

Digital mobilitet



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ITS

Trondheim, 16 mars 2017

1. Elektrisk og ren
2. Autonom og intelligent
3. Sammenkoblet og trygg
4. Sosial
5. Virtuell
6. ...



100 Totalt annerledes?

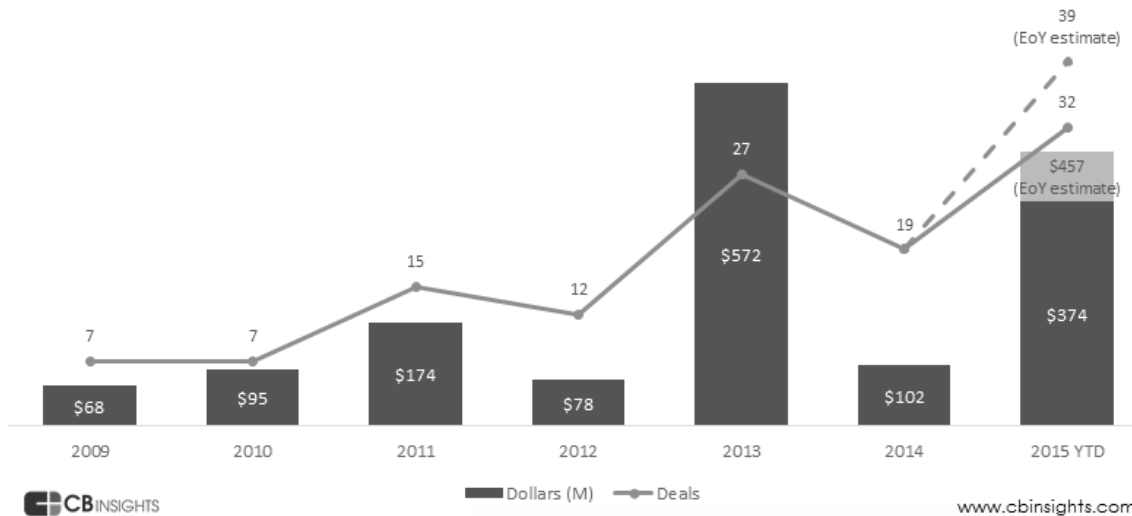
Tre raske: software på hjul (ref CB Insights)#3

The Auto Tech Market Map

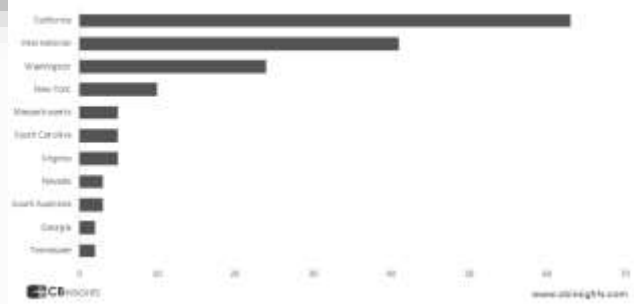


Software companies are working in a broad range of areas, from telematics to cybersecurity, in order to reinvent the future of driving.

Deals and Dollars Into Auto Tech
2009 - 2015 YTD (10/27/2015)



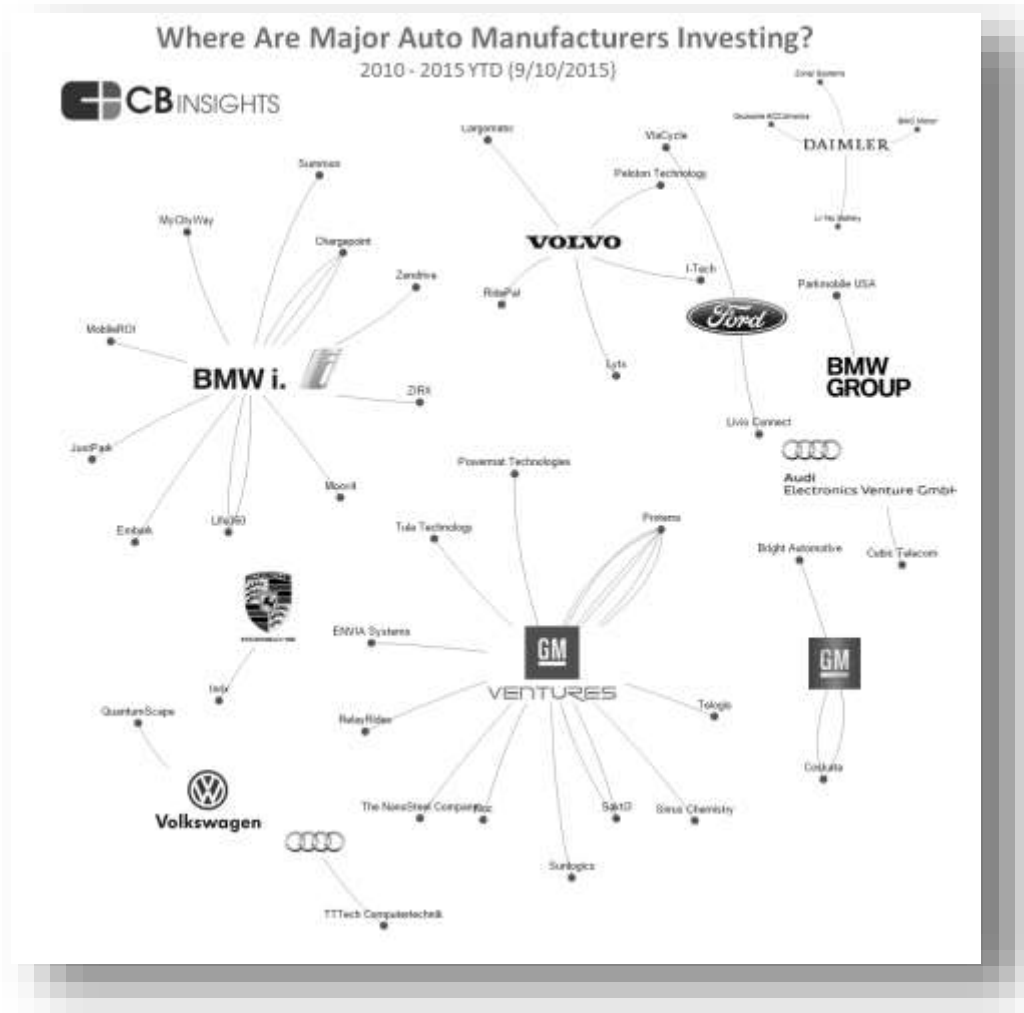
Of Deals Into Auto Tech By Geography
2009 - 2015 YTD (10/27/2015)



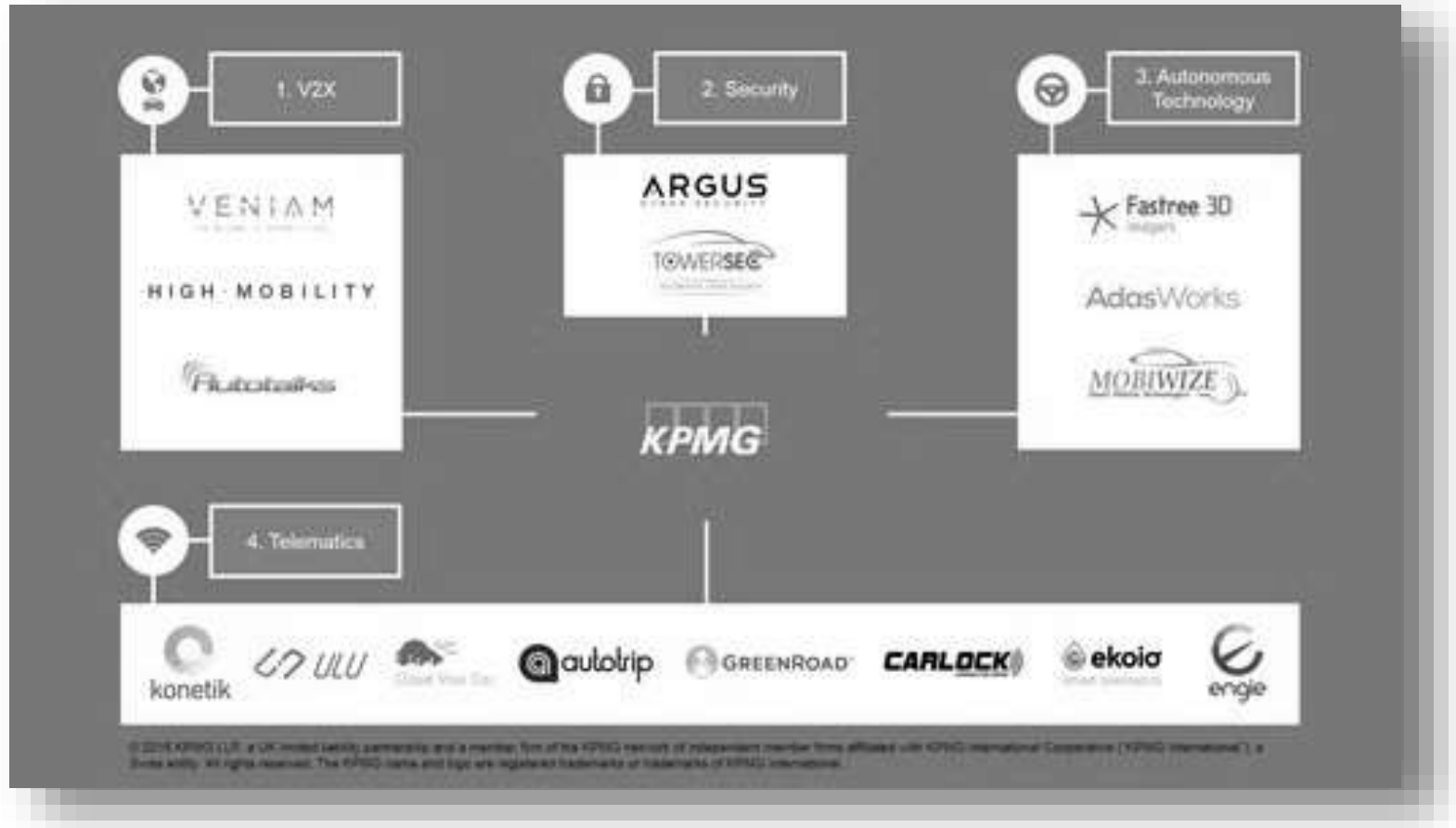
Top Investors In Auto Tech Companies

Investor	Select Companies
Intel Capital	INRIX, Peloton, Robot of Everything
MAGNA	Peloton, Zbie, ARGUS
NGP	Peloton, Zbie
General Catalyst	Peloton, Zbie
Combinator	CRUISE, AUTOMATIC
Bain Capital Ventures	INRIX, Cruise
magma	Autotalks, ARGUS
NEA	SMARTDRIVE, Metromile
First Round Capital	Metromile, ZENDRIVE
Founders Fund	AUTOMATIC, SMARTDRIVE
ignition	EVOLUTION, Airbiquity
Volkswagen Group Venture Capital	lytx, Peloton
KPCB	INRIX, Telogis
PENTINALIS	Telogis, ZENDRIVE
QUALCOMM VENTURES	iOnRoad, nady

With tech giants and auto makers involved in a race to deploy self-driving cars, there's renewed attention on auto tech. A flurry of new auto tech startups have been funded in the last few years, and some notable companies have emerged.



BMW, Audi, GM And The Rest Of Big Auto Are Betting On Startups



With three out of four cars sold in the UK being connected by 2020, and in-car electronics now approaching 50% of total product cost, the holy grail of transportation – the autonomous vehicle - is much closer than most people realise.



Chris Urmson TED: How a driverless car sees the road

So in 1885, Karl Benz invented the automobile. Later that year, he took it out for the first public test drive, and — true story — crashed into a wall. For the last 130 years, we've been working around that least reliable part of the car, the driver. We've made the car stronger. We've added seat belts, we've added air bags, and in the last decade, we've actually started trying to make the car smarter to fix that bug, the driver.

Even today, the average vehicle contains more lines of code than an F-35 fighter jet, with this figure set to triple as cars become intelligent, connected self-driving devices.




E.g.: The embedded driver's heart and respiration sensing system by the Harken consortium. Wouldn't you want an alarm to go off if you fall asleep driving?

1. Eksponentiell
2. Kombinatorisk
3. Polariserende

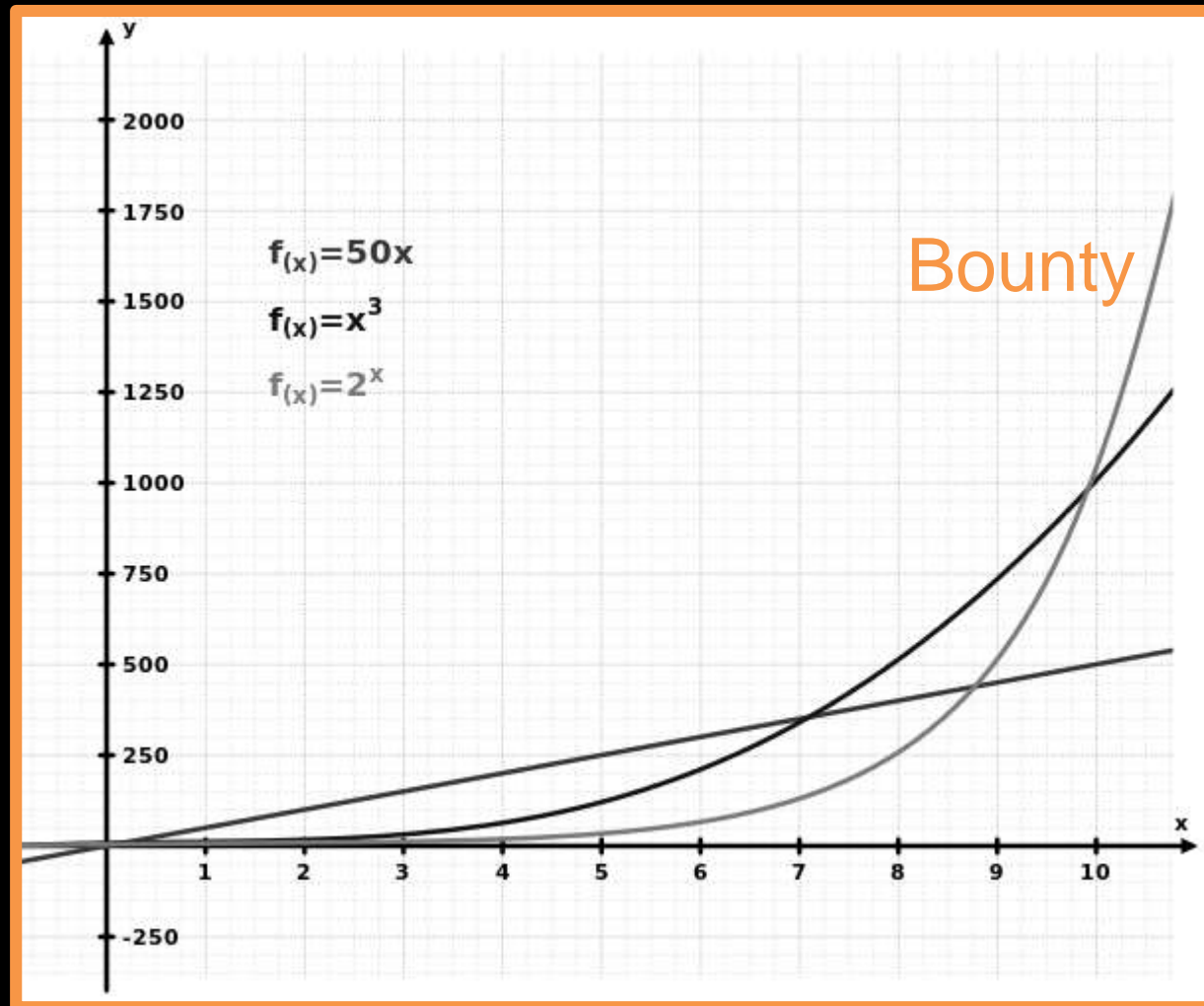
Navigating the next industrial revolution

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE FUTURE BY ENHANCING THE REACH OF THE WORLD'S IDEAS.

Revolution	Year	Information
	1	1784 Steam, water, mechanical production equipment
	2	1870 Division of labour, electricity, mass production
	3	1969 Electronics, IT, automated production
	4	? Cyber-physical systems

Graph 1: eksponentiell

#10



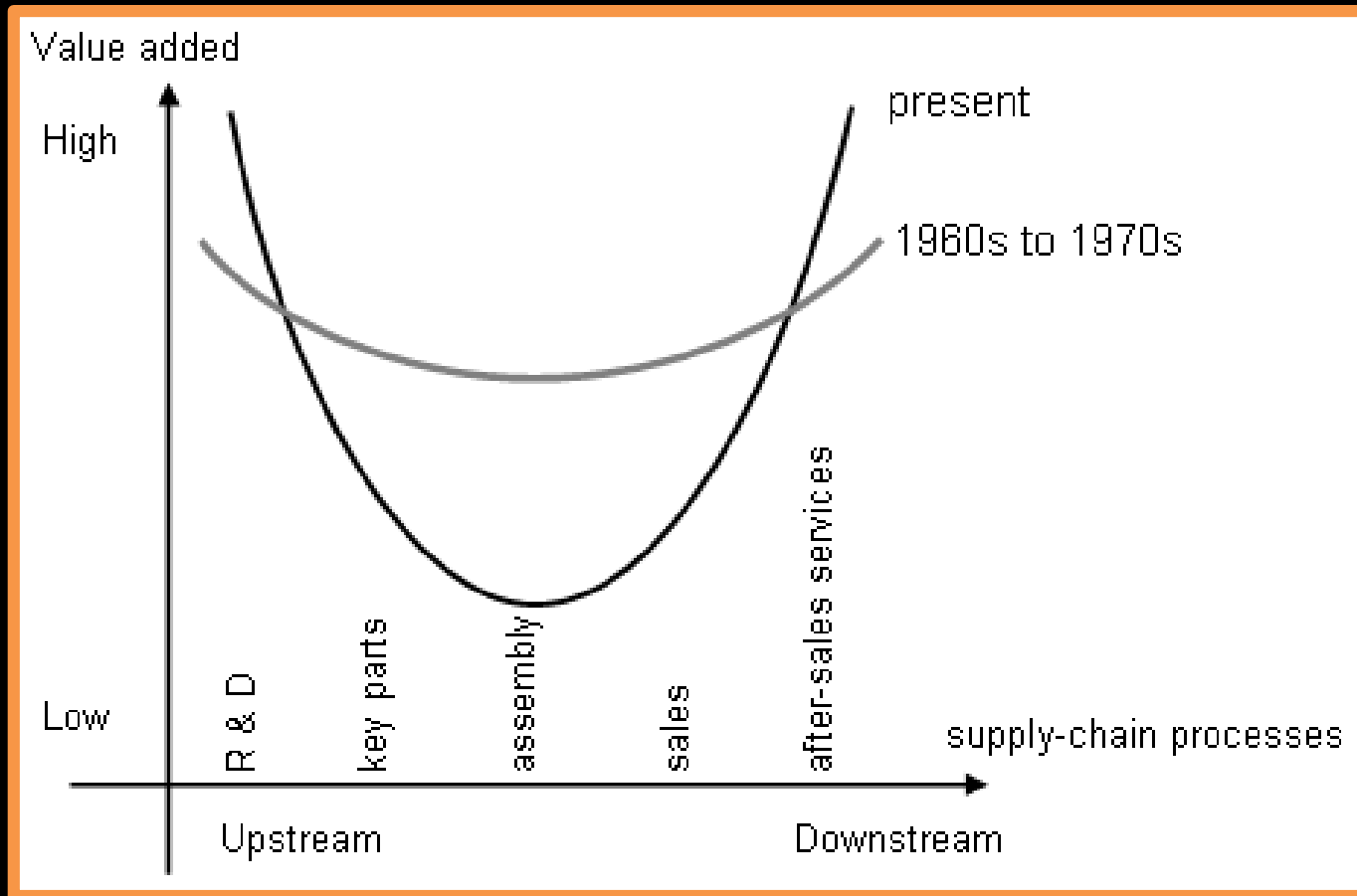
Graph 1: polariserende

#11



Enabling technologies

Market platforms



- 
1. Kunstig intelligens, big data
 2. Roboter, automatisering
 3. Biotech, bioinformatikk
 4. Energi, klimasystemer
 5. 3D printing, nanotech
 6. Nettverk, sensorer
 7. Digital medisin
 8. Fintech, regtech, edtech
 9. VR og AR
 10. Genetikk
 11. Transport og droner
 12. Kunst, sosiale strukturer, politikk...

Big Data, Artificial Intelligence
Cognitive capabilities that can
augment or replicate human thinking



Robotics
Next generation robotics/automation
technologies to work with humans



Biotechnology & Bioinformatics
Digitization of the genome + ability
reprogram DNA for new therapies



Energy & Environmental Systems
Greater cost effective management
of inputs/outputs than ever before



Digital Mftg. & Nanotechnology
3D printing and digital design digitize
product creation and distribution



Computation, Networks & Sensors
Increased speed, declining costs of
computation, networking, and sensing



Digital Medicine
Increasing the sensing capabilities
focused around the human body



Convergence
Though individually
powerful, the real power
of exponentials lies in
their convergence –
when different
technologies merge into
a new, unified whole.



Crowdsourcing & Micro-work
Leveraging communities to
achieve a specific goal



Crowdfunding
Leveraging the public to fund the
creation of a product or company



Incentive Competitions
Prize-based competitions to engage
the community to solve a problem



DIY & the Maker Movement
Creative potential unlocked when the
public can make their own items



Digital Economies/Blockchain
Crypto-currency, mobile payments,
and other economic innovations



Gamification
Leveraging game mechanics to
incentivize specific behaviors



Sharing and Social Economy
An economic model that focuses
on community and sharing



Det er ingen sjans at iPhone får noen betydelig markedsandel.

Microsofts Steve Balmer, sa i 2007



Det tok oss mange år å lage en god telefon...
PC folk kan ikke bare komme hit.

Palm-CEO Ed Colligan i 2006



Med Mac fikk Apple først mye oppmerksomhet, men forble en nisjeaktør...
det blir deres rolle i mobiltelefoni også.

Nokia's sjefstrateg Anssi Vanjoki i 2009



Amazon.com er et interessant salgskonsept, men vent og se hva vår kunde Wal-Mart skal gjøre... IBM genererer allerede mer inntekter og mer profitt enn alle de beste Internett-selskaper til sammen. Lou Gerstner, i 1999

Det ville være en vanskelig oppgave som krever flere titalls milliarder dollar i kapital og år. (om Amazons beslutning om å lease fly og kjøpe sine egne lastebiler)

FedEx konserndirektør Mike Glenn sa i mars 2016

“

Netflix er ikke en gang på radarskjermen i form av konkurranse

Blockbuster konsernsjef Jim Keyes i 2008,

“

Det er litt som om den Albanske hæren kommer til å ta over verden; jeg tror ikke det. (om selskapets planer for lisensiert innhold)
Time Warner CEO Jeffrey Bewkes i 2010

“

Forestillingen om at selskaper som Netflix bytter ut TV-sendinger kan ikke være helt nøyaktig og vi trenger mer perspektiv.

Alan Wurtzel, NBCUs president for medieutvikling, 2016

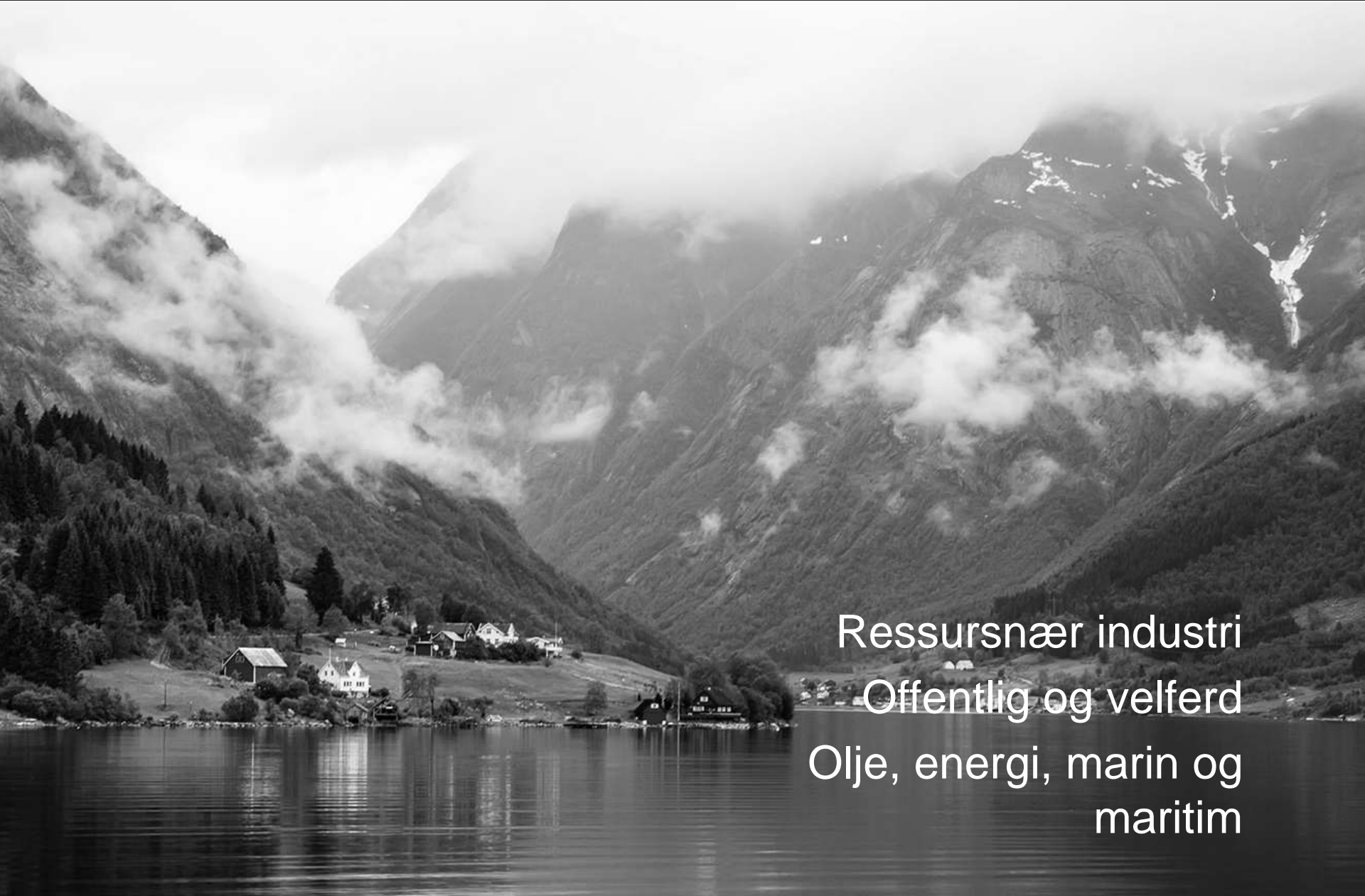


“Var det et rykte om at Mercedes eller Daimler planlegger å bygge smartphones, så ville ikke Apple vært søvnløs om natten; og det samme gjelder for meg. Daimler sjef Dieter Zetsche i 2015



“En iPhone hører hjemme i lommen, ikke på veien.

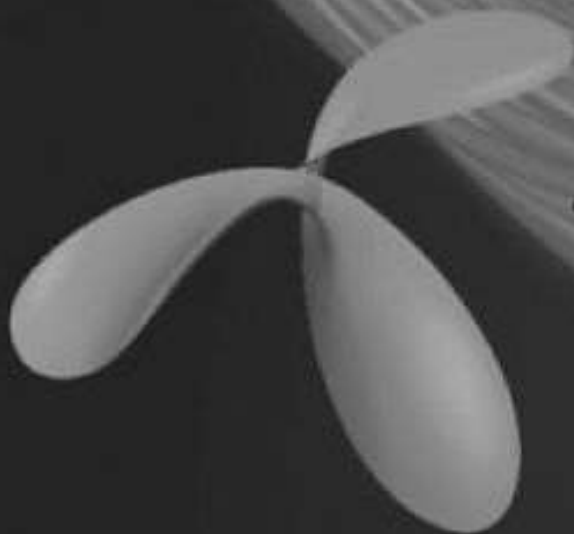
Porsche konsernsjef Oliver Blume i 2016



Ressursnær industri
Offentlig og velferd
Olje, energi, marin og
maritim



Andre hamskift: fra landlinje til mobil til digital.



telenor



“*Fra bulk til NATO logistikk til IT tjenester til JIT manufacturing!*”



“

Fra media til transport til energi.



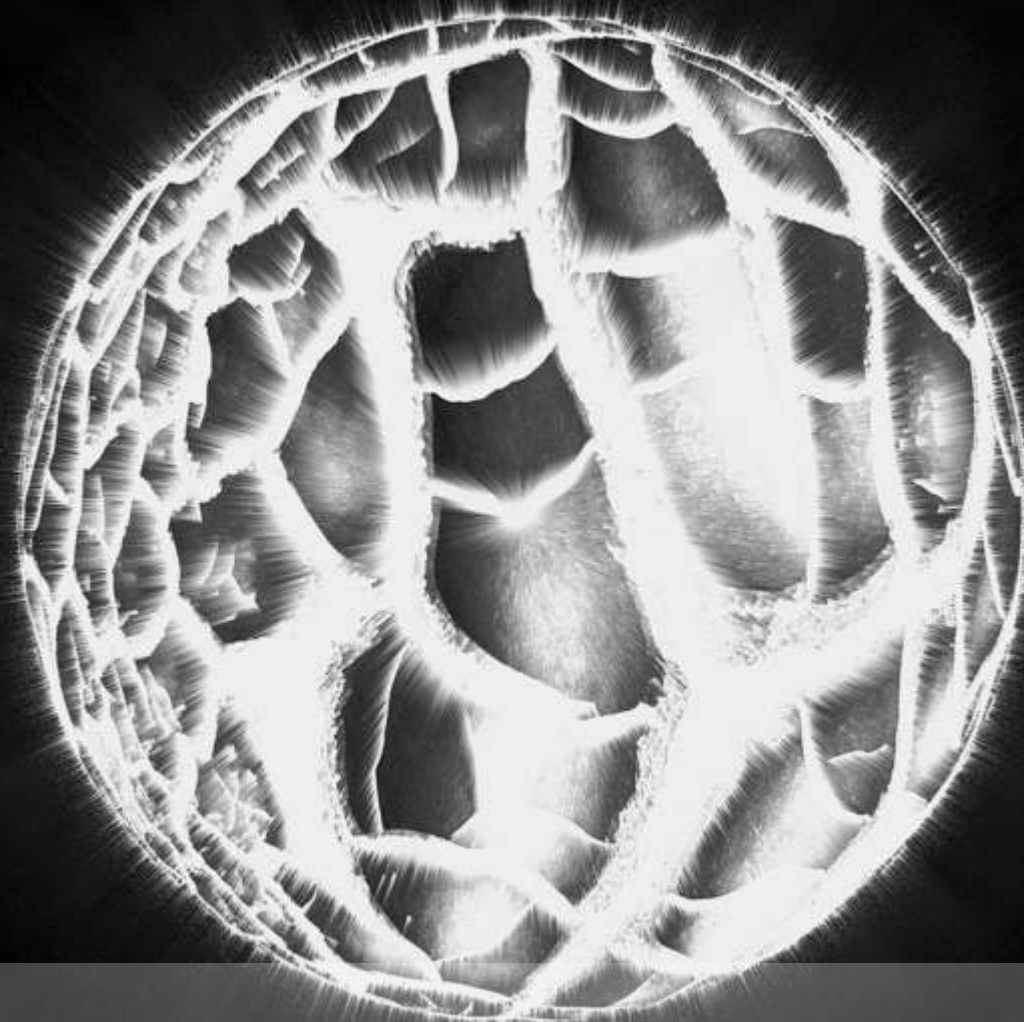
Busser, mobilitet eller frihet?





“

Hva er samfunnsoppdraget?



Polarisering, algoritmisering, globalisering

Kunnskapens halveringstid er nede fra 30 til 5 år

John Seely Brown (Chief of Confusion men også Chief Scientist ved Xerox og sjef i PARC)



HIRES VS JOB OPENINGS



SOURCE: Bureau of Labor Statistics via FRED

BUSINESS INSIDER



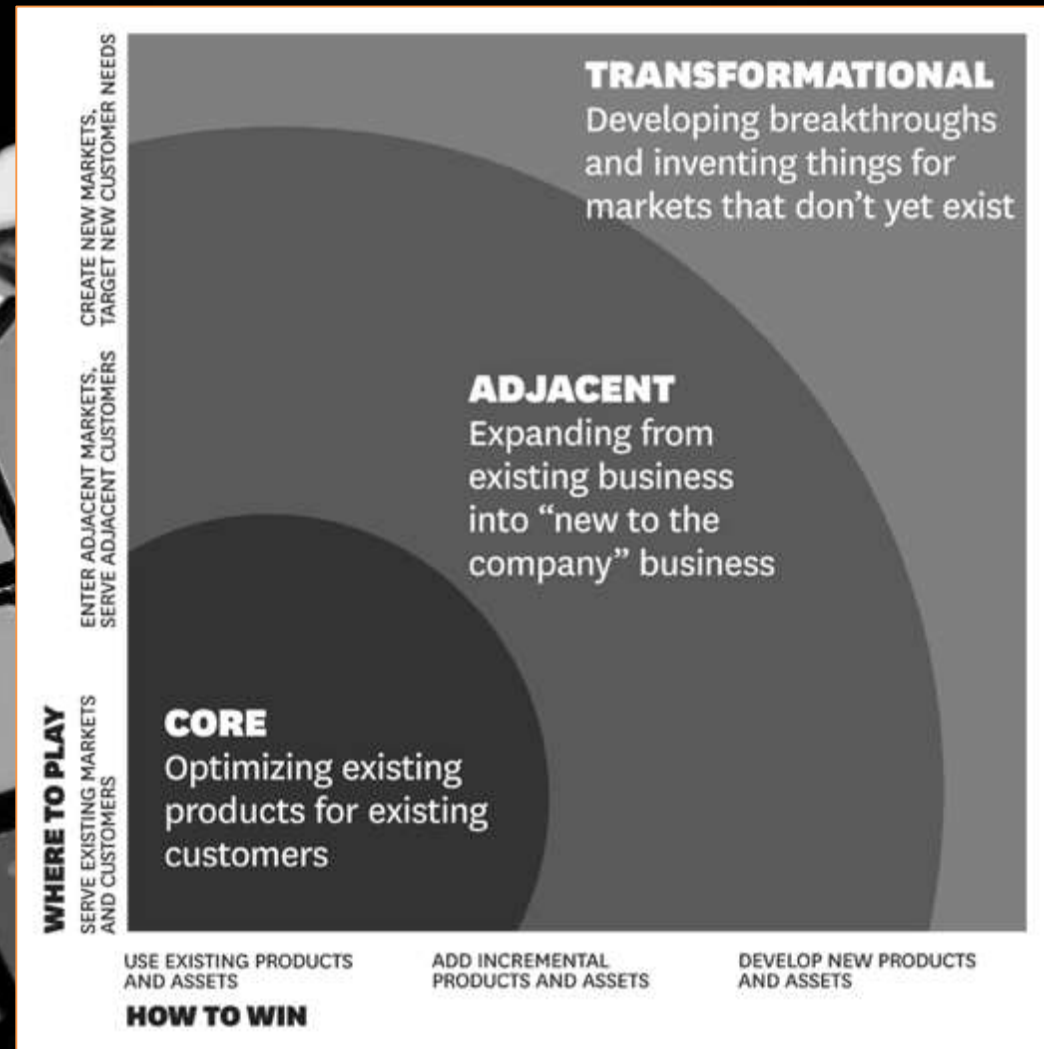
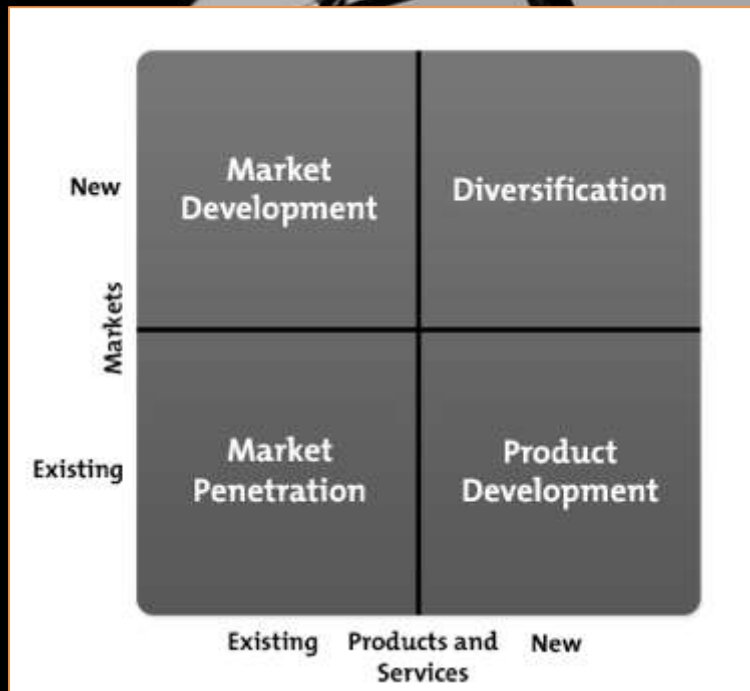
Må ha STABILITET

i:

1. Verdier
2. Visjon
3. Strategi
4. Relasjoner
5. Nettverk

Må også ha AGILITET i:

1. Ressursallokering
2. Budsjettering
3. Forretnings-
portefølje
4. Individuelle
jobbeoppgaver
5. Forretningsmodell





Takk!

#32



Spørsmål?

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