



Kennissessie 'Mobiele werktuigen en datamonitoring'

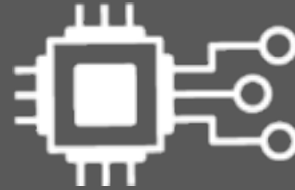
Het kan,....!

Paul van Haperen

Telematics & data services



Embedded Electronics



Control systems



Zuinig gereden naar Utrecht?



VRAAGSTUK #1

Materieel wat nu niet of beperkt gemonitord kan worden....

.... maar wel verantwoordelijk is xx% van het brandstofverbruik?

VRAAGSTUK #1 - PRAKTIJK

⚡ Load at current speed	11/06 16:47	24%
⚡ Hydraulic Temperature	11/06 16:47	30 °C
⚡ Hydraulic Return Filter	11/06 16:47	0 -
⚡ Hydraulic Pressure	11/06 16:47	228 Bar
⚡ Hydraulic Level	11/06 16:47	100 -



MA
MOBILE AUTOMATION

Engineering in
MOBILE ProcessTech

Company / customer
Project description
Job number

Manufacturer (company)
Project name
Rule
Type
Place of installation

Created on: 18/11/20
Edit date: 24/06/20



Boskalis
TARGUS

GAT 06

Totale

Brandstof verbruikt [hr]	0
Brandstofverbruik [liters]	0.0
Brandstofverbruik [norml/h]	0.0

GAT 06

Urenverbruik [hr] 0 |

Normaal verbruik [lit] 0 |

Brandstofverbruik [liters/h] 0.0 |

VRAAGSTUK #2

Fabrikanten bieden mogelijkheden om materieel te monitoren....

...weer een extra portal?

```
<Invoice>
<Customer>
  <CustomerId>
  <Name>Van Bastoren</Name>
  <City>MILAN</City>
</Customer>
<InvoiceId>20137844</InvoiceId>
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<Invoice>
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  <CustomerId>
  <Name>Chilan Instruments</Name>
  <City>NEW YORK</City>
</Customer>
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<Description>Ledikant</Description>
</Invoice>
</Invoices>
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Row	Street	City	State	Beds	Baths	Sq Ft	Type	Sale Date	Price	Latitude	Longitude
1	1026 HIGH ST	SACRAMENTO	CA	2	1	836	Residential	Wed May 21 00:00			
2	51 OMAHA CT	SACRAMENTO	CA	3	1	1167	Residential	Wed May 21 00:00			
3	2796 BRANCH ST	SACRAMENTO	CA	2	1	796	Residential	Wed May 21 00:00			
4	2805 JANETTE WAY	SACRAMENTO	CA	2	1	852	Residential	Wed May 21 00:00			
5	6001 MCMANON DR	SACRAMENTO	CA	2	1	797	Residential	Wed May 21 00:00			
6	5828 PEPPERMILL CT	SACRAMENTO	CA	3	1	1122	Condo	Wed May 21 00:00			
7	6048 OGDEN NASH WAY	SACRAMENTO	CA	3	2	1104	Residential	Wed May 21 00:00			
8	2561 19TH AVE	SACRAMENTO	CA	3	1	1177	Residential	Wed May 21 00:00			
9	11150 TRINITY RIVER DR Unit 114	RANCHO CORDOVA	CA	3	2	941	Condo	Wed May 21 00:00			
10	7125 10TH ST	ROO LINDA	CA	3	2	1146	Residential	Wed May 21 00:00			
11	645 MORRISON AVE	SACRAMENTO	CA	3	2	909	Residential	Wed May 21 00:00			

VOLVO



VISIONLINK.
Unified Fleet



VRAAGSTUK #2 – KANSEN!

TELEMATICS DATA STANDARD V1.2

- Header information
- Last known location
- Cumulative operating hours
- Amount of fuel used
- Amount of fuel used in the last 24 hours
- Distance traveled

2011

TELEMATICS DATA STANDARD V2.0 (ISO15143-3)

- Header information
- Last known location
- Cumulative operating hours
- Amount of fuel used
- Amount of fuel used in the last 24 hours
- Distance traveled
- Description of fault
- Cumulative idle hours
- Percent of fuel remaining
- Is engine running
- Is switch on
- Cumulative power take off hours
- Average daily load factor
- Maximum Daily Speed
- Cumulative Load Count
- Cumulative Payload Totals
- Cumulative Active Regeneration Hours

2016

VRAAGSTUK #2 - PRAKTIJK



TELEMATICA DATA STANDARD



VRAAGSTUK #3

Data van grotere fabrikanten wordt in toenemende mate gestandaardiseerd, dit biedt tal van mogelijkheden....

...hoe kan 'speciaal' materieel mee in deze trend van standaardisatie?

VRAAGSTUK #3 - PRAKTIJK



TELEMATICA DATA STANDARD



VRAAGSTUK #1



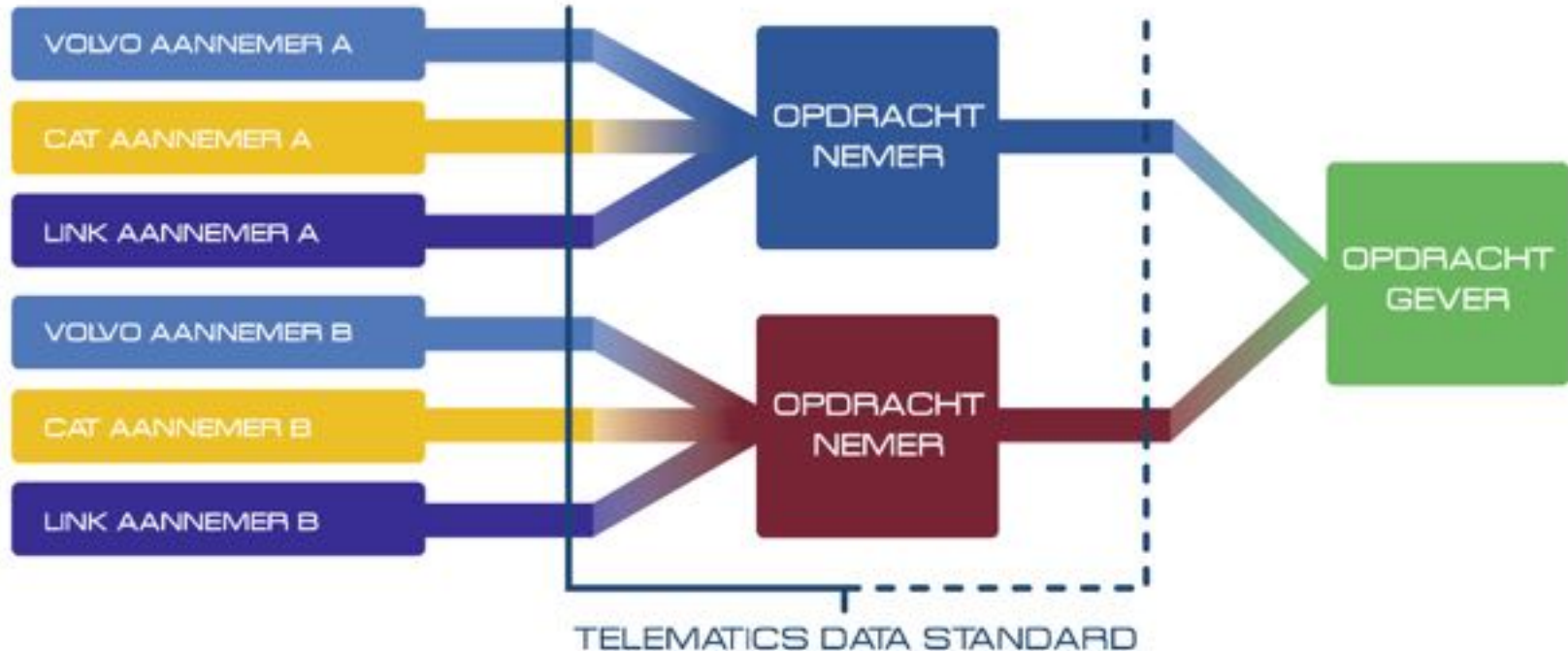
VRAAGSTUK #1+2



VRAAGSTUK #1+2+3



VRAAGSTUK #1+2+3+kansen



PVH ervaringen

- Het kan!!!!
- Uniforme definities zijn belangrijk
- Houd controle over uw data
- Data koppeling fabrikanten, minder up-to-date dan fabrikant portal
- Garbage in / garbage out, specificatie is geen implementatie
- Maatwerk materieel en projecten, behoeft vaak een maatwerk oplossing
- Agrarische sector als voorbeeld en inspiratie

Zuinig gereden naar Utrecht?

For current FCM's an accuracy of about **±4%** is achievable, when the vehicle is tested on a chassis dynamometer in a conventional emission laboratory.

This in-lab accuracy will result in an achieved accuracy of about **±8 to 9%** under real-world conditions.

Weer zuinig naar huis?

