

# GREAT HealthTech seminarium



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*Ordförande, GREAT  
VD, HiQ Göteborg*



**Peder Wahlgren**  
*CEO, GoCo Health  
Innovation City*



**Charlotta Gummeson**  
*CEO,  
Sahlgrenska Science Park*



**Joakim Hökegård**  
*Styrelsemedlem, GREAT  
Kommunikations-  
strateg, HiQ*



**Frode Langmoen**  
*Technology Executive,  
IBM*



**Henrik Cederqvist**  
*VD, Cuviva*

*Digitalisering  
som möjliggörare för  
en vård i världsklass  
– lärdomar i  
kölvattnet av  
coronapandemin*





**Jerker Lindstén**

Ordförande, GREAT  
VD, HiQ Göteborg

**Välkommen!**





## Om GREAT

GREAT tror på digitaliseringens kraft och möjligheter genom att samarbeta, utbyta erfarenheter, driva debatt och sprida kunskap för att utveckla människor, företag och organisationer i Västsverige.

Vi är den naturliga samverkans-arenan för näringslivet, akademien och samhället i Västsverige kring aktuella IT-infrastruktur & digitaliseringsfrågor.

**2004**  
*startade*

**50**  
*medlemmar*

**8-10**  
*aktiviteter/år*

**WELL**  
*connected*



## Medlemmar

Föreningen består av ett 50-tal aktörer; operatörer, företag, föreningar, universitet och högskolor, kommuner samt kommunala och regionala bolag. Som medlem ingår man i ett professionellt nätverk och man har möjlighet att vara med att påverka samt utveckla det digitala Västsverige.

### Huvudsponsorer



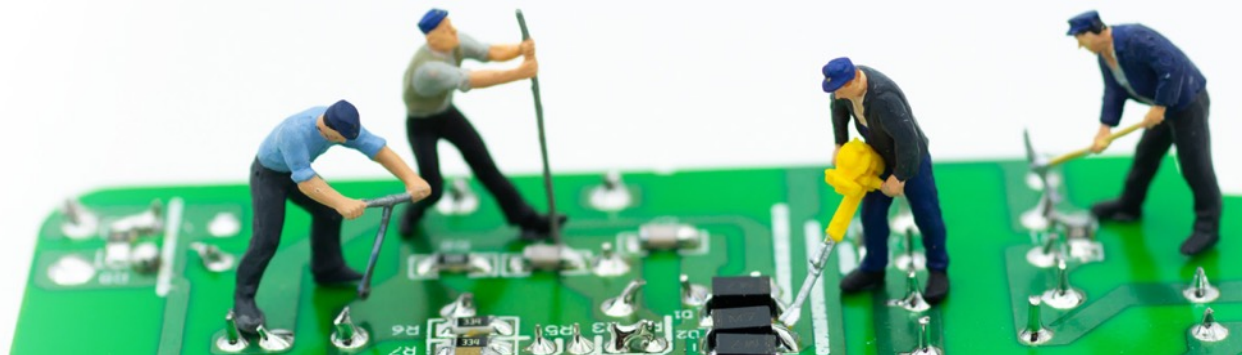
Framtidens  
Bredband



Göteborgs Stad



Västra  
Götalandsregionen



# Verksamhet

**Infrastruktur**



**Välfärdssamhället 2.0**



**Internet of Things**





**GREAT verkar för det digitala samhällets  
utveckling, innovation och livskvalitet  
för individer, företag och organisationer.**

**[great-it.se](https://great-it.se)**



## **Joakim Hökegård**

Styrelsemedlem, GREAT  
Kommunikationsstrateg, HiQ

# Moderator





**Peder Wahlgren**

CEO, GoCo Health  
Innovation City



**Charlotta Gummesson**

CEO, Sahlgrenska  
Science Park





## **Joakim Hökegård**

Styrelsemedlem, GREAT  
Kommunikationsstrateg, HiQ

*En ny värld tar form  
– Digital samverkan  
för bättre vård  
och konkurrenskraft*





**GREAT HealthTech**

***En ny värld tar form***

***– Digital samverkan***

***för bättre vård***

***och konkurrenskraft***

CASH WAS KING

Sätt in ditt kort  
Please insert your card

BEDLAR

KORT



# SHIFT HAPPENS



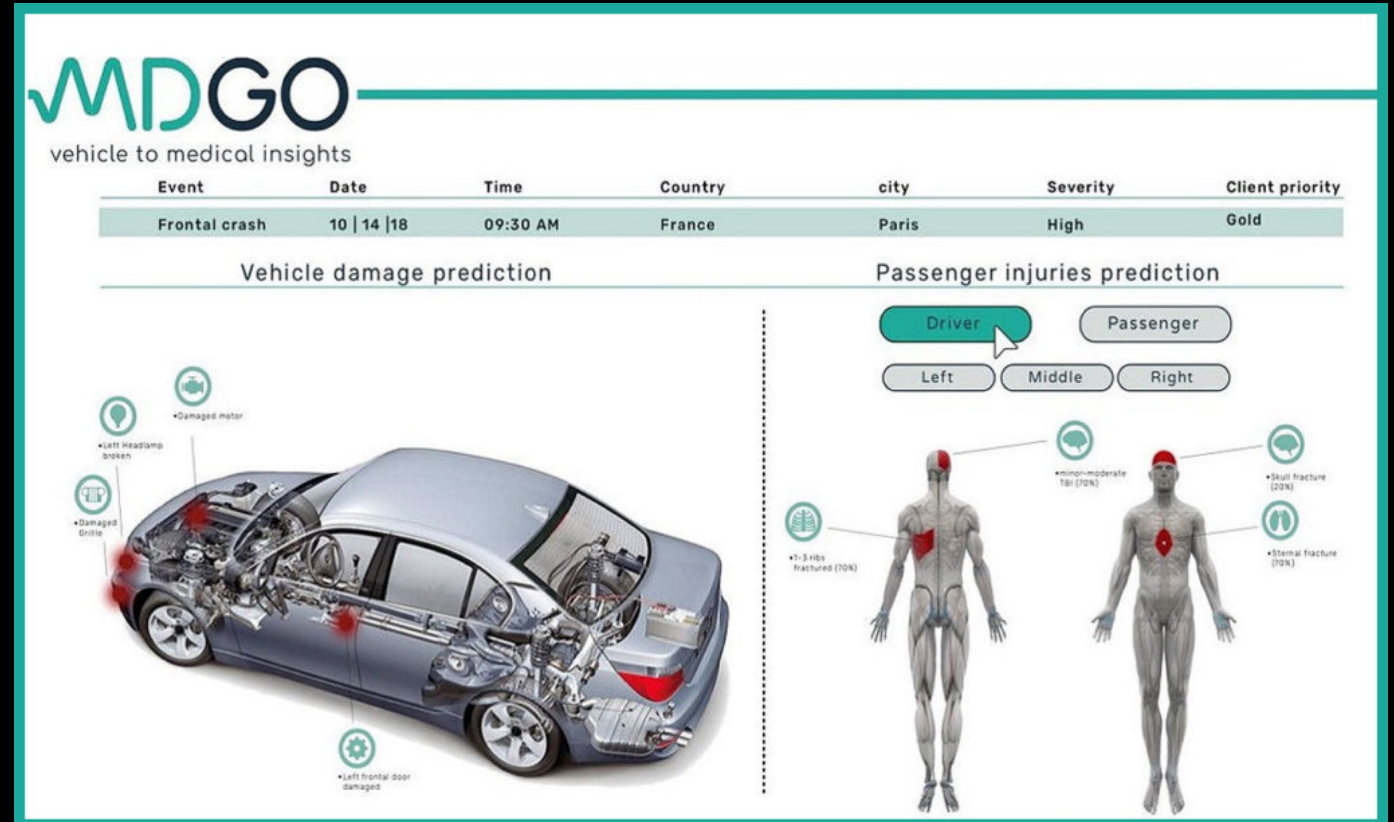
# In Car Delivery



# Volvo Cars Technology Fund – MDGo

Medical artificial intelligence company

- Combines real-time crash data with medical knowledge
- Predicts type of injuries and informs first responders, hospital
- Medical personnel arrive better prepared, potentially reducing the likelihood of complications and (by extension) serious injuries or fatalities
- Data can also be used for further improvement of cars during the design process





OUR COMPANY PURPOSE AND FUTURE PRODUCT IS TO PROVIDE

Freedom to Move

*in a personal, sustainable and safe way*

## Folkhälsomyndigheten tar hjälp av mobildata från Telia

Ska analysera hur människor har rört sig i samband virusspridningen






[Mac](#)[iPad](#)[iPhone](#)[Watch](#)[Music](#)[Support](#)

SKF

Driving innovation in the factory  
and in the field with iOS.

Watch the film 

[ABOUT SKF](#)

[IN THEIR WORDS](#)

[SHARE THEIR STORY](#) 

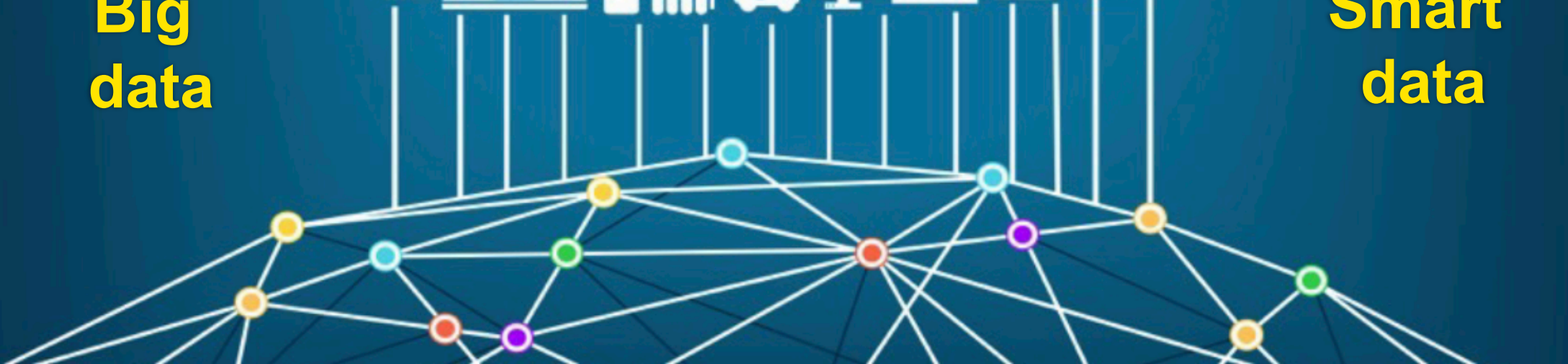
Everyday operations go mobile.

**Internet  
of Things**

**Sensokrati**

**Big  
data**

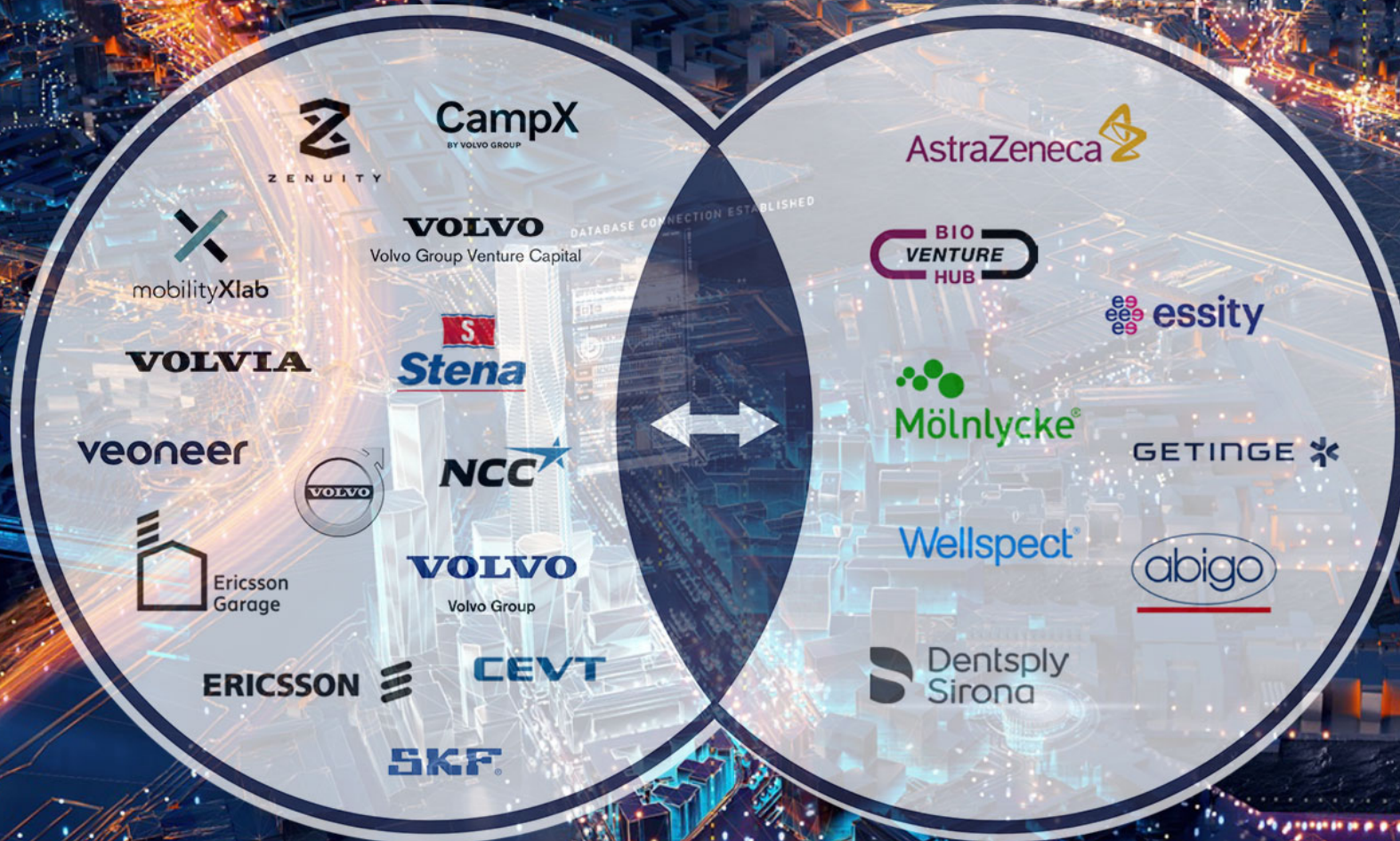
**Smart  
data**



# Digital samverkan för bättre vård och konkurrenskraft

ICT & MOBILITY

LIFE SCIENCE



TACK!

Joakim Hökegård

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+46 (0)723 88 05 47





**Frode Langmoen**

Technology Executive, IBM

***Do you know what  
you eat  
– and it is safe?***



# **IBM Food Trust**

**Frode Langmoen**

**[frode@se.ibm.com](mailto:frode@se.ibm.com)**



- 294 000
- 4 570 000
- 11 500
- 13.8 %



# Matindustrin i EU

- 294 000 företag
- 4 570 000 anställda
- 11 500 miljarder SEK
- 13.8 % av hushållens inkomst





- 8

- 500 000

- USA

- 3



# Problem: Ehec i sallad från USA

- 8 döda
- 500 000 sjuka
- All sallad inom US återkallad
- 3 veckor hitta smittan



# Lösning: Matspårning

## Walmart

- Spårning från 3 veckor till 1 sec
- Krav på alla leverantörer
- Dynamiskt bäst-före-datum
- Minskat matsvinn
- Säker mat
- Bättre logistik



500 000

420 000

80 %

33 %

20 %



# Matindustrins utmaningar

500 000 sjuka/år i Sverige

420 000 döda/år i världen

80 % av alla system manuella

33 % av alla färskvaror slängs

20 % av all fisk- och skaldjur felmärkt (“laxfisk”)

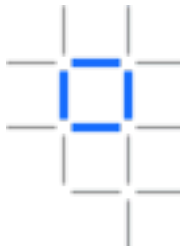
(42 % av restauranger i New York)



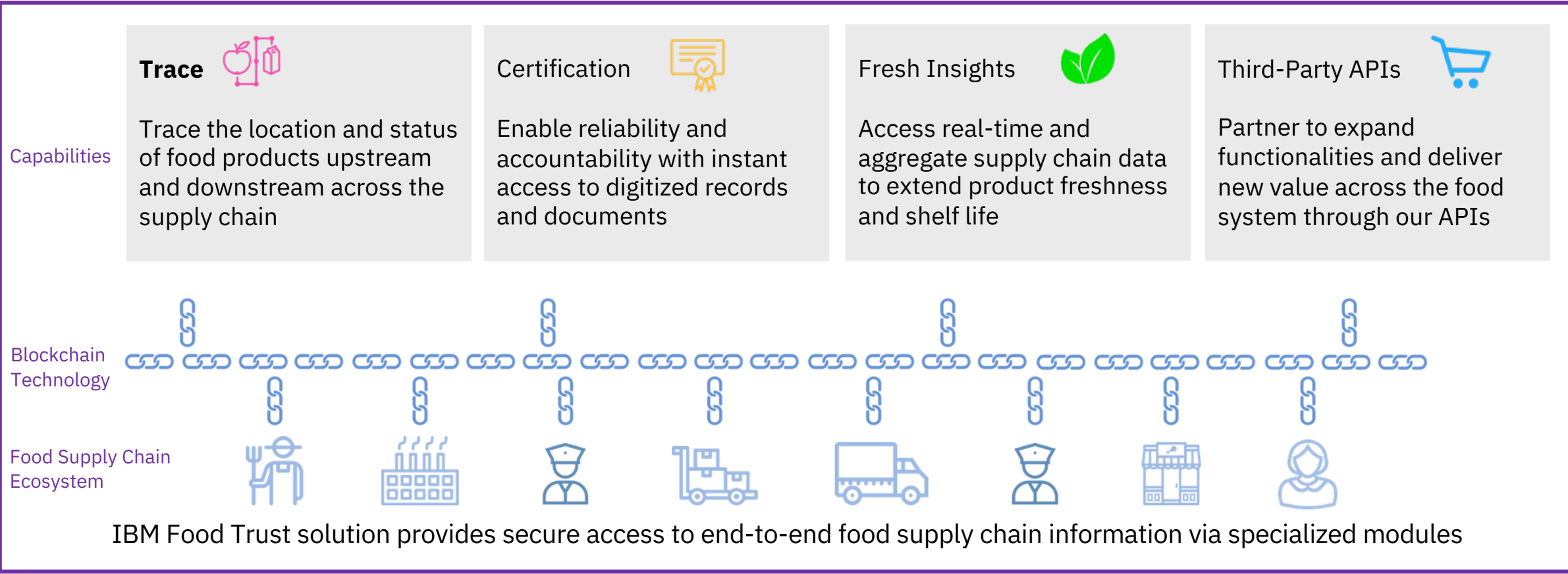
# Blockchain! Gammal idé med nya möjligheter?



# IBM Food Trust leverages blockchain to address a range of pain points in the food ecosystem



IBM Food Trust

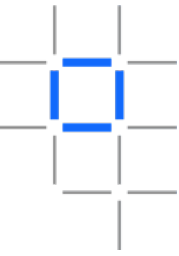


IBM Blockchain

Sample Clients



# Food Trust Ecosystem



## Certification Bodies



- Reduce fraudulent certificates
- Increase renewal speed

## Consumers



- Understand and trust their food better
- Learn about and act on recalls quickly

## Regulators/ Standards



- Identify contamination quickly
- Reduce unnecessary testing

## Food Manufacturers

- Build loyalty and engagement
- Manage inventory in real-time
- Automate & reduce manual certificate management
- Instill trust between retailers, suppliers & customers

## Wholesalers / Distributors

- Manage inventory in real-time
- Conduct targeted recalls
- Enable internal data sharing

## Food Logistics

- Manage inventory in real-time
- Enhance ability to meet compliance standards
- Reduce manual processes

## Food Retailers

- Strengthens consumer relationship and increase brand loyalty
- Assure customers food is safe
- Conduct targeted recalls
- Extend shelf-life



## Food Service

- Certify food sourcing practices
- Ensure safe food
- Reduce food waste

## Growers

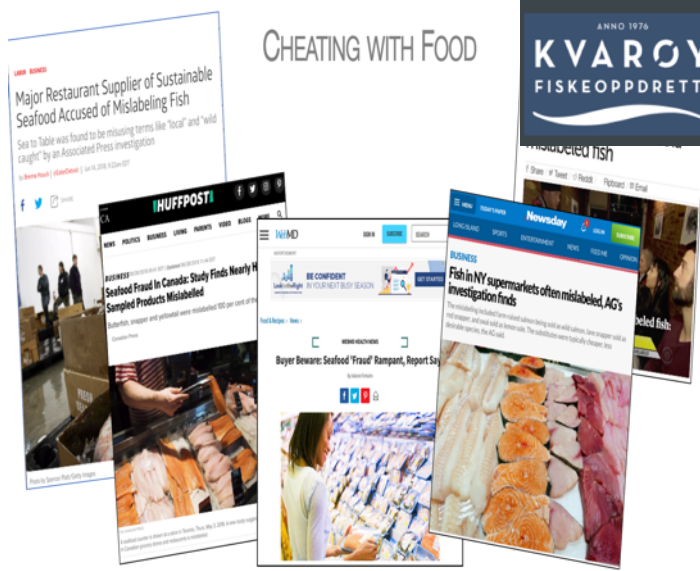
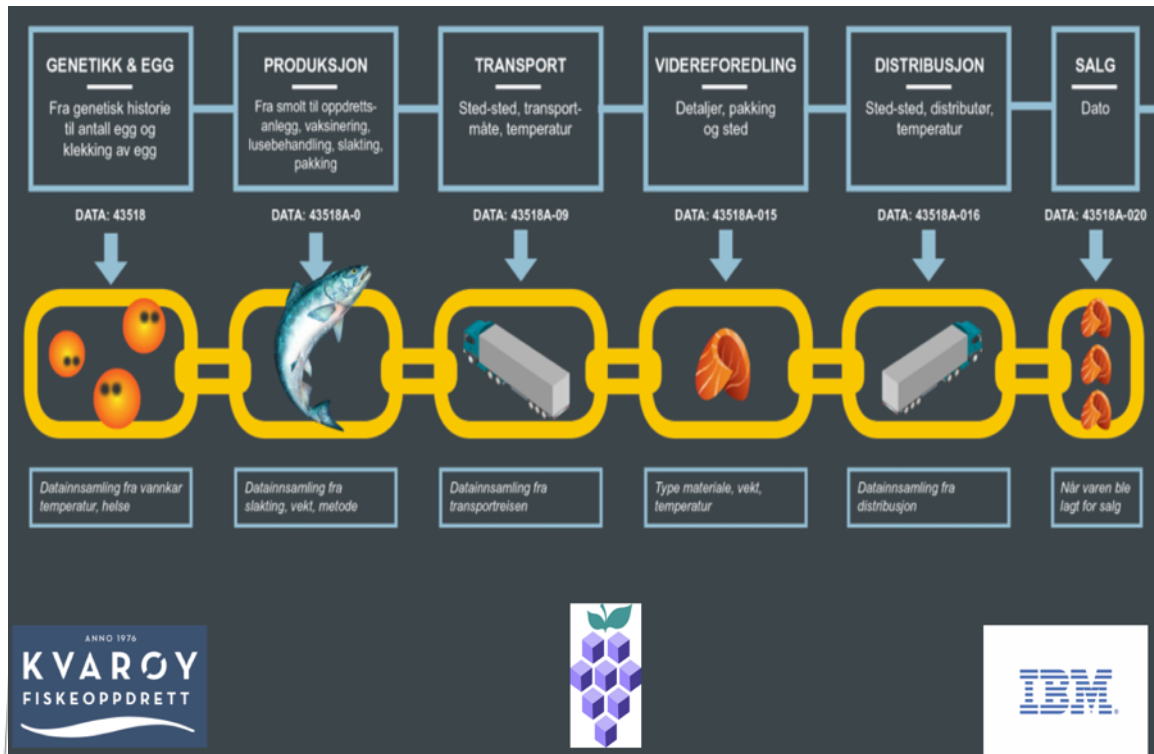
- Prove sustainable growth practices
- Satisfy compliance requirements and connect with consumers
- During a recall, show that farm is not source of contamination
- Ease of connectivity to the downstream supply chain



Fundamental value from farm to fork



# IBM Foodtrust och Kvarøy



# Problem: Kopierade reservdelar

## Airbus

- Original reservdelar
- Supply Chain
- Underlätta kontroll
- Reservdelshistorik
- Minskar olyckor

## Aerospace suppliers look to blockchain for parts tracking

Victoria Bryan

6 MIN READ



(This version of the May 2 story corrects lead to remove reference to cause of accident having been identified)



# Problem: Spårbarhet

Transparens för att identifiera varornas ursprung och spåra tillgångar med större synlighet i branscher med förtroende.



## Conflict Diamonds: African Artisanal Miners Struggle For Survival

Published 5 days ago on June 15, 2018  
By Makinde Oluwarotimi



## Fresh-cut melon recalled in wake of salmonella outbreak

BRIEF

## Fiat Chrysler recalls 4.8 million U.S. vehicles for cruise control defect

Drivers can overpower the system by continuously applying the brakes.

## How Chinese Sellers of Fake Dior Are Evading a Crackdown Online

Bloomberg Bloomberg News



Best By Date is placed on the left side of the bar wrapper.

Lot Code is printed on the left side of the bar under the Best By Date.



Best By Date is placed on the side of the carton.

## Livsmedelsverket: 17 av 21 olivoljor felmärkta

UPPDATERAD 17 FEBRUARI 2020 PUBLICERAD 17 FEBRUARI 2020

När Livsmedelsverket testade 21 extra jungfruolivoljor som köpts i svenska butiker visade sig 17 av dem inte nå upp till den standard som marknadsförts. De flesta visade sig ha den lägre standarden jungfruolja. I två fall visade sig oljan ha standarden bomolja – en så låg standard att den inte får säljas till konsumenter.

Det är på beslut av EU som Livsmedelsverket nu i två år, i samarbete med kommuner, skickat ett urval av svenska olivoljor för att testas på ett ackrediterat laboratorium. Där har oljorna genomgått kemiska, fysikaliska och organoleptiska (alltså lukt och smak) analyser.

Alla de 21 oljor som testats under 2018 och 2019 säljs som extra jungfruolja – den högsta standarden. Men Livsmedelsverkets analys visar att 17 av dem inte når upp till kraven, utan istället borde kallas jungfruolja. I två fall var standarden ännu lägre – bomolja.

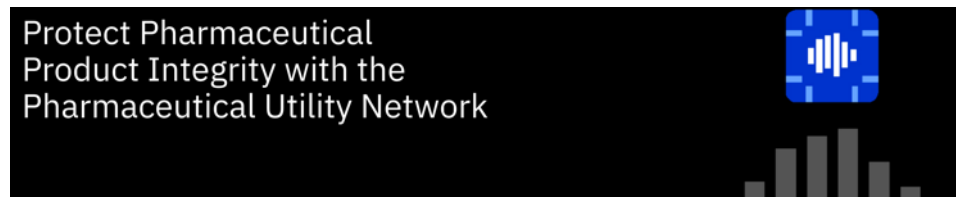
# Problem: Mediciner

- Kvalitet
- Piratkopior
- Supply Chain
- Kontroll
- Historik

## IBM, KPMG, Merck, Walmart team up for drug supply chain blockchain pilot

Ron Miller @ron\_miller / 2:34 pm CEST • June 13, 2019

Comment



December 16, 2019 | Written by: IBM Blockchain Pulse

Categorized: [Blockchain announcements](#) | [Blockchain in healthcare](#) | [Supply chain](#)

Share this post:



The Drug Supply Chain Security Act (DSCSA) Interoperability Pilot demonstrates how blockchain technology can be used to effectively track and trace certain prescription drugs throughout the supply chain. The visibility offered by blockchain makes it easier for pharmaceutical supply chain actors to comply with the DSCSA (a U.S. law that goes into effect in 2024), prevent the distribution of counterfeit drugs, facilitate the drug recall process and more.

In December 2019, KPMG, Merck, Walmart and IBM completed the Drug Supply Chain Security Act (DSCSA) Interoperability Pilot as part of the U.S. Food and Drug Administration (FDA) DSCSA Pilot Project Program. The pilot's findings demonstrate that leveraging blockchain technology can significantly reduce the time needed to trace a prescription drug — from up to 16 weeks to two seconds.

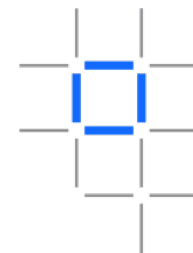


IBM announced its latest blockchain initiative today. This one is in partnership with KPMG, Merck and Walmart to build a drug supply chain blockchain pilot.

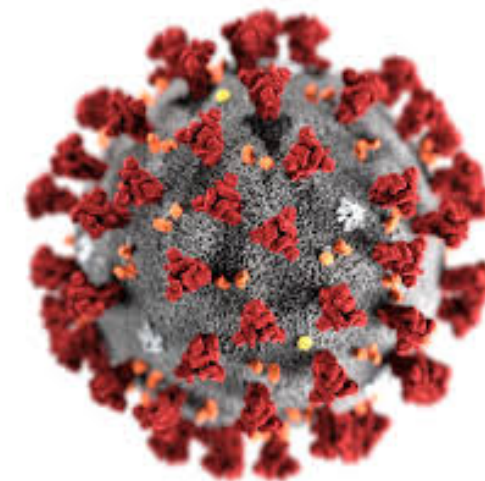
These four companies are coming together to help come up with a solution to track certain drugs as they move through a supply chain. IBM is acting as the technology partner, KPMG brings a deep understanding of the compliance issues, Merck is of course a drug company and Walmart would be a drug distributor through its pharmacies and care clinics.

The idea is to give each drug package a unique identifier that you can track through the supply chain from manufacturer to pharmacy to consumer. Seems simple enough, but the fact is that companies are loathe to share any data with one another. The blockchain would provide an irrefutable record of each transaction as the drug moved along the supply chain, giving authorities and participants an easy audit trail.

# Covid-19



- Integration av verifierade datakällor
- Sammanställning av data från land, organisationer
- Adressera inkonsekvenser
- Identifiera fel eller felrapportering av Corona
- Integrera nya pålitliga dataflöden
- Öppen plattform för attesterade virusdata
- Avpersonifierad data



➔ Identifiera behov av testning, isolering och karantän, kartlägga data för att beräkna risken för exponering, prioritera resurser på sjukhus.



The world is on lockdown, following the uncontrollable spread of coronavirus.

Entire regions and countries are paralyzed by misinformation, and with a lack of better options, resorting to extreme, sweeping measures that **infringe on privacy** and severely damage our **security, safety** and **quality of life**.

We are separated by fear, and the uncertainty paralyzes region after region, country after country, state after state. Blocking and stopping every thing, all the time, is not sustainable or economically viable. At the same time, ignoring the severity or underplaying the risk in letting it spread, is irresponsible.

There is a way out, together. We need to make informed decisions. But how? **The key is data.**

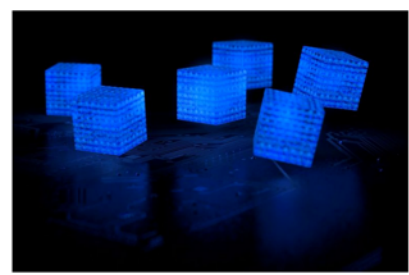
This is why we are building **MiPasa** — a multidisciplinary supergroup of health professionals, privacy experts, and software developers, backed by leading technology companies and commercial entities.

# MiPasa project and IBM Blockchain team on open data platform to support Covid-19 response

March 27, 2020 | Written by: [Gari Singh](#) and [Jonathan Levi](#)

Categorized: [Blockchain announcements](#) | [Blockchain development](#) | [Blockchain explained](#)

Share this post:



Powerful technologies and expertise can help provide bet people better understand their situation. As the world cor ongoing coronavirus outbreak, officials battling the pande valid information at scale to help foster a greater sense of public. As technologists, we have been heartened by the p such as [Call for Code](#), hackathons and other attempts by r rapidly create tools that might be able to help stem the cr to work, they need data from sources they can validate. F the world's economy will likely require not only testing mi also being able to map who tested positive, where people

who is at exceptionally high risk of exposure and must be quarantined again.

## IBM Blockchain



### What is MiPasa?

- ✓ **Powered by Blockchain, Driven by Care**  
MiPasa is a global-scale control and communication system that enables a swift and more precise early detection of COVID-19 carriers and infection hotspots through seamless and fully private information sharing between individuals, state authorities and health institutions such as hospitals and HMOs, utilizing advanced technological tools and a dedicated user app.
- ✓ **No-One is Looking over Your Shoulder / No "Need" for Government Surveillance**  
MiPasa is the first tool to securely and democratically manage COVID-19 outbreaks by crossing siloed health and location data, while fully and unwaveringly protecting the privacy of its users.
- ✓ **Outsmarting Coronavirus using Crowd Data (the Intelligence of the Crowd)**  
MiPasa can help monitor and foresee local and global epidemiological trends and detect likely asymptomatic carriers by feeding big data on infection routes and occurrences to powerful AI processors around the world.
- ✓ **100% Audited and Verifiable Data-Workflows**  
We are utilizing advanced technologies that were developed to comply with the strictest privacy regulations and were up until now only available to leading financial institutions.
- ✓ **Battle-tested, Proven Underlying Technology**  
We are using privacy and cryptography modules that have not just been scientifically proven academically, but ones that have been implemented by the world's top applied cryptographers and these modules are being used by certified mission-critical systems, in production, today.



### Who is Involved?

MiPasa would not have been possible without the collaboration of help of many. Individuals and Companies, research institutions and scientists... some contribute code, some hardware and others data and relevant information.  
Overall, there is a lot of compassion behind all of this open platform to fuel the "MiPasa verifiable information highway"... and we would like to thank them all:

In collaboration with:



... as well as:



# Spårbar Zoegas



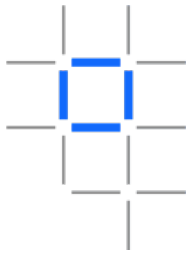
“På kaffeförpackningen finns en QR-kod som leder konsumenten in på en websida för att läsa om varje steg i kaffets väg från böna till kaffekopp. Konsumenten kan genom att skanna koden få information om var kaffet odlats, när det plockats, när och var det skeppats från och när det rostats och koppats på Zoégas i Helsingborg. Konsumenten kan också läsa om sex av de fantastiska odlare som bidragit med kaffe till Zoégas Ltd Edition Summer 2020”



<http://www.mynewsdesk.com/se/nestle-nordic/pressreleases/nu-blir-zoegas-sommarkaffe-spaarbart-hela-vaegen-fraan-boena-till-kopp-2985886>



# Vad kan Food Trust göra för dig?



### Food safety

Securely trace products in seconds – not weeks – to mitigate cross-contamination, spread of food-borne illness, unnecessary waste and the economic burden of recalls.



### Food freshness

Gain unprecedented visibility into supply chain data to improve freshness, increase shelf life and reduce product loss.



### Reduced waste

Maximizing shelf life, optimizing the supply chain and providing quick response to food recalls translates into less waste.



### Sustainability

Identify inefficiencies, ensure quality of goods, track authenticity of products and certify provenance across the entire supply chain.

**IBM Food Trust Value Assessment**

Get started | Questions | Results

How much can you save with IBM Food Trust?

IBM Food Trust is a collaborative solution created to efficiently and securely trace food during each step of the food supply. Powered by blockchain, we work with each member of the food system to spread new levels of trust and transparency across the world's diverse food ecosystems, making food safer from farm to fork.

The Deloitte Experience | Automotive, Aerospace & Defense

Use our value assessment to see how your organization can benefit from this solution.

**Step 1** Complete the brief questionnaire

**Step 2** Adjust the details to tailor results to your specific product

**Step 3** Review your unique results and learn more IBM Food Trust

Get started

Select your profession: Retailer

1. Product category:  Produce  Meat and Poultry  Seafood  Dairy  Other

2. Retailer Grocery Revenue: 10,000,000,000

3. Number of Stores: 2,000

4. Number of Distribution Centers: 25

5. Number of people in Headquarters working on trace-backs: 5

6. Number of trace-backs annually: 200

7. Number of people managing certifications: 7

Reset Submit

Value Assessment for each module by efficiently managing recalls, Certifications, Freshness, and increasing market share with Consumer app.



# IBM Food Trust Blockchain platform delivers **Business Value** in multiple ways

## Trust



Build relationships with Buyers, shoppers and with partners through data that is immutable and permissioned



## Traceability



Support sustainable farm practices with two way connections between growers and consumers



## Transparency



Trace every step of the Food Journey from farm to fork even with the most complex transformation events



## Connected Ecosystem

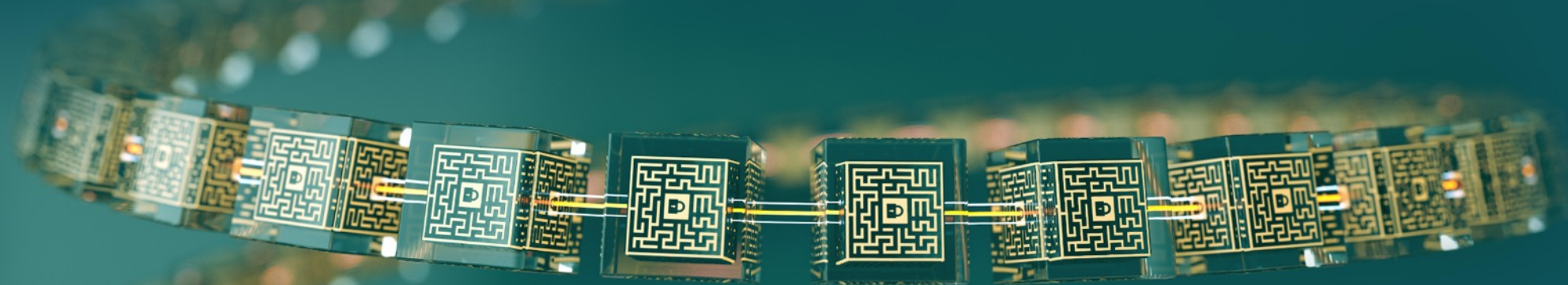


Optimize supply chain actions with intersection of AI, IoT and Blockchain



Frode Langmoen

[frode@se.ibm.com](mailto:frode@se.ibm.com)





**Henrik Cederqvist**

VD, Cuviva

***Digitaliserad  
hemsjukvård  
– möjligheter  
och utmaningar***





cuviva

Demokratisk digitalisering

för hållbar vård och omsorg


GREAT HealthCare 200402



De 3-4% sjukaste invånarna i  
Sverige

- multisjuka och sköra äldre  
står för ca 50 procent av  
samhällets vårdkostnader.

*“De patienter som är viktigast  
att starta denna resa med är de  
allra sjukaste, vilka också har ett  
mycket stort behov av vård och  
omsorg.”*

A photograph of Lena Hallengren, a Swedish politician, sitting at a table and speaking. She has blonde hair and is wearing a black top. Her hands are raised in a gesturing motion. In front of her is a white paper cup with the red logo of the Swedish Social Democratic Party (Socialdemokraterna). The background is a bright, indoor setting with a window and some greenery.

”Om vi ska klara av morgondagens hälso- och sjukvård, med samma ambitioner som idag - inga förhöjda ambitioner, ingen ökad servicenivå - bara på samma nivå som idag, men baserad på allmän befolkningstillväxt, då saknas det 90 miljarder SEK per år från 2026”

Lena Hallengren  
Socialminister

Folkhälsomyndighetens uppmaning:  
"Vi måste skydda våra äldre"  
Johan Carlson säger vidare att  
Sverige behöver "Slå en ring runt  
riskgrupper, särskilt äldre"

Johan Carlson  
Generaldirektör för Folkhälsomyndigheten  
SVT 15 mars 2020



# Cuivas lösning – En skalbar IoT plattform för kommunikation till de mest behövande.



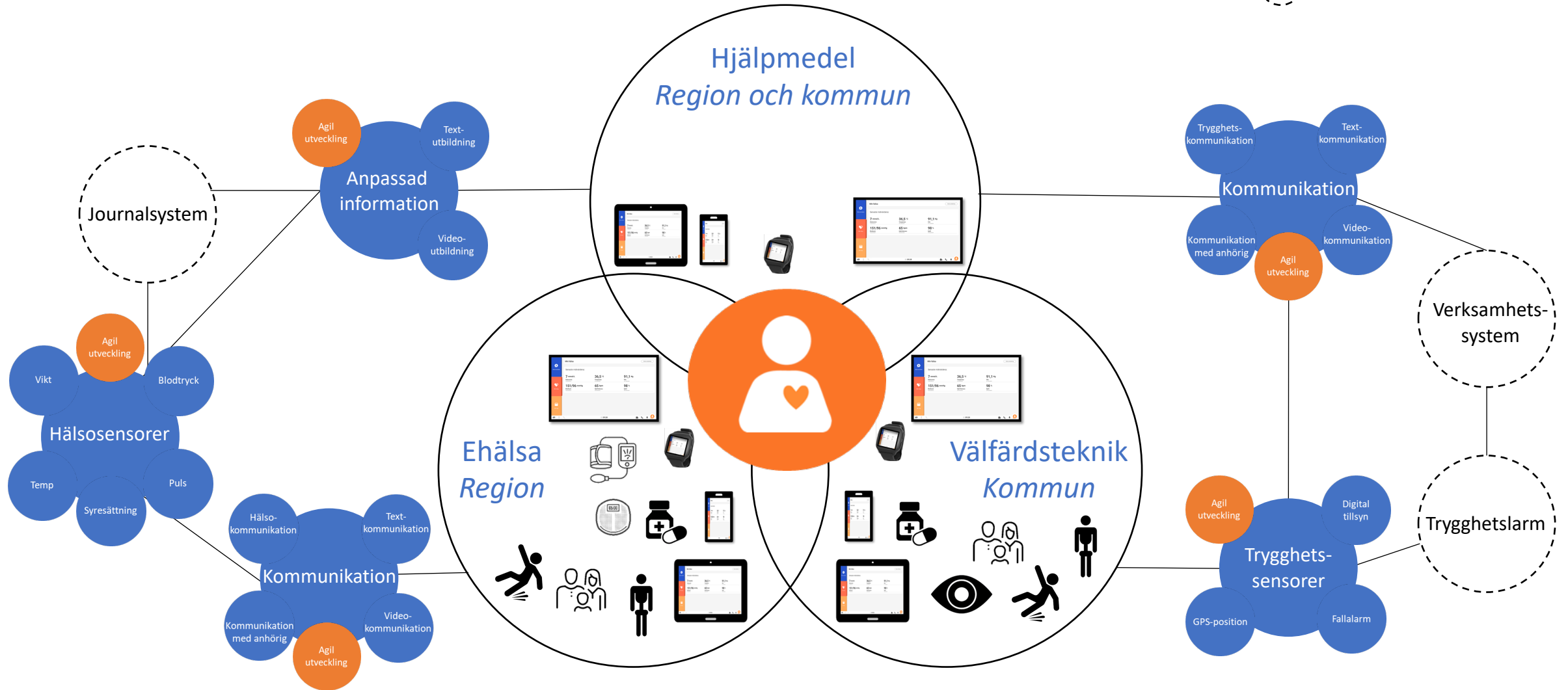
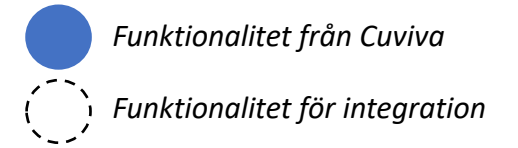
**CUVIVA** är en skalbar plattform där individen kan kommunicera med vård-, omsorgsgivare och familjemedlemmar, som ger stöd för individuell hälso- och sjukvård, realtidskommunikation och delade patientdata.

**CUVIVA** lösningen består av fyra moduler som erbjuder unika möjligheter att täcka alla aspekter av hälsa, omsorg och säkerhet hemma:

- MittCuvida
- Cuviva Hemma
- Cuviva Kommunikation
- Cuviva Moln



# Cuivas kommunikationsplattform och ekosystem



# Systematiska översikter av RCT inom området RPM (Remote Patient Monitoring) och multisyka med hjärtsvikt, visar;

- 30-45% färre akuta inläggningar och antal vård dygn
  - 25-40% färre besök på specialistmottagning
  - 25-45% färre besök hos läkare i primärvård
  - 25% färre besök av hemsjukvårdsläkare
  - 25-30% färre besök av hemsjukvårdsköterska
- 
- Region Örebro, Interaktiv telemedicin vid långvariga sjukdomstillstånd, 91 Systematiska översikter, HTA-enheten CAMTÖ, [www.regionorebrolan.se/camto](http://www.regionorebrolan.se/camto) 2018:15
  - Melchiorre MG, Lamura G, Barbabella F, EHealth for People with Multimorbidity: Results from the ICARE4EU project and insights from the “10 e’s” by Gunther Eysenbach (2018)
  - Vegesna A, Tran M, Angelaccio M, Arcona S, Remote Patient Monitoring via Non-Invasive Digital Technologies: A Systematic Review. *Telemed J E Health* 2017 jan 1;23(1):3-17
  - Bashi N, Karunanithi M, Ding H, Walters D, Remote Monitoring of Patients With Heart Failure: An Overview of Systematic Reviews, *J Med Internet Res* 2017 jan 20;19(1):e18
  - Kotb A, Cameron C, Hsieh S, Wells, Comparative Effectiveness of Different Forms of Telemedicine for Individuals with Heart Failure (HF): A Systematic Review and Network Meta-Analysis *PLoS One*. 2015 Feb 25;10(2):e0118681
  - Inglis SC, Clark RA, Dierckx R, PrietoMerino D, Cleland JG. Structured telephone support or noninvasive telemonitoring for patients with heart failure. *Cochrane Database Syst Rev* 2015; 10: CD007228.
  - Kitsiou S, Paré G, Jaana M. Effects of Home Telemonitoring Interventions on Patients With Chronic Heart Failure: An Overview of Systematic Reviews *J Med Internet Res*. 2015 Mar 12;17(3):e63. doi: 10.2196/jmir.4174.
  - Seferovic PM, Ponikowski P, Anker SD, et al. Clinical practice update on heart failure 2019: pharmacotherapy, procedures, devices and patient management. An expert consensus meeting report of the Heart Failure Association of the European Society of Cardiology. *Eur J Heart Fail*. 2019;21(10):1169–1186. doi:10.1002/ejhf.1531

# Att gå från traditionell sjukvård av multisjuka sköra äldre till kontinuerlig distanskommunikation och distansmonitorering



# Vi måste ändra perspektiv från traditionella upphandlingar och införande till mer agila förhållningsätt



A hand holding a smartphone against a blue background. The phone is held in the right hand, with the thumb resting on the screen. The background is a solid blue color with a faint, semi-transparent image of a hand holding a smartphone.

CUVIVA

Contact:

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[cuviva.com](http://cuviva.com)