

Green Business Model Cloud: A new perspective with Internet of Things connected Green Business Models empowered with Artificial Intelligence



Funded scientific projects related to this presentation



- GreenBizz (currently ongoing).



SCHOOL OF BUSINESS AND SOCIAL SCIENCES
AARHUS UNIVERSITY

- Biogas 2020 – A Scandinavian Biogas Network.



- Experimental exploration of business model digitization.



- B-LAB environment attribute monitoring and control.



- Exploring the boundaries of human-computer interaction in a real-world setting of globally connected entrepreneurial business model environments.

24 percent of all kilometers driven by truck are empty cars, and that the vehicles carry on average only 57% of what they actually have room for.

According to Innovation Fund Denmark, a statement from the EU countries shows that 24 percent of all kilometers driven by truck are empty cars, and that the vehicles carry on average only 57% of what they actually have room for. [1]

When the trucks are on average only 57% full, it hides some very gloomy figures on large parts of the freight transport. It is known that large parts of the freight transport to e.g. car production is run super-optimized, i.e. almost 100% full. Then the remaining many transports must necessarily take place with trucks that are far from half full. [2]

[1] <https://innovationsfonden.dk/da/investeringer/investeringshistorier/nu-skal-det-vaere-slut-med-tomme-og-halvtomme-lastbiler-pa>

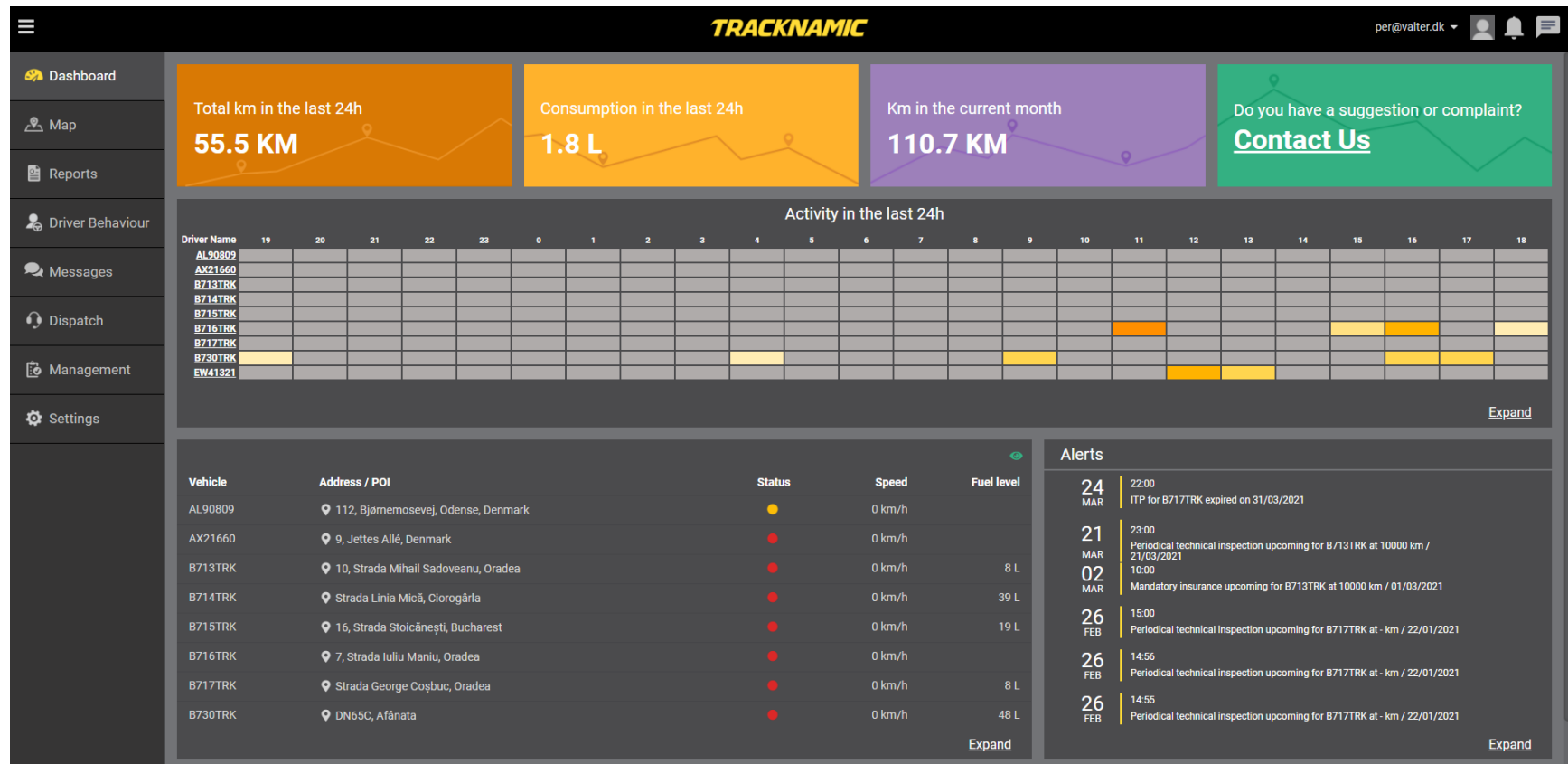
[2] <https://businessreview.dk/transport-logistik/reducer-co2-fra-lastbiler-med-40/>



Green Transport Conference Herning



Telematics & TMS: Portal



Telematics & TMS: Vehicle map overview

TRACKNAMIC

per@valter.dk

Dashboard

License plate, driver name

Select vehicle filters

Select division/partner

Map

AL90809

AX21660

B713TRK

B714TRK

B715TRK

B716TRK

B717TRK

B730TRK

EW41321

Reports

Driver Behaviour

Messages

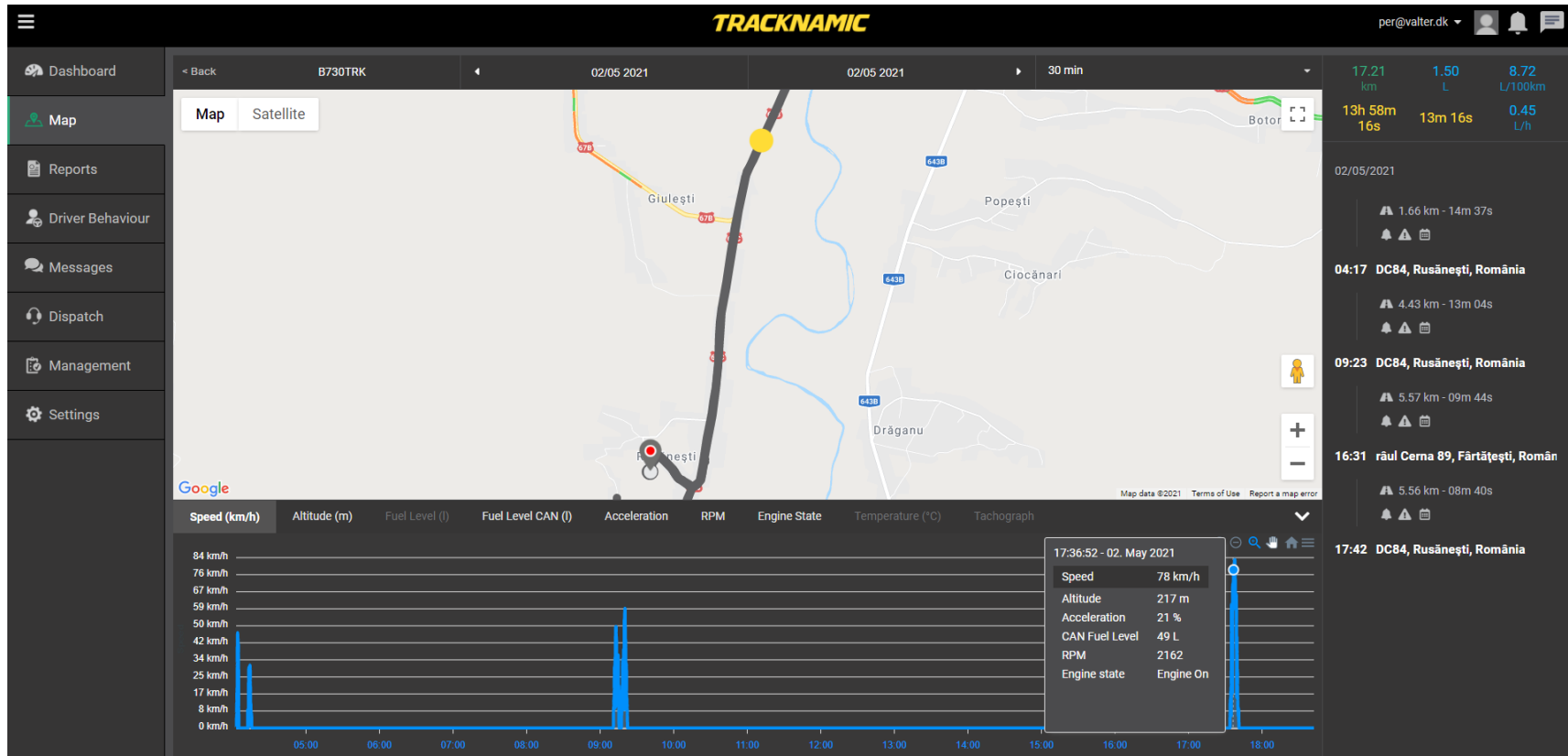
Dispatch

Management

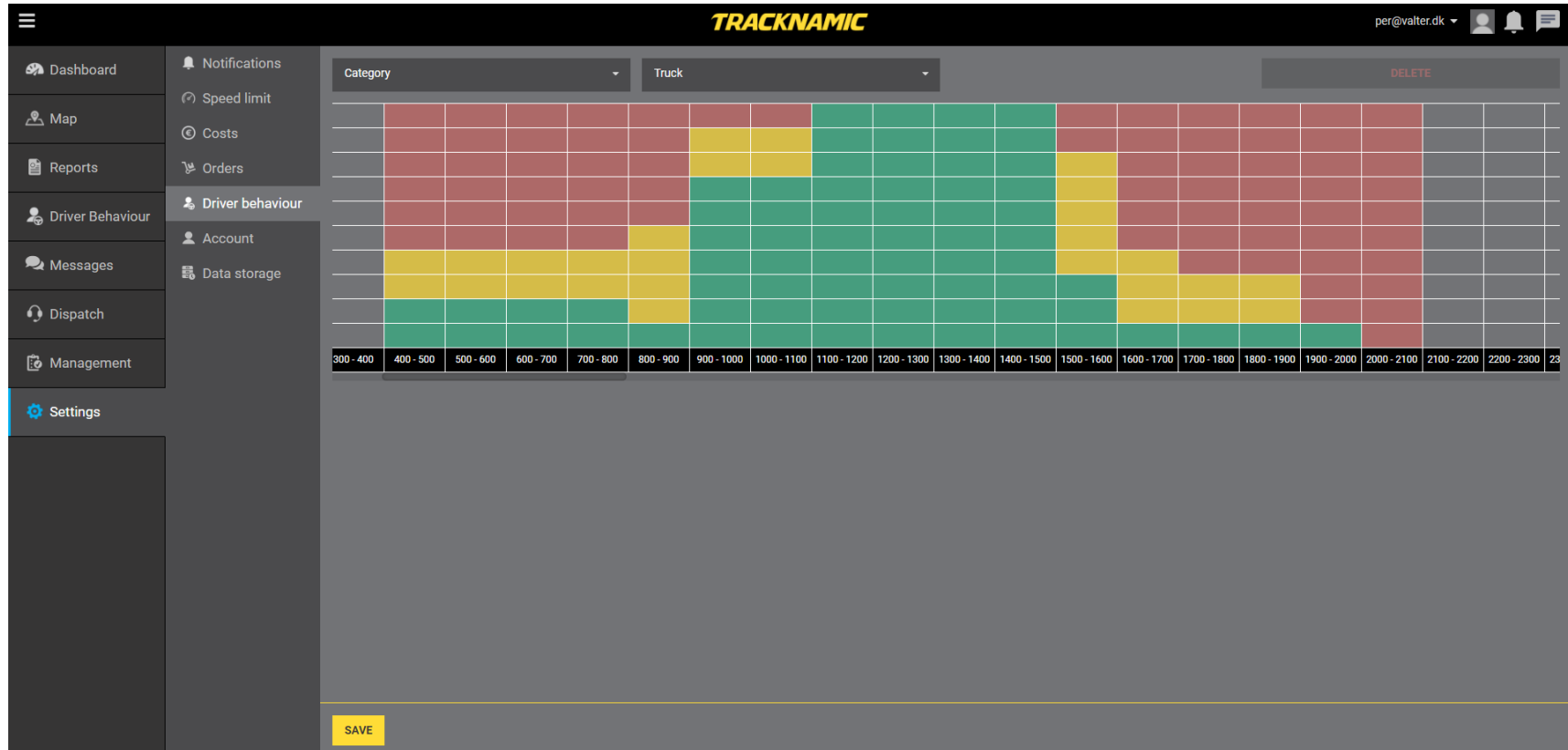
Settings

Map data ©2021 GeoBasis-DE/BKG (©2009), Google, Inst. Geogr. National | Terms of Use

Telematics & TMS: Vehicle detailed view



Telematics & TMS: Driver behaviour



Telematics & TMS: Driver behaviour

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@valter.dk

- Dashboard
- Map**
- Routes
- Orders
- Reports
- Clients
- Vehicle groups
- Driver Behaviour
- Messages
- Dispatch
- Management
- Settings

Transport type 📄 ⬢ ❄️ 🛡️

+ Enter a query

Name	Distance	Drive	Rest
-	-	-	-
1	839 km	12h 40m 33s	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
	839 km	12h 40m 33s	-

Dislocat / tarifar Profitability Cost **739 €**

BUDGET	STAT NAME	PROFITABILITY
-	€	-
ETA	OTHER STAT	
-	-	-

☐ Primary Distance Duration Cost
839 km 12h 40m 33s 739 €

☐ 🏠 Cheapest Distance Duration Cost
973 km 1d 22h 09m 27s 2255 €

☐ 📍 Shortest Distance Duration Cost
897 km 1d 17h 45m 55s 2430 €

☐ ⚡ Fastest Distance Duration Cost
973 km 1d 22h 08m 33s 2255 €

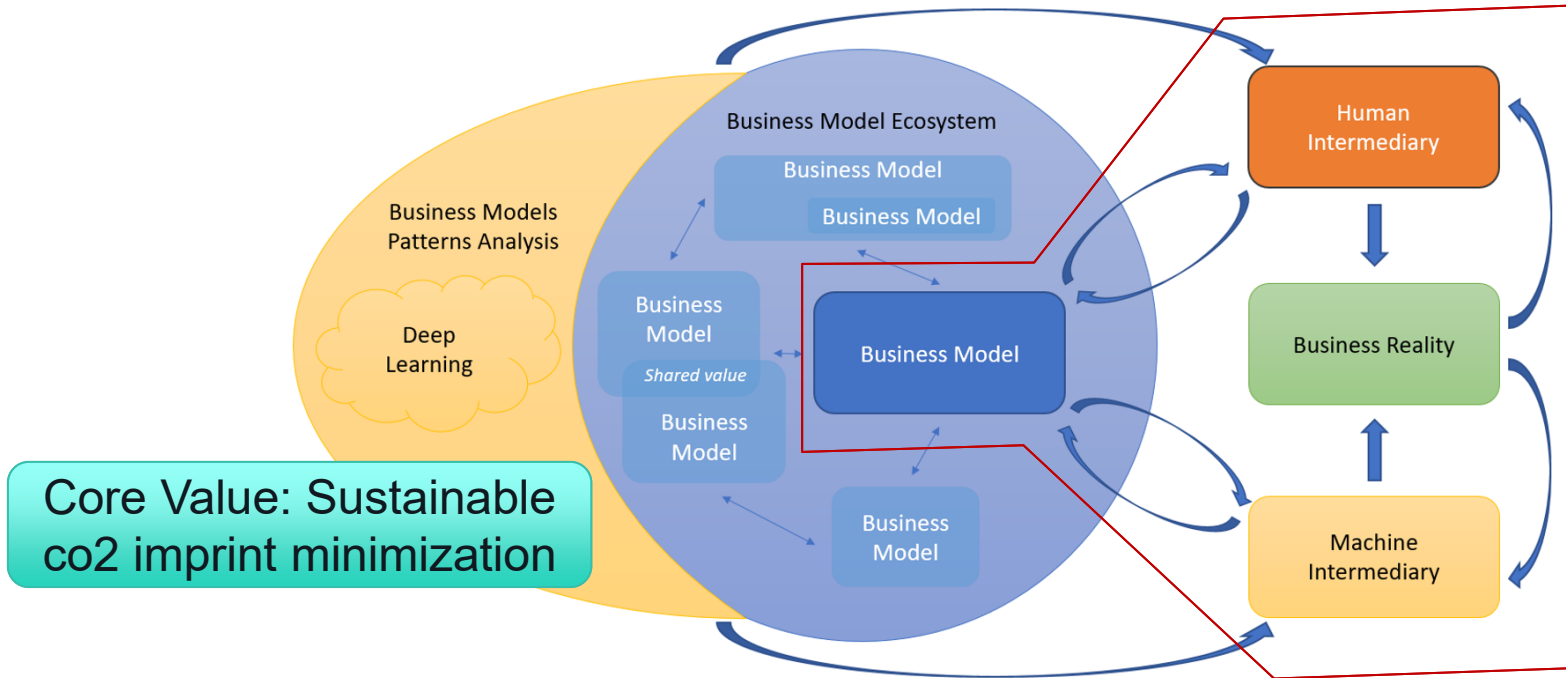
Optimize

Stash
Save

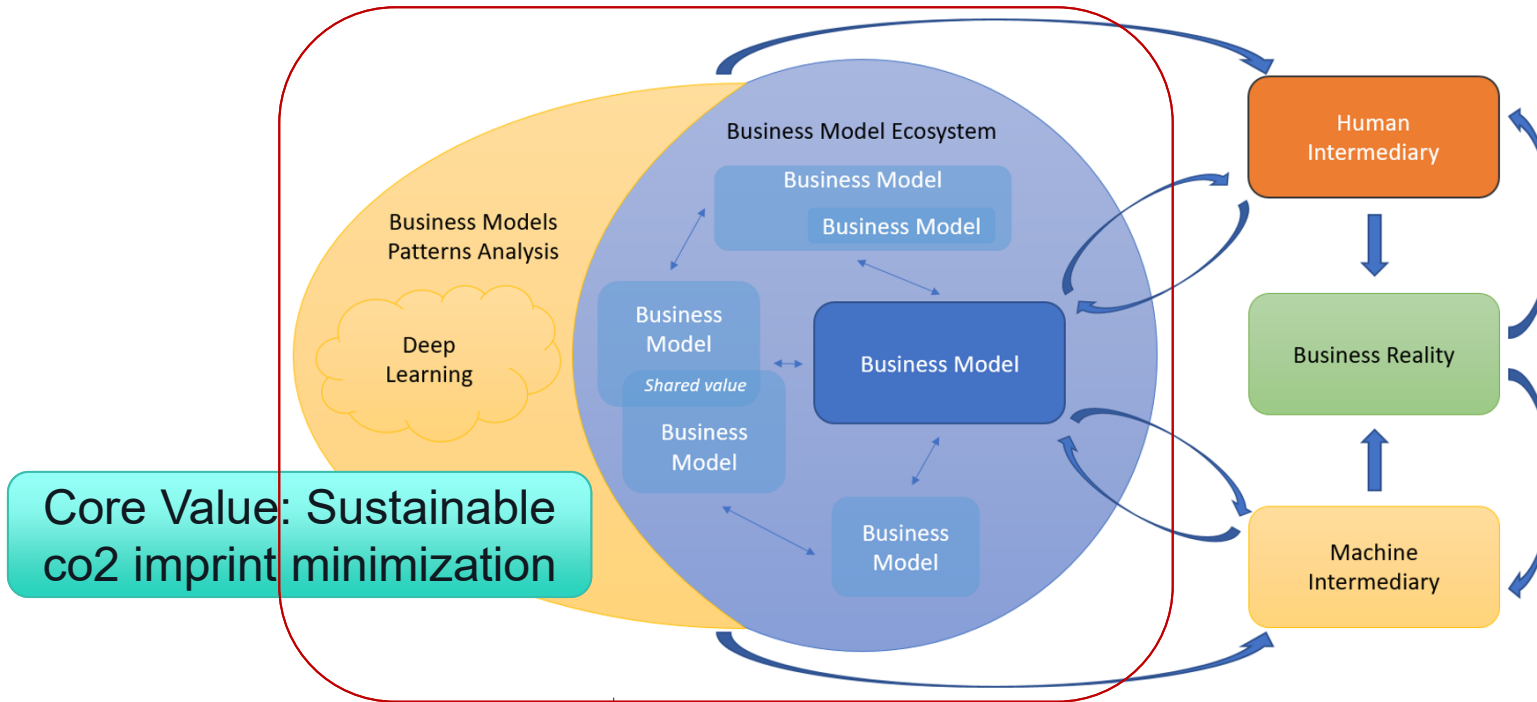
Hide vehicles

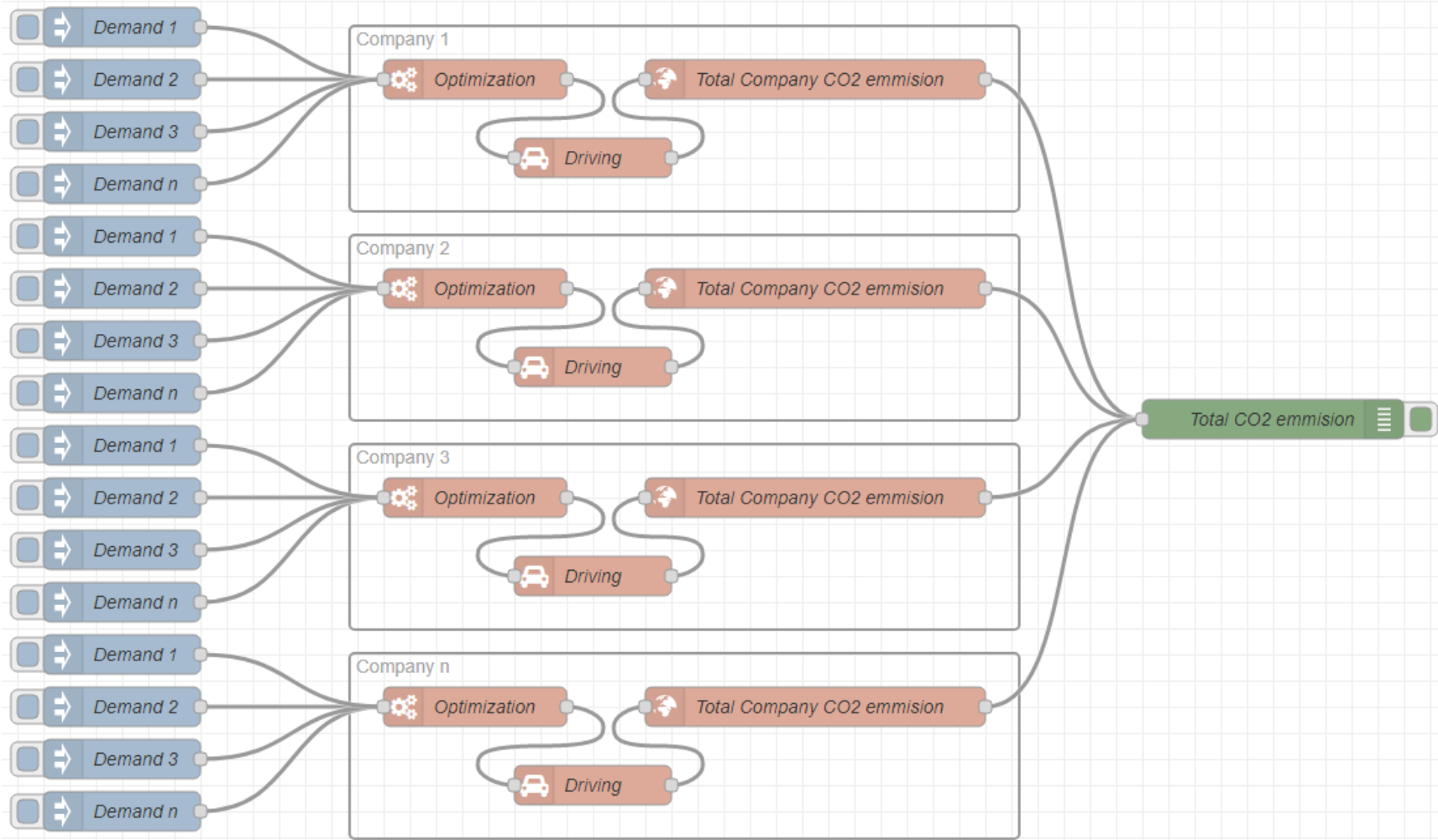
Map Satellite

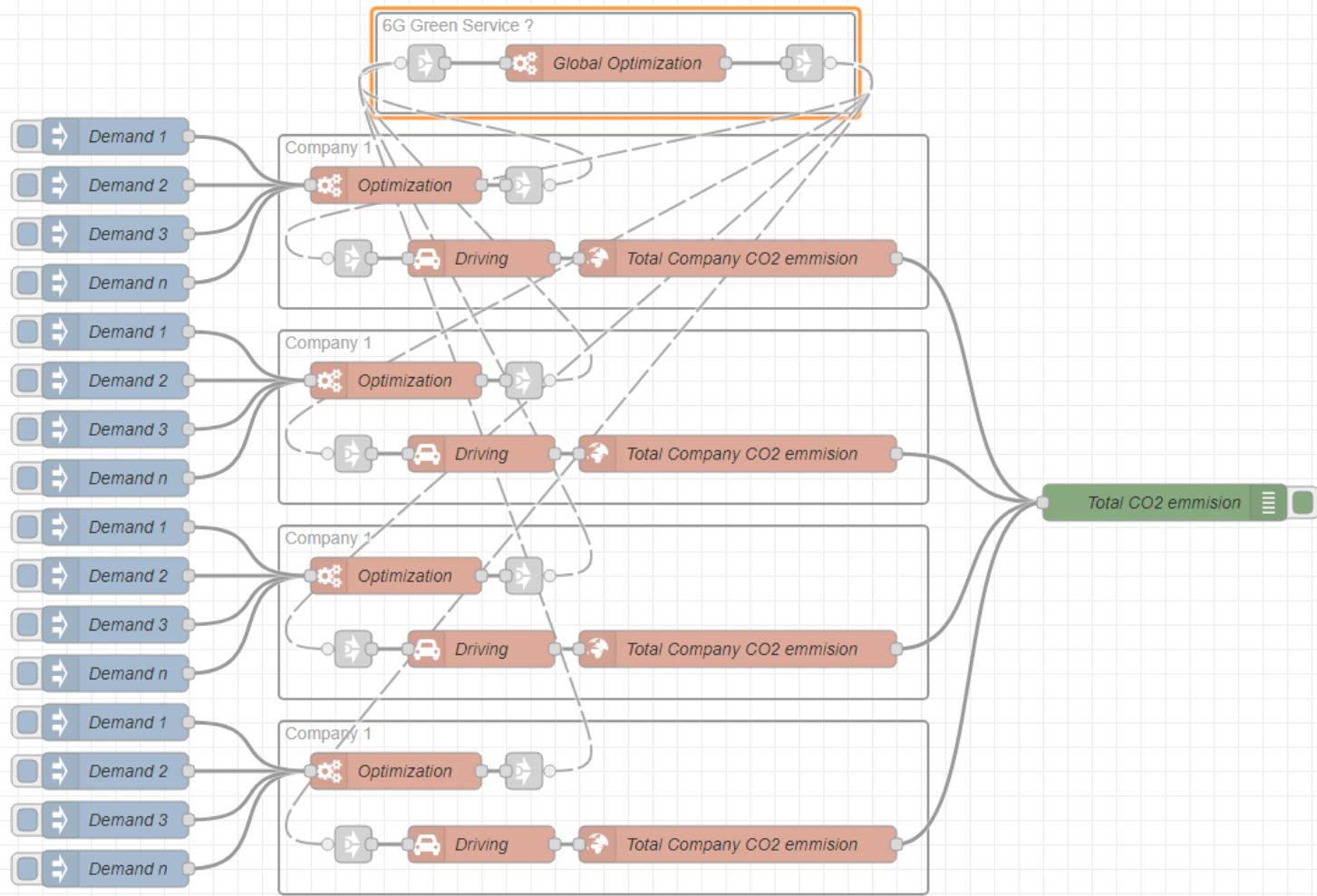
Green business model innovation using digitization and technology: Focus today



Green business model innovation using digitization and technology: Proposed 6G Application Service







Transport and CO₂ emissions

Global CO₂ emissions from transport

Our World
in Data

This is based on global transport emissions in 2018, which totalled 8 billion tonnes CO₂.
Transport accounts for 24% of CO₂ emissions from energy.

74.5% of transport emissions
come from road vehicles



OurWorldinData.org – Research and data to make progress against the world's largest problems.

Data Source: Our World in Data based on International Energy Agency (IEA) and the International Council on Clean Transportation (ICCT).

Licensed under CC-BY by the author Hannah Ritchie.

Theoretical Optimization Potential

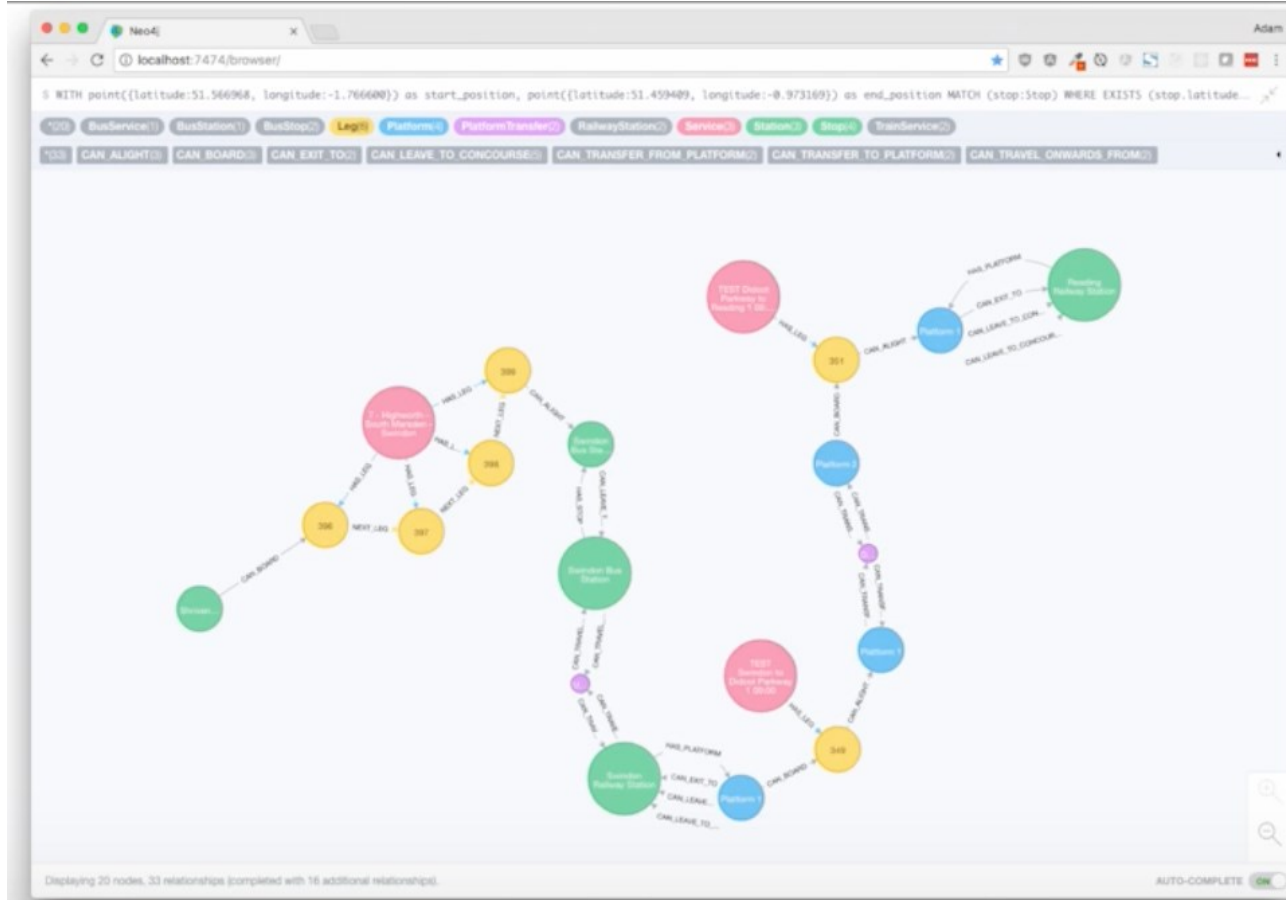
24 % of all truck driving are empty driving, the rest is driving with an aware of 57% usage, this gives an theoretical optimization potential 56.68% on all truck driving before 100% utilization of the trucks are used.

If only 50% of the theoretical optimization potential is unleashed with global optimization, which in 2018 numbers gives 666.556.800.000.- tons CO₂, equaling to more then 20 times the entire Danish CO₂ emission in 2020.

6G Application Service Architecture: Graph database

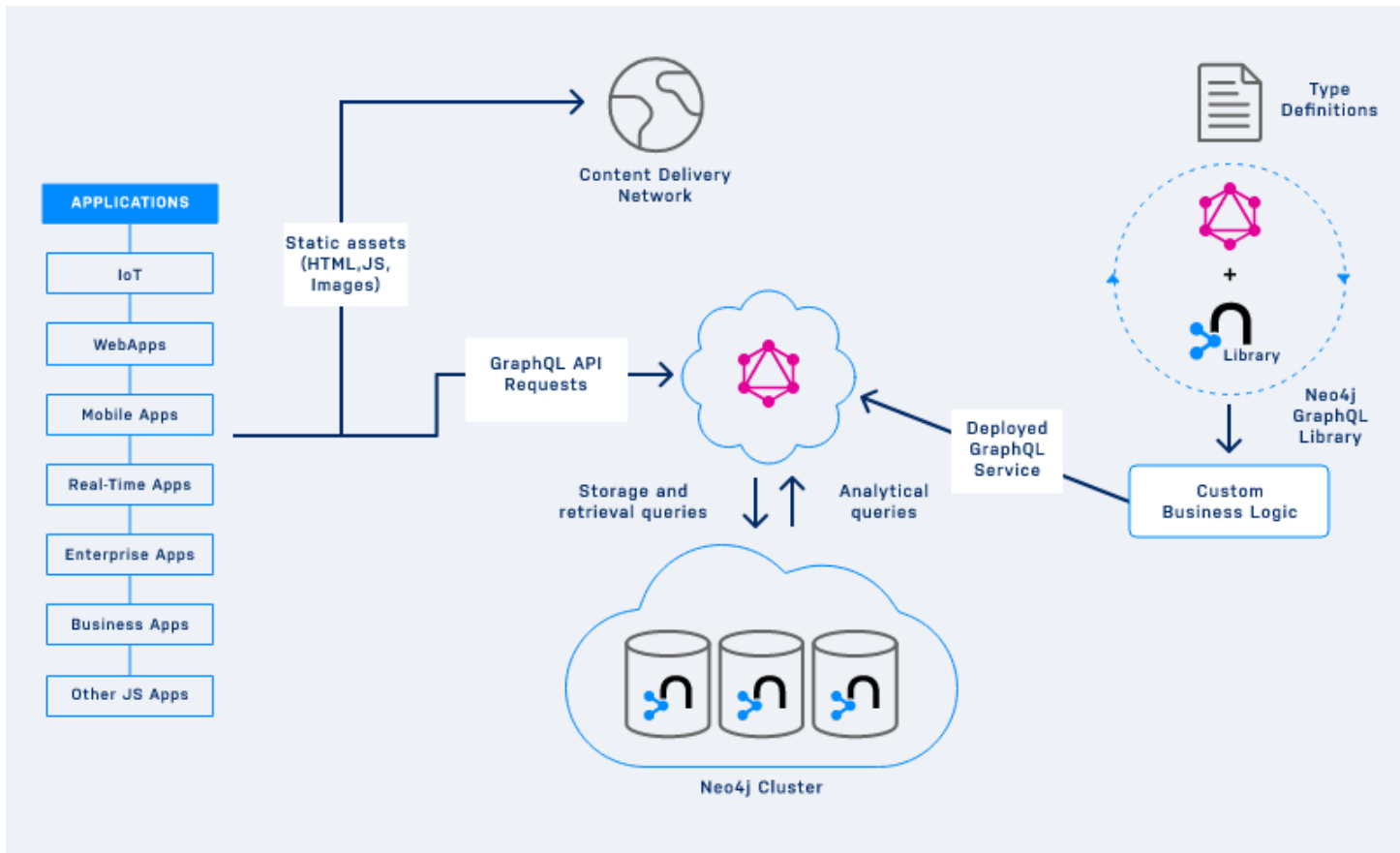


6G Application Service Architecture: Graph database

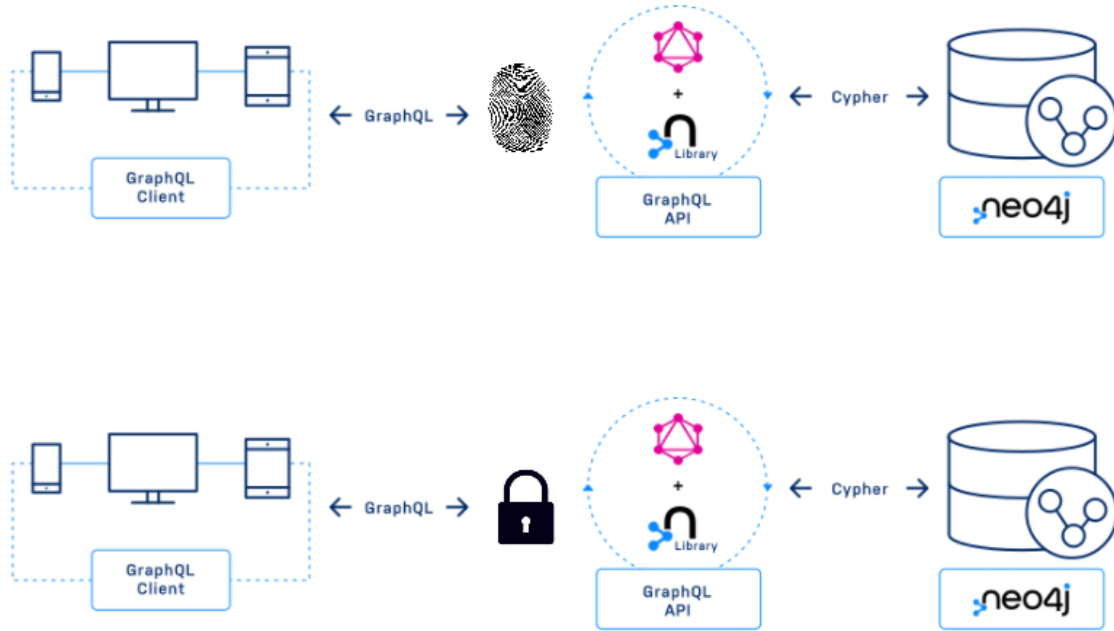


Source: <https://neo4j.com/blog/journey-planning-why-i-love-cypher/>

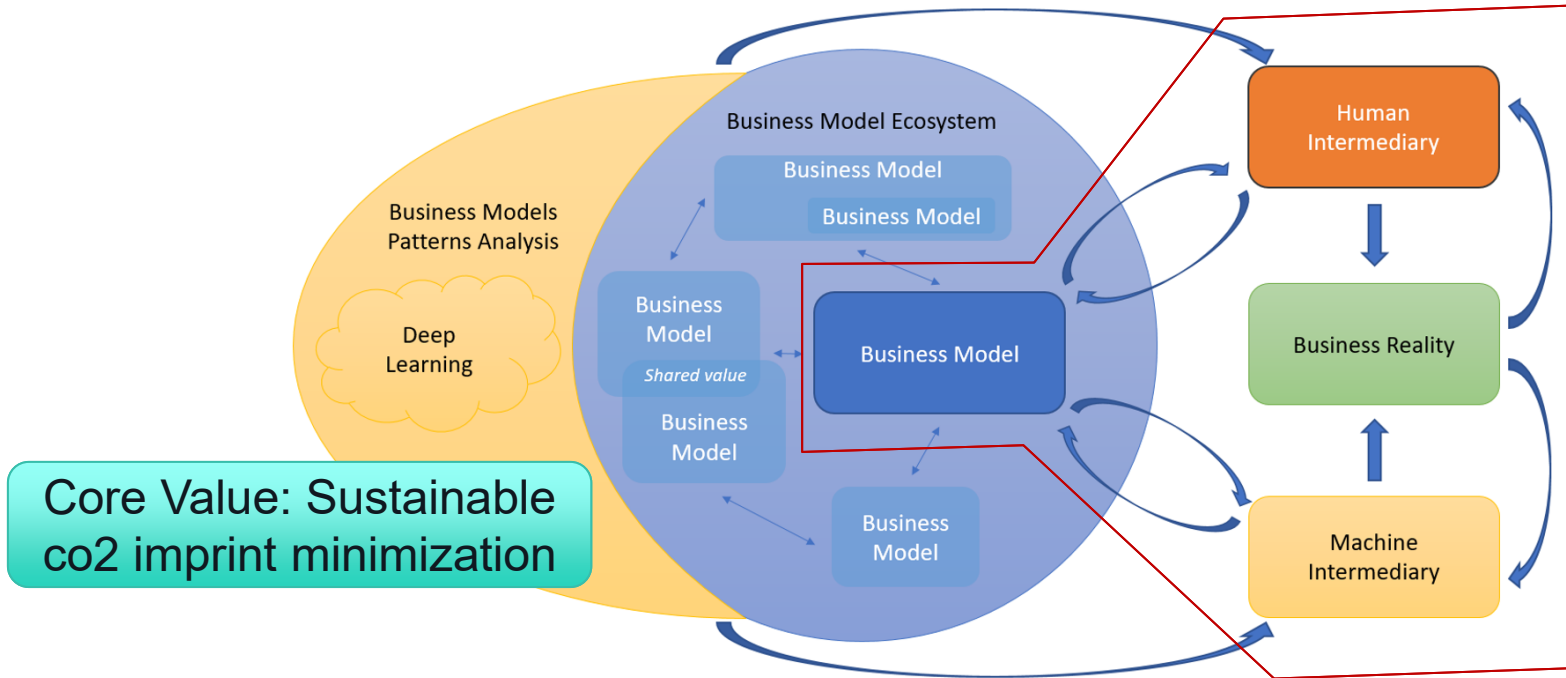
6G Application Service Architecture: Cloud Service



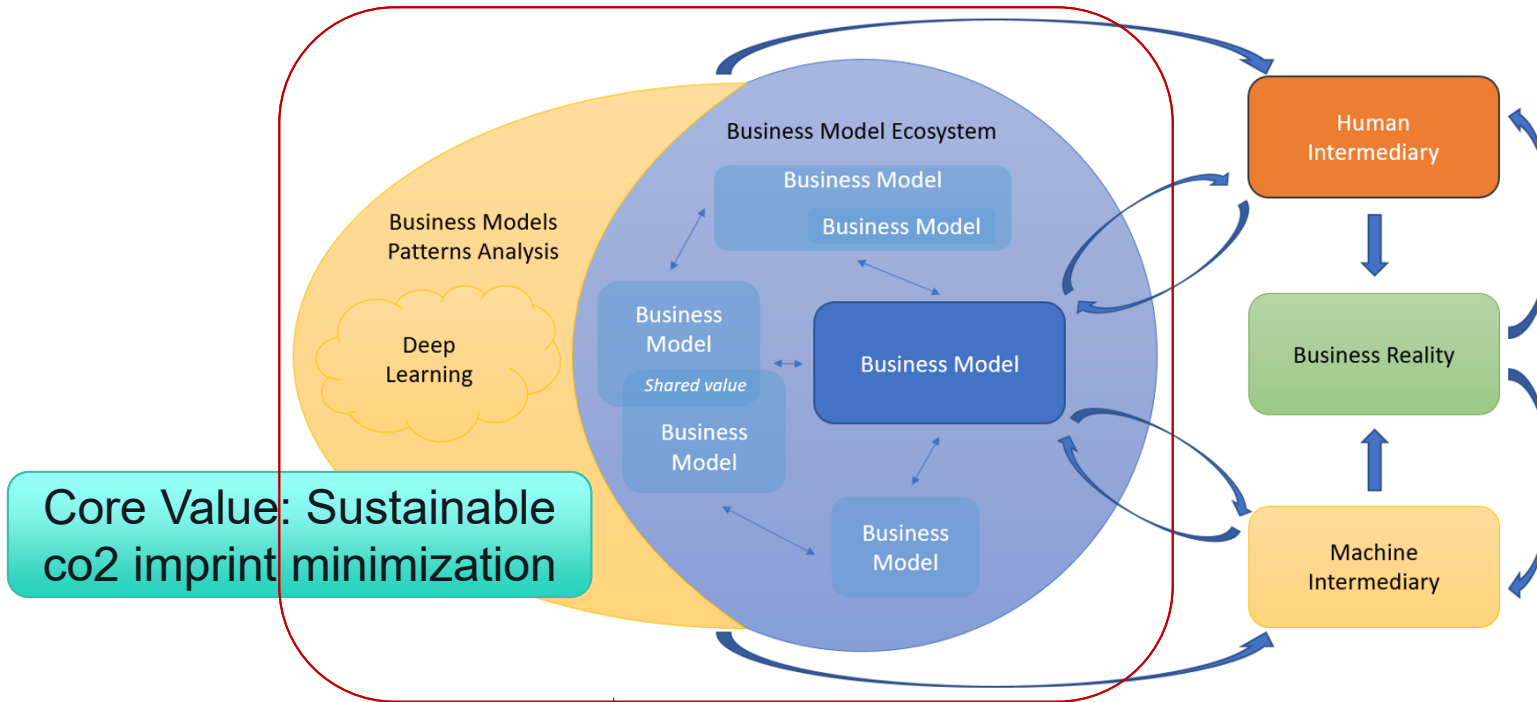
6G Application Service Architecture: Security



Green business model innovation using digitization and technology: Focus today



Green business model innovation using digitization and technology: Proposed 6G Application Service



From Connecting Things to Connected Intelligence

