largely made up of people who can remember what life was like before digital. But one day digital natives — those who cannot remember a pre-digital era — will be in the majority.



1999:

Viacom holds Blockbuster IPO, valued at up to \$4.8 billion



Vala Afshar ✓
@ValaAfshar



Follow

"Investor concern over the threat of new technologies is overstated." — Blockbuster analyst report, 1999



2010:

Drowned in revenue losses of \$1.1 billion, sources say Blockbuster plans to file for bankruptcy. The company is valued at just \$24 million

meanwhile in Norway...



- Det fysiske formatet har en fremtid, sier leder i Rettighetsalliansen Willy Johansen. Foto: Thomas T. Kleiven





Startup L. Jackson
@StartupLJackson



Following

You can't win without a good product, but even a great product is rarely sufficient.

p.s. Anybody want to buy my Betamax tape collection?

“

**Uber, the world's largest taxi company,
owns no vehicles.**

”

“

Facebook, the world's most popular media owner, creates no content.

”

“

**Alibaba, the most valuable retailer, has
no inventory.**

”

“

And Airbnb, the world's largest accommodation provider, owns no real estate.

”

I foresee a marked **deterioration** in American music and musical taste, an **interruption** in the musical development of the country, and a host of other injuries to music in its artistic manifestations, by virtue – or rather by vice – of the multiplication of the various **music-reproducing machines**.

John Philip Sousa,
"The Menace of Mechanical Music,"
Appleton's Magazine, Vol. 8 (1906)

“

The only thing worse than training your employees and having them leave is **not training them and having them stay**

Henry Ford

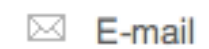
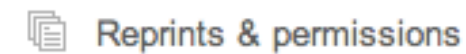
”



The music industry

From major to minor

“In 2006, EMI, the world's fourth-biggest recorded-music company, invited some teenagers into its headquarters in London to talk to its top managers about their listening habits. At the end of the session the EMI bosses thanked them for their comments and told them to help themselves to a big pile of CDs sitting on a table. But none of the teens took any of the CDs, even though they were free. “That was the moment we realised the game was completely up,” says a person who was there.”

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“

...jeg vet om selskaper som har måttet skifte forretningsmodell på grunn av teknologiutvikling - sånn kan det vel ikke være meningen at det skal være...

the names have been changed to protect the innocent...

”

eller...?

“

*...jeg vet om myndigheter som har måttet **justere reguleringen** på grunn av teknologiutvikling - sånn kan det vel **ikke være meningen** at det skal være...*

will the names be changed to protect the innocent...?

”

“

The **future** is already **here**
— it's just not very evenly distributed

”

William Gibson



**Congratulations to Audi for winning
South African Car of the Year 2006.**



**From the Winner of
World Car of the Year 2006.**

Although anyone who has been behind the wheel of the much-awarded A-Series is well aware that it's without doubt the iconic sports sedan, it was gratifying to have that fact officially confirmed by 16 of the world's leading motoring journals. When every new car around the world was scrutinized and tested, a combination of inspirational handling, thrilling performance and superior finishes convinced the world's most discerning say that the BMW A-Series is without doubt, the world's finest car.

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Le Mans 24 Hour Races
2000-2006**



Vorsprung durch Technik audi.co.uk





- acknowledge the users (real) needs
- understand technology, yes understand technology
- remove the obstacles
- mandate everyone to facilitate
- build for the future
- procure for the future*
- digital infrastructure must function for everyone in the food chain
- don't get lost in regulatory misconceptions & details
- think security in all steps
- look back upon today from 2050

“

You know we're sitting on four million pounds of fuel, one nuclear weapon and a thing that has 270,000 moving parts built by the lowest bidder. Makes you feel good, doesn't it?

”

Armageddon (1998)

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3.754



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