



Innovative Telematiklösungen für weltweite Objektverfolgung

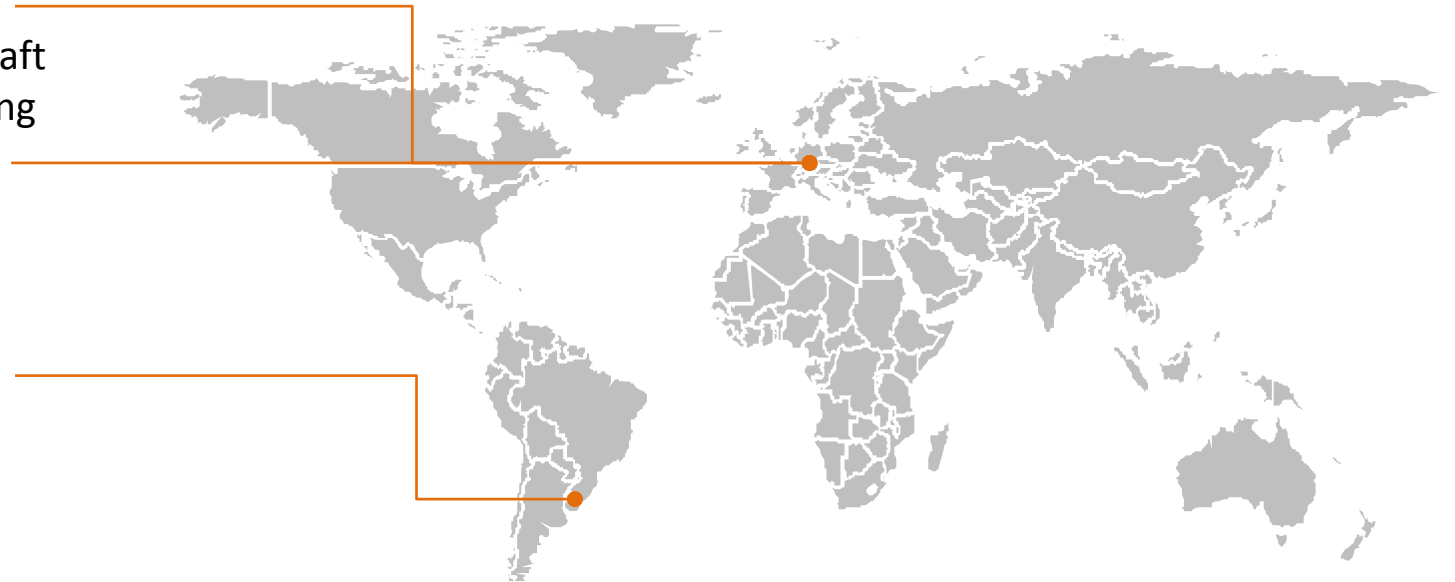


Über uns

MECOMO Unternehmensgruppe



- **Holding: MECOMO AG**
Unterschleissheim/München, Deutschland
gegr. 2000, privatfinanzierte kleine Aktiengesellschaft
Kernaufgaben: Vertrieb/Marketing, R&D, Verwaltung
- **mecSOLAR smart devices GmbH**
Unterschleissheim/München, Deutschland
gegr. 2010, 100% Tochter MECOMO AG
Kernaufgaben: Telematikhardware
- **Niederlassung MECOMO do Brasil S.A.**
Porto Alegre/RS, Brasil
gegr. 2008, 100% Tochter MECOMO AG
Kernaufgaben : Software Entwicklung
- Gesamt: ca. 30 Mitarbeiter



media content mobile



since 2012



MECOMO – Unsere Standorte



Unterschleissheim/München

MECOMO AG (Holding)
mecSOLAR smart devices GmbH

Vertrieb, Marketing, SW Entwicklung, Produktion,
Verwaltung, HW Entwicklung



Porto Alegre/RS, Brasilien

MECOMO do Brasil S.A.

SW Entwicklung

MECOMO - Full-Service Telematiklösungen für nicht-stromversorgte Objekte

Spezialisierung auf Wechselbrücken, Container, Bahngüterwagen und Logistikobjekte aller Art



Was bedeutet "Full-Service Telematiklösungen"?

- **Komplettlösung Telematikplattform:**
robust, offen und kundenspezifisch anpassbar
- **Anwenderoberflächen für alle Informationskanäle: Web & Mobile Apps**
Unterstützung aller relevanten Web Browser und mobilen Betriebssysteme (iOS, android)
- **Telematikeinheiten**
Breites Portfolio robuster und modularer Ortungsmodule: Wartungsfreie Solartelematik und batteriebasierte Einheiten
- **Kundenspezifische Lösungsentwicklung:**
Wir helfen unseren Kunden ihre individuellen Herausforderungen zu lösen – wir entwickeln vertikale Lösungen



since 2012



MECOMO – Vision, Mission, Strategy



VISION

CHANGE THE WORLD OF TELEMATICS

MAINTENANCE-FREE, CABLE-FREE

MISSION

As a holistic telematics solution provider,
our mission is to
innovate, develop, build and operate
best in class telematics solutions
in highly available and highly scalable software
as well as robust and maintenance-free
tracking hardware,
adopted to our customers' needs –
to improve our
customers' business.

Leistungskennzahlen mecSOLAR®/mecFLEET®

Unsere Leistungsfähigkeit in Zahlen



> 2.5 Mio
notifications
triggered per
month

> 710 Mio
positions
processed per
year

> 17 years
of LBS and telematics
platform experience

> 50.000
solar telematics
devices sold

> 50.000
objects tracked
by mecFLEET®

> 8 years
MECOMO solar-
powered devices
in operation

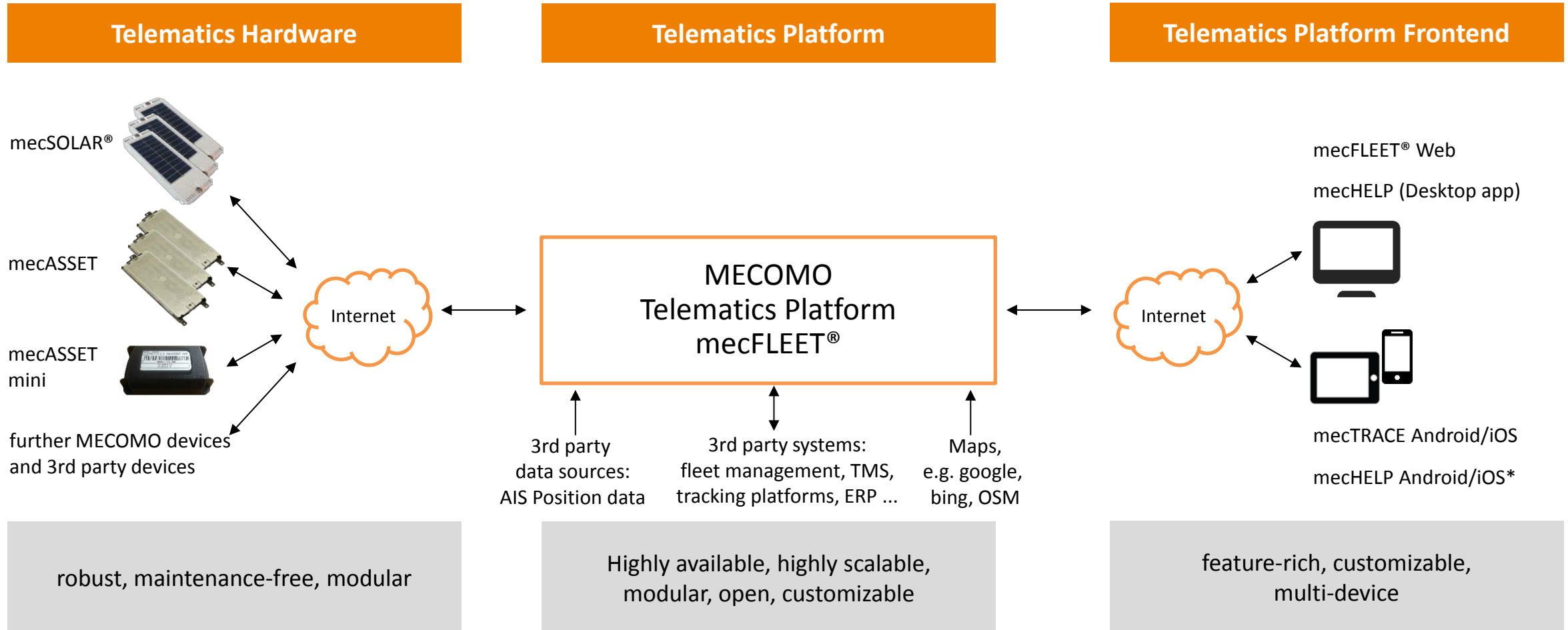
> 7 years
experience in
mobile app
development

> 20.000
installations of
mecTRACE
Android

> 4 Mio.
users of apps
developed by
MECOMO

MECOMO Telematikportal mecFLEET®

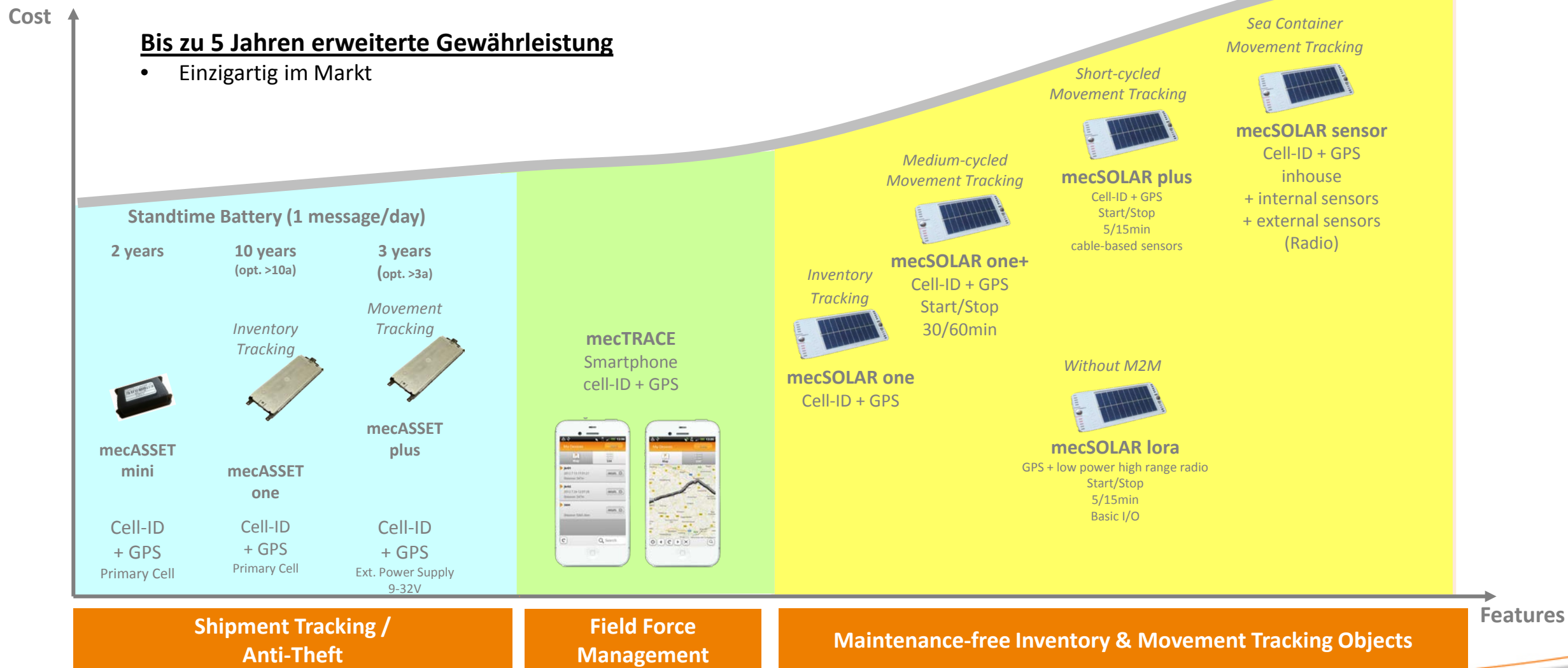
Ende-zu-Ende Telematiklösung – Robust, offen und kundenspezifisch anpassbar



* currently mobile Web

mecSOLAR® Skalierbare Produktfamilie

Best-of-Class Inventur und Bewegungsortung – langlebig, wartungsfrei, feldbewiesen



MECOMO Solartelematik



mecSOLAR® – der Goldstandard der Wechselbrückenortung

Best-of-Class Bewegungsortung – langlebig, wartungsfrei, feldbewiesen



Optional: Vandalismusschutz durch Plexiglas

Intelligentes Battery Management

- Solar-basierte Energiegewinnung
- unique solar charger intelligence
- sustaining battery-recharging
- life span and endurance maximization
- Li-Ion primary, Li-Po rechargeable



Beispiel: Klickhalterung für einfache Installation



Positioning and data transmission

- reliable GPS, Glonass, Cell-ID positioning
- 2G (GSM, GPRS) and 3G (UMTS) Modem
- LoRa available, NB-iot in POC-Phase

Modular design

- designed to tackle challenges of varied physical requirements
- freely definable inside components
- optional auxiliary equipment

Patented IP69K casing

- IP69k, extremely robust and long-lasting
- designed to withstand decades
- against all weather conditions
- multimodal mounting

Solar-gestützte Telematikeinheiten mecSOLAR®

Breites Portfolio wartungsfreier Telematikeinheiten mit Optionen zur kundenspezifischen Anpassung



	mecSOLAR® one	mecSOLAR® one+	mecSOLAR® plus	mecSOLAR® sensor	mecSOLAR® lora
Application	inventory tracking	medium-cycled movement tracking	short-cycled movement tracking	sea container movement tracking	inventory + movement tracking
Positioning					
GPS	✓	✓	✓	✓	✓
Cell-ID location	✓	✓	✓	✓	
Glonass/Galileo (optional)	✓	✓	✓	✓	✗
Mobile Communication	2G	2G	3G	3G	LoRa
Optional Sensors					
Internal	✗	✗	✗	°C, %, g, lux, door, mount	✗
External	✗	✗	°C, door	°C, door	✗
Full Operation w/o sunshine	~ 4 months	~ 4 months	> 6 months	~ 3 months	> 6 months
Casing / Mounting	modular casing IP69K – various holders/mounts for different customer options and transport modalities				

mecSOLAR® Produktfamilie



mecSOLAR® one

**Best-of-Class
Inventory
Tracking**



mecSOLAR® one+

**Entry Class
Movement
Tracking**

(Start/Stop)



mecSOLAR® plus

**Best-of-Class
Movement
Tracking**

with
maximum Variability



mecSOLAR® sensor

**100%
Container
Monitoring**

mecSOLAR®

Hardware Installation



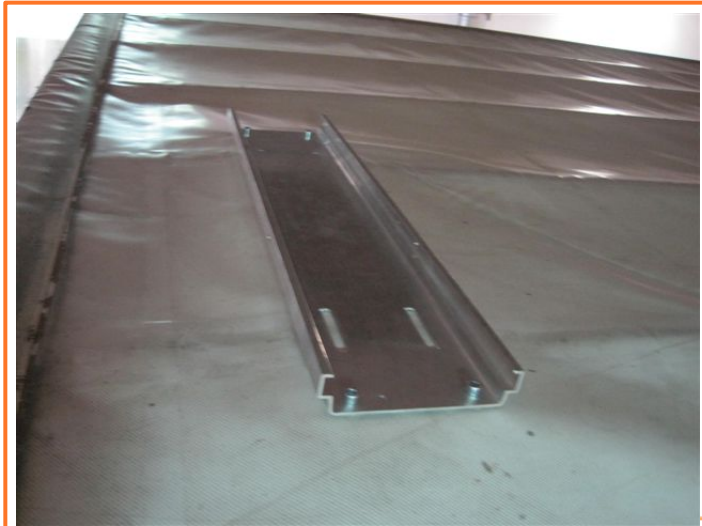
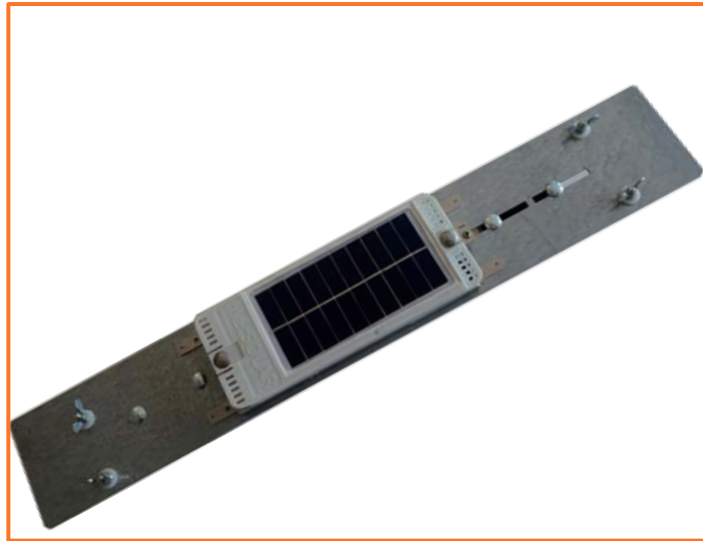
mecSOLAR® Montageoptionen / Varianten Halterungen

Wechselbrücken/ Trailer



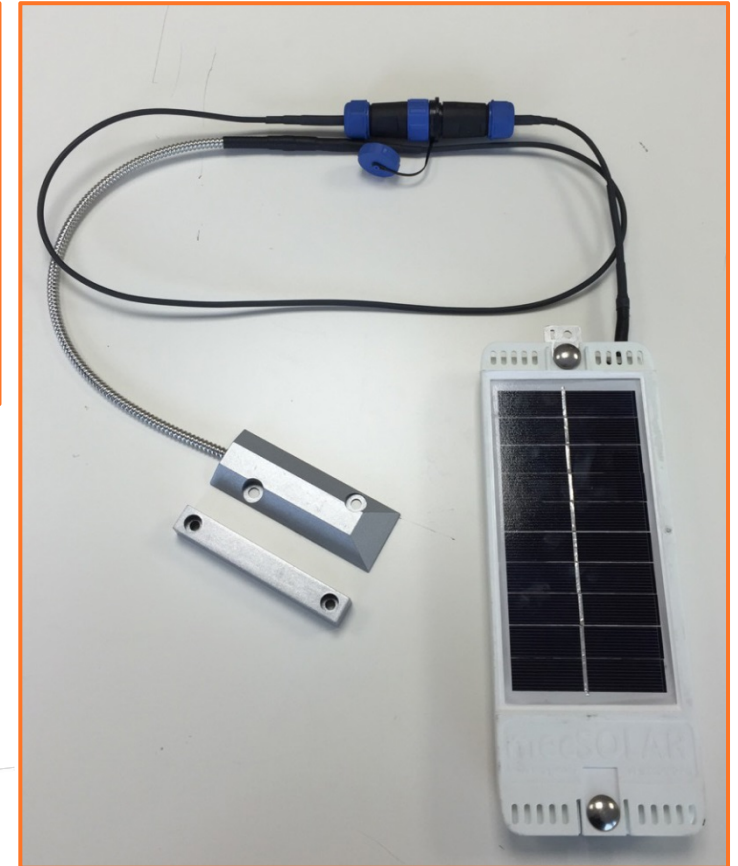
mecSOLAR® Montageoptionen / Varianten Halterungen

Vollplanen / Trailer & Wechselbrücken



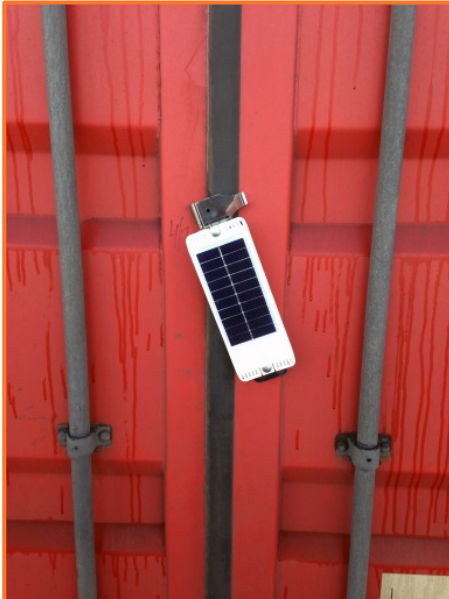
mecSOLAR® Montageoptionen / Varianten Halterungen

Kabelsensorik



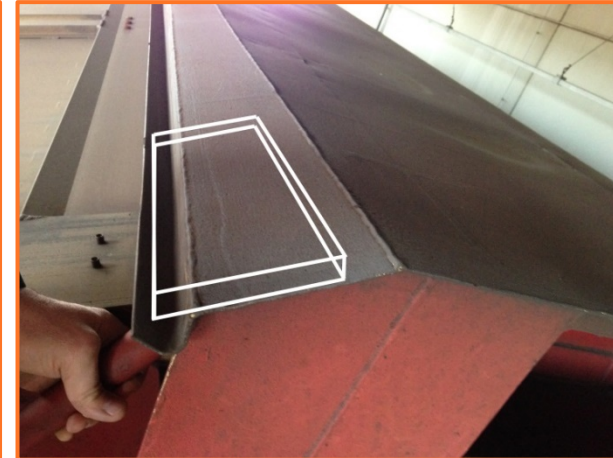
mecSOLAR® Montageoptionen / Varianten Halterungen

Seecontainer



mecSOLAR® Montageoptionen / Varianten Halterungen

Güterwagen Bahn – Wartungsfreier Betrieb Solartelematik seit 4 Jahren durch Spezialbeschichtung



LoRa / NB-iot

Objektüberwachung auf Betriebsgeländen



MECOMO Objektüberwachung auf Betriebsgeländen

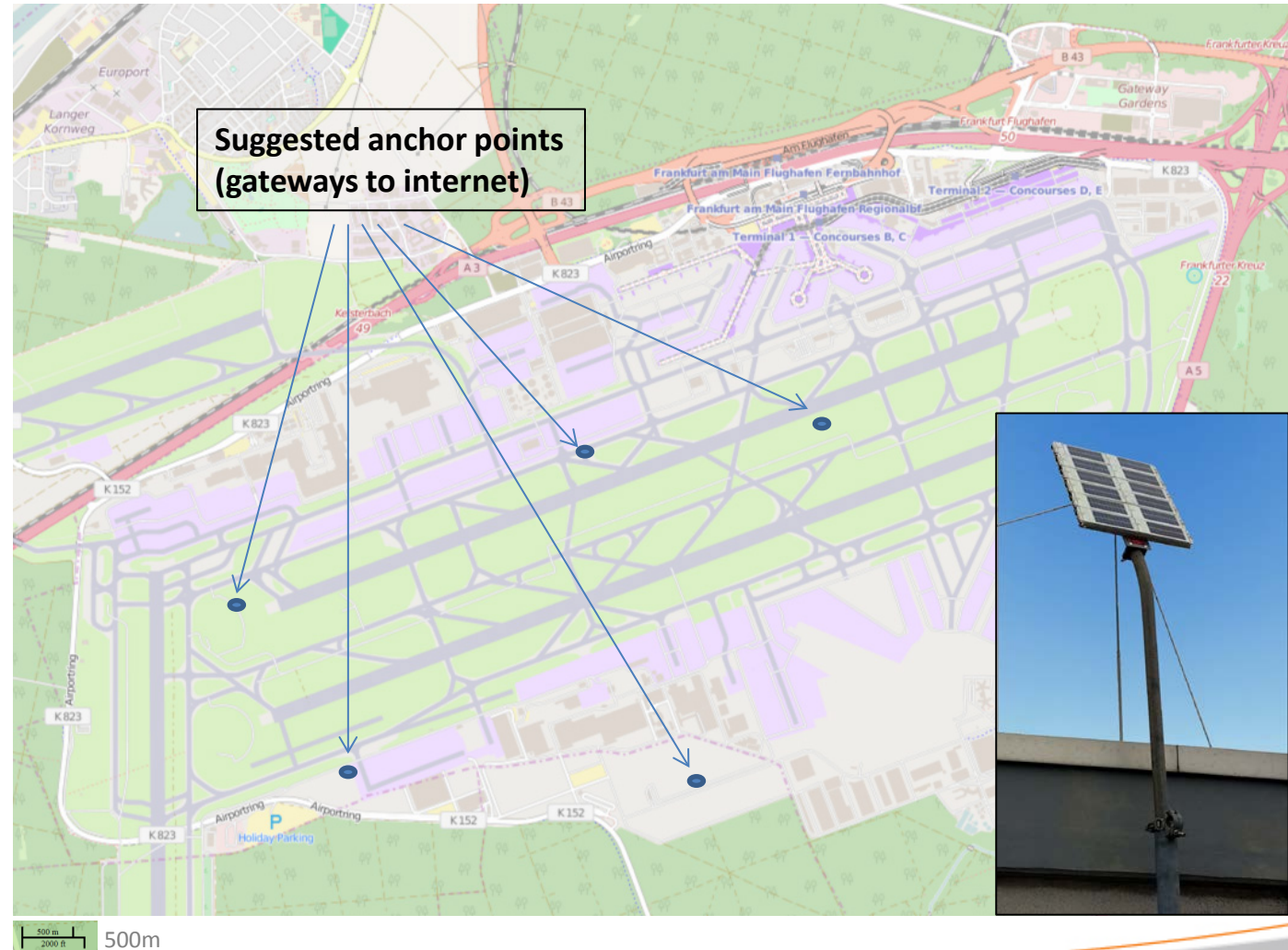
Bewegungsartung ohne Netzbetreiber (kein M2M)



Low Power High Range Radio technology 5+ km

- Due to solar: maintenance free movement tracking
- Object tags: 5+ km range (high anchor locat.)
 - Each object reaches anchors directly
- LORA Gateways: No fixed infrastructure req'd
 - Gateways route messages into internet
 - M2M gateway (WiFi & Ethernet possible)
 - Affordable, powered gateways
 - Option: No power cord/solar-powered
 - gateways completely autarchical
 - easily to be placed where needed
- Auto-registration of objects

Easy & No Hassle



MECOMO Objektüberwachung auf Betriebsgeländen

Ideal for industrial complexes, logistics hubs, airports, railway stations etc. (indoor/outdoor)



LORA (or NB-iot) – Movement Tracking

Outdoor + indoor object monitoring possible

- Suitable for all object modalities
- By simple installation of gateways indoor tracking possible



mecSOLAR lora telematics device on movable airplane stairs



Gateway without power cord by solar energy harvesting



Ideal für Betriebsgelände

mecSOLAR

Container Telematics



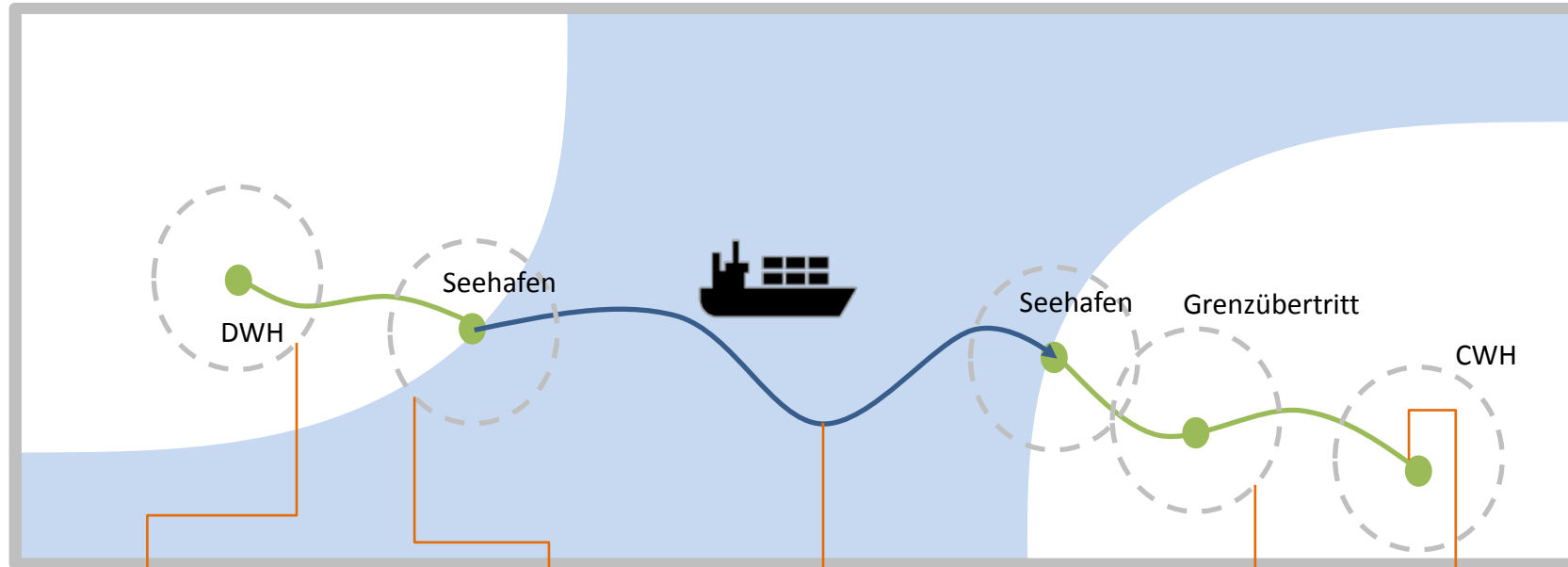
mecSOLAR® Telematik für Container

Installationsbeispiel auf einem Seecontainer



MECOMO Telematikplattform mecFLEET® – Shipment/Tour Überwachung

Anfang-bis-Ende Sichtbarkeit des Transportwegs – Erheblicher Zusatznutzen für Endkunden



Automatische Status
Nachricht an alle
relevanten Parteien

Event-Aufzeichnung
(Ankunft, Abfahrt,
Standzeiten,
Demurrage) zur
weiteren Analyses

“Echtzeit”
Positionsverfolgung
(GPS/AIS)

Automatischer
Status Update
(e.g.
Verspätungs-
warnung)

“Echtzeit”
POD und
automat.
Tourbericht

mecTRACE®
Field Force Automation



Mobile Anwendungen mecTRACE®

Mobile Apps Family mecTRACE®



- **Field-Force-Automation via smartphone: individual - intuitive**
- Combination of tracking platform and hardware as smartphone solution
- Field Force Automation and order management
- White-label solution
- Android
- iOS
- Beschädigungsmanagement
- Fahrerkommunikation
- Koordination Hofmitarbeiter



mecFLEET®
Telematikportal



Telematikportal mecFLEET®

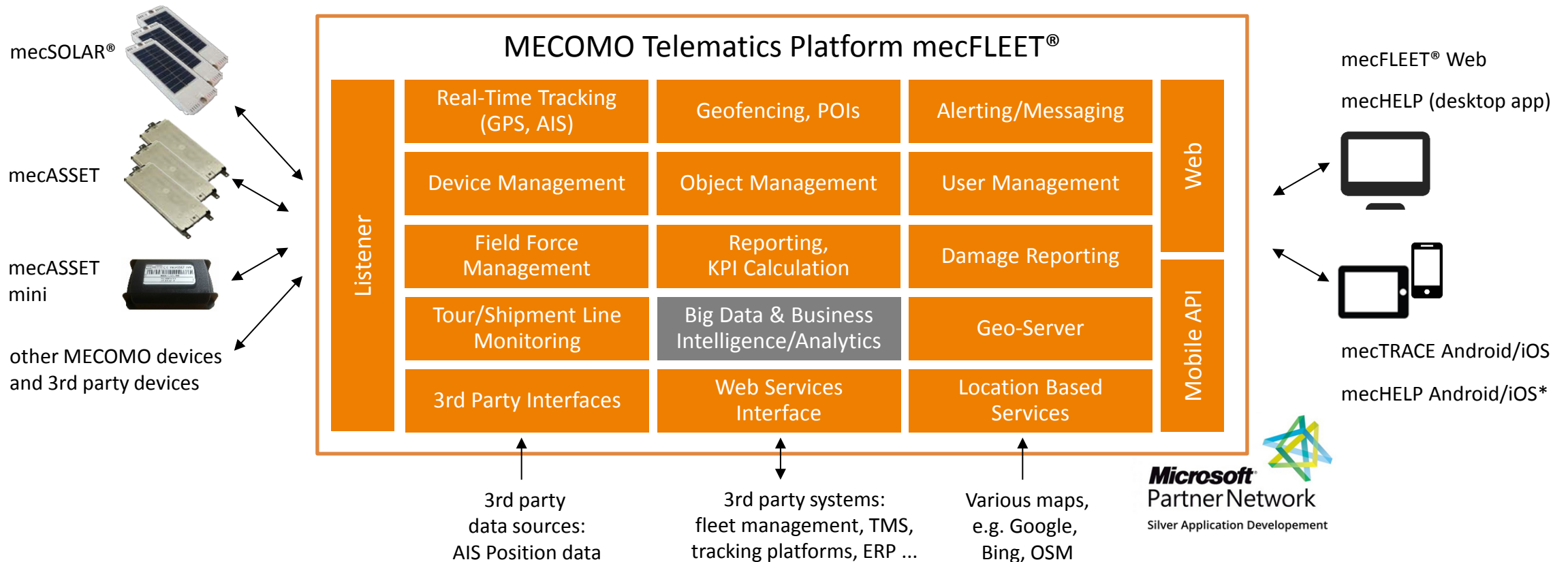
Telematics Platform mecFLEET® – highly available, highly scalable, modular, open, customizable



Telematics Hardware

Telematics Platform

Telematics Platform Frontend



* currently mobile Web

Telematikportal mecFLEET® – Funktionsübersicht

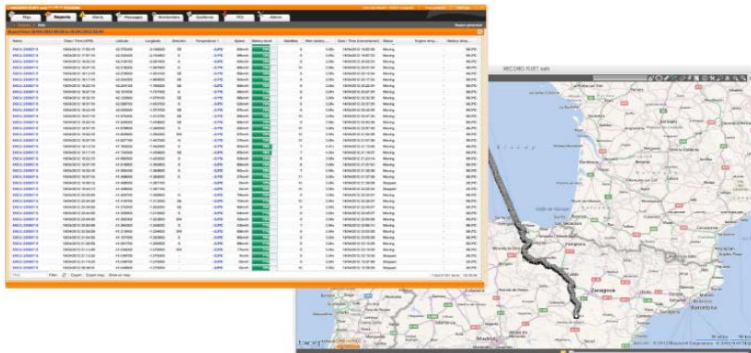
Alles was das Herz des Fuhrparkleiters begehrt 😊



Real-time Tracking

Track objects in real time:

- > Object status by icon immediately visible (e.g. in movement)
- > Additional information of current status
- > Individual, detailed information (customizable view)
- > Different map options
- > Useful tools (zoom, freeze, copy link, group sharing with customers and other mecFLEET users, customized visualizations, ...)



Comprehensive Reporting

Three types of reporting logic:

- > **Web report** of basic information like position history, over-speeding, message reports, route reports and its visualization on map
- > **Report generator** for automatically generated reports (e.g. daily or weekly idle time reports sent to one or many email accounts)
- > **Individual designed reports** according to customer requirements

Alerting & Messaging

User-defined warning and alert messages:

- > Over- or under-speeding
- > Sensor events (opening of a door, battery status and temperatures)
- > Signal strength of GPS
- > Geofence or Point of Interest (POI) events (entry/exit, retention time, planned vs. actual)
- > Alerting by email, SMS (optional) and reported in mecFLEET Web

Field force communication

- > Chat between mecFLEET and field worker through mecTRACE Android
- > Expansion to full work management tool

Geofences, POIs

POIs (Points of Interest)

- > Customer specific POIs can be imported to mecFLEET
- > POI visualization on map

Geofences

- > Circular geofences around addresses with defined diameters
- > Corridors for routes
- > Polygons for detailed geofencing
- > Multi-polygons for dynamic grouping



Object Management

Definitions

- > tracked object can individually be named (e.g. container no.), grouped (e.g. by branch responsibility, type, etc.) or enriched by additional information (e.g. UVV/inspection interval)

Groupings

- > **Static groups:** All objects of a type, organizational/regional responsibility, etc. can be grouped to ease administration.
- > **Dynamic groups:** Dynamic grouping based on geofence entry/exit or other location based events. Regional responsibilities might be covered (e.g. all devices in a certain region, on a certain company ground, on a construction site/zone)

Telematikportal mecFLEET® – Tourüberwachung

Beispiel: Naher Osten



mecFLEET STAGING Huawei - mec

Map Reports Alerts Messages Activities Tours Geo-fence POI Objects Devices Admin

→ Shipment Dashboard → New

Transport number:

Object:

Pick up date: (?) 23:38

Delivery date: (?) 23:38

Activity list type:

HTM Tender No:

Truck plate:

P/L 01:

P/L 02:

P/L 03:

P/L 04:

P/L 05:

Shipment Line:

Waypoint 1:

Waypoint 2:

Waypoint 3:

Waypoint 4:

Waypoint 5:

Waypoint 6:

Waypoint 7:

Save

Telematikportal mecFLEET® – Individuelle Berichte

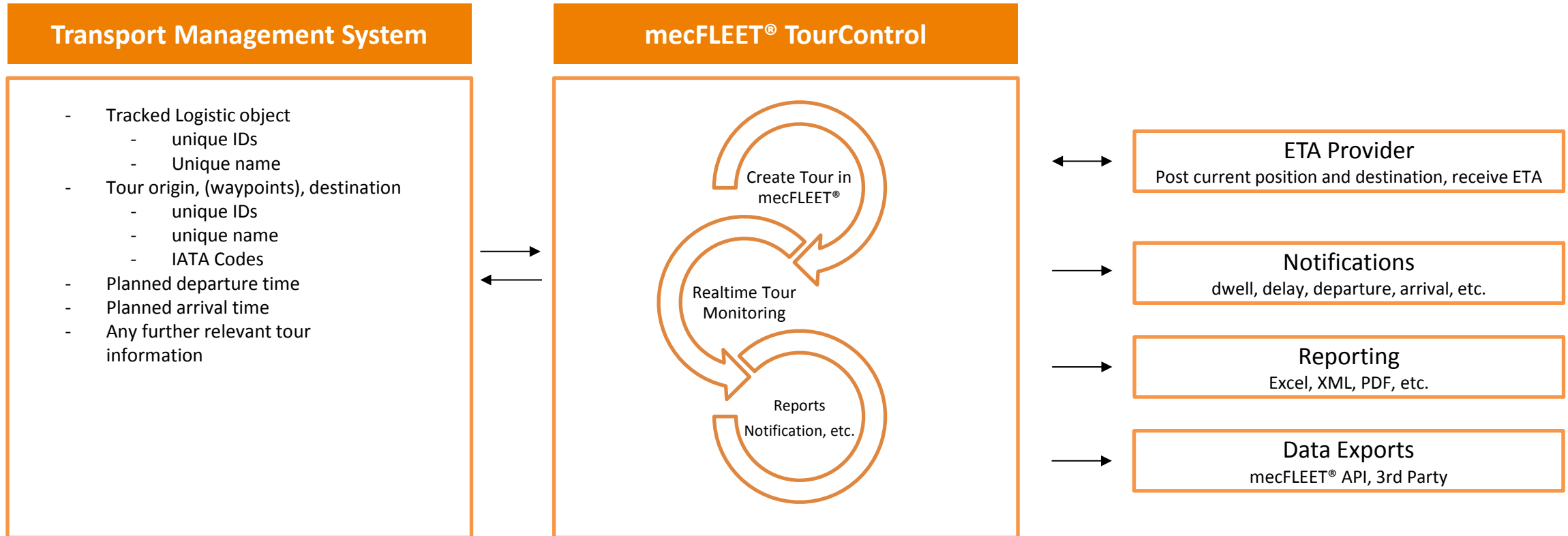
Beispiel: KPI-basierte Flottenproduktivität / Stillstandszeitanalysen



Routes Summary													Presence inside Depots (Geofence Area)		
Object / Driver	Distance km	KPI Trip / Total	Trip Time (d.hh:mm)	Stop Time (d.hh:mm)	2 hours (d.hh:mm)	KPI 2h / Total	2h-10h (d.hh:mm)	KPI 2-10h / Total	10-15h (d.hh:mm)	KPI 10-15h / Total	>15h (d.hh:mm)	KPI >15h / Total	Total Time in Depot (d.hh:mm)	End Depot Name	KPI Depot / Total
Testgroup_Germany															
1	883	10 %	17:26 (14)	8:08:34 (15)	02:08 (8)	1 %	19:21 (3)	12 %	13:45 (1)	8 %	4:19:21 (5)	69 %	1.17:52 (4)	Heilbronn	24 %
2	205	3 %	05:27 (9)	6:18:33 (10)	01:02 (3)	1 %	09:43 (3)	6 %	00:00 (0)	0 %	6:07:47 (4)	90 %	02:31 (1)	-	1 %
3	576	6 %	09:17 (7)	6:14:43 (8)	03:58 (5)	2 %	00:00 (0)	0 %	00:00 (0)	0 %	6:10:45 (3)	92 %	1.05:15 (1)	-	17 %
4	1078	14 %	23:44 (20)	6:00:16 (21)	07:23 (11)	4 %	1.21:41 (7)	27 %	00:00 (0)	0 %	3:19:12 (3)	54 %	10:46 (4)	-	6 %
5	387	7 %	12:26 (16)	6:11:34 (17)	04:35 (8)	3 %	12:06 (3)	7 %	13:07 (1)	8 %	5:05:46 (5)	75 %	00:43 (2)	-	0 %
6	1194	12 %	20:14 (10)	6:03:46 (11)	00:46 (4)	0 %	02:16 (1)	1 %	00:00 (0)	0 %	6:00:44 (6)	86 %	08:36 (6)	-	5 %
7	2714	28 %	1.23:24 (26)	5:00:36 (27)	08:14 (18)	5 %	2.03:41 (6)	31 %	11:41 (1)	7 %	2.01:00 (2)	29 %	04:34 (10)	-	2 %
8	1138	11 %	18:33 (7)	6:05:27 (8)	00:21 (2)	0 %	00:00 (0)	0 %	14:54 (1)	9 %	5:14:13 (5)	80 %	08:55 (6)	-	5 %
9	1526	15 %	1.01:58 (16)	5:22:02 (17)	07:39 (9)	5 %	19:04 (4)	11 %	00:00 (0)	0 %	4:19:19 (4)	69 %	18:35 (6)	-	11 %
10	1055	11 %	17:39 (10)	6:06:21 (11)	04:05 (7)	2 %	06:10 (1)	4 %	00:00 (0)	0 %	5:20:06 (3)	83 %	02:28 (3)	-	1 %
11	632	10 %	16:02 (18)	6:07:58 (19)	10:23 (13)	6 %	02:16 (1)	1 %	00:00 (0)	0 %	5:19:20 (5)	83 %	3.03:38 (7)	Mannheim	45 %
12	1608	16 %	1.02:40 (13)	5:21:20 (14)	05:48 (6)	3 %	07:15 (2)	4 %	21:38 (2)	13 %	4:10:40 (4)	63 %	00:00 (0)	-	0 %
13	936	8 %	14:07 (7)	6:09:53 (8)	00:08 (2)	0 %	23:20 (3)	14 %	00:00 (0)	0 %	5:10:26 (3)	78 %	03:00 (1)	-	1 %
14	1538	15 %	1.01:59 (15)	5:22:01 (16)	05:37 (9)	3 %	11:00 (2)	7 %	00:00 (0)	0 %	5:05:23 (5)	75 %	1.17:19 (7)	-	24 %
15	1040	9 %	15:49 (10)	6:08:11 (11)	00:34 (4)	0 %	09:13 (1)	5 %	00:00 (0)	0 %	5:22:24 (6)	85 %	2.11:50 (6)	-	35 %
16	601	5 %	09:12 (6)	6:14:48 (7)	00:05 (1)	0 %	00:00 (0)	0 %	00:00 (0)	0 %	6:14:43 (6)	94 %	1.15:03 (5)	Mönchengladbach	23 %
17	1237	11 %	18:37 (9)	6:05:23 (10)	03:07 (4)	2 %	00:00 (0)	0 %	00:00 (0)	0 %	6:02:16 (6)	87 %	2.06:27 (9)	-	32 %
18	9	0 %	00:36 (1)	6:23:24 (2)	00:00 (0)	0 %	00:00 (0)	0 %	00:00 (0)	0 %	6:23:24 (2)	100 %	00:00 (0)	-	0 %
19	504	12 %	19:26 (18)	6:04:34 (19)	07:57 (13)	5 %	08:22 (1)	5 %	00:00 (0)	0 %	5:12:16 (5)	79 %	00:00 (0)	-	0 %
20	0	0 %	00:00 (0)	7:00:00 (1)	00:00 (0)	0 %	00:00 (0)	0 %	00:00 (0)	0 %	7:00:00 (1)	100 %	00:00 (0)	-	0 %
Amount of devices: 20	18861	Ø 10 %	14.08:35	125.15:24(252)	3.01:48	Ø 2 %	9.11:28	Ø 7 %	3.03:05	Ø 2 %	109.23:05	Ø 79 %	16.17:32		Ø 12 %

Telematikportal mecFLEET® – Anbindung Backend-IT

TMS & ERP Integration



Telematikportal mecFLEET® – Integrationsplattform

Alle anderen Telematikanbieter oder Telematikendgeräte können integriert werden



- Third Party Platforms
 - 27 and growing
 - New: Integration with AIS Global Ship tracking
- Third Party Hardware
 - Pointer
 - CeTEC
 - Teltonika
 - HyLine
 - Sertec
 - Löbbbe Reefer
 - Et al

**Open for your choices –
Available integration, not only a future promise**

1	Daimler FleetBoard	JA
2	Transics Quattro Plus	JA
3	TRUCK-LOC Stepp 3	JA
4	Enaikoon	JA
5	Tom Tom WebFleet	JA
6	MAN LogiWeb	JA
7	Q1Q Telematic	JA
8	TRAVEL-TAINER	JA
9	MASK.IT M-Track	JA
10	Qualcomm FleetVisor	JA
11	Yukatel	JA
12	TwinLine Twinbox	JA
13	VDQ LogPro / XP3	JA
14	Volvo Dynafleet	JA
15	Agheera Track	JA
16	Cargobull Telematics	JA
17	idem	JA
18	TelematicOne (T-Systems)	JA
19	gatehouse	JA
20	novacom (beide Richtungen)	JA
21	nicbase (beide Richtungen)	JA
22	Masternaut/Tachofresh	JA
23	KRONE telematics	JA
24	Mobile Objects	JA
25	CenTAUR CeTEC	JA
26	Marinetraffic AIS	JA
27	Ocean Insight AIS	Jul 16

Telematikportal mecFLEET® – Individualität

Kundenspezifische Funktionen und Corporate Identity



- Web application
 - mecFLEET.com or mecFLEET.de
 - Individual URL
- Company Look&Feel
 - Own Login mask
 - mecFLEET in company colours
 - Excel reporting with own Look&Feel
- Customized functions and features



<http://companyname.mecfleet.com>

Sprechen Sie mit uns ☺



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