

Manufacturing

Bringing SMART into Manufacturing



Frits van Calker *ing.* MBA
Founder of RFIDdirect
25+ years in RFID & manufacturing



Container Terminal Optimisation

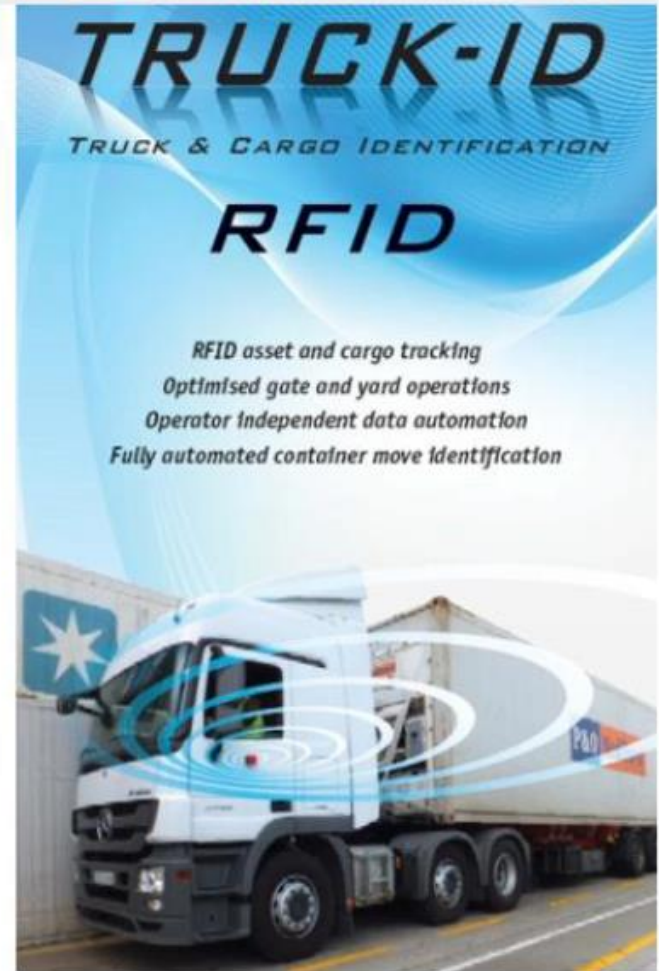
Ensuring containers are placed in the planned location, efficiency improvement, reducing handling, optimizing space use

- ☐ Truck-ID
- ☐ Container-ID

Mount-on-metal RFID tags

CAEN A941 OEM reader, connected to Wi-Fi network.

Project development Time: 3 years





Photometric testing Aeronautical Ground Lighting (AGL)

AGL systems (covering runway centreline, touchdown zone, edge and taxi-way lights) support safe and regular aircraft operations by providing essential visual guidance to pilots and aerodrome personnel

- ☐ RFID identification of each light with special designed tags
- ☐ RFID Bluetooth stick readers for an accurate and secure reading of the tag information



Project development time: 2 Years



Electric Busses

Electrical Busses in Birmingham.

Recharging at different locations 'en-route'

- ☐ Bus-ID
- ☐ Location-ID

bespoke tags RFID, RFIDdirect

CAEN R1270 Quark OEM reader on board of bus,
integrating data with vehicle management
system.

Project development Time: 1½ years



Fish Weighing Automation



Weighing Fish on board of the trawler

Collecting data per returnable crate

- ☐ **Crate-ID**
- ☐ **Weight – Sort - ID**

bespoke tags RFID, RFIDdirect

**CAEN R1270 Quark OEM reader on board
integrated in the weighing device, communicating
with management system and EDI to fish auction
on the shore**

Project development Time: ½ year





High Quality Formal Garment Hire

Rental Company for Formal Garments;

- 1.5 million items in stock
- 10.000 units / week
- UK-wide rental organisation

CAEN R1260I Slate on final goods-out control

CAEN R1240I redmine qID hand-held device

Project development Time: 3 years, first operational system supplied in May 2014





RFIDdirect®
www.RFIDdirect.eu



Jewellery Software Solution

Modular Software solution for the High Street Jewellery Shops.

- ☐ Jewellery-tags
- ☐ POS, Stock control, software integration

Improving loss, theft control, security

CAEN R1260I Slate as POS reader

CAEN R1240I qID hand-held device

Project development Time: 3 years, first two shops fitted in Antwerp summer 2014



RFIDdirect®

SOIL FERTILITY AND SOIL QUALITY

In Kenya farm land's potential is hugely under-utilized.

Improving land management with the correct information.

Soil and fertilization advise to small farmers

- ☐ Sample bag-ID
- ☐ Temp.Logging during transport

CAEN RT0005 temp.loggers

CAEN R1260I Slate readers

Project development Time: ½ year



Customer note:

All calibrated values were within 1°C of the set values (tested at 4, 25, 40 and -20°C) compared to the used PT100 sensors in the calibration fridges and freezers.



De Business Case voor RFID

Automotive / Railway

Inventory management

Railway track production

- Real time visibility of inventory
- Reducing operational costs
- Reducing re-work costs
- Improving customer information
- Improving operational efficiency

voestalpine Railpro BV



Our Ref.: RailPro-FvC-16-012-ROI

Nov. 2016

North Wales

Manufacturing Timber Fire Doors

Industry 4.0 & KPI

- Real time visibility of production KPI
- Reducing inventory value
- Reducing operational costs
- Improving customer information
- Improving production planning process

Conducted: Scoping / Specification Design

Production scheduled Nov. 2020

Deployment scheduled Summer 2021

Scoping

"Tracking & Tracing within Production"

UK Fire Doors Ltd

"Keeping track, adding value"



Ref: FireDoors-FvC-17-010-IssueA

Oct. 2017

Concrete Manufacturing

Inventory management

- Real time visibility of inventory
- Reducing inventory value
- Reducing operational costs
- Improving customer information

Voorraad Management Systeem

dmv RFID technologie, een voorstel tot onderzoek bij



MBI BV

|

Onze Ref: MBI-FVC-15-012-ISSUEA

Dec. 2015

Distribution Frozen Fruit Juice

Traceability world-wide

- Improving traceability
- Reducing risks
- Visibility of inventory in Chilled Warehouse
- Improving customer information
- Increasing numbers returned big-bags

RFID in Returnables

"Analysing the Logistics"

Maia – Global

"Keeping track, adding value"



Ref: Maia-FvC-017-Issue B

Feb. 2017

Kitchen Manufacturer

Paint-shop Quality

- Drying time recording
- Reducing risks
- Improving customer information
- Reducing rework

RFID Identification

"Analysing the Logistics"



Wren Kitchens

"Keeping track, adding value"

Ref: Wren-FvC-17-011-IssueA

Aug 2017

Distribution Logistics

Smart Warehousing

- Warehouse Management
- Improving service level
- Reducing operational costs
- Improving efficiency
- Real time visibility of inventory

Scoping

“Analysing the Logistics”

Europa Components & Equipment PLC

“Keeping track, adding value”



Ref: EurCom-FvC-18-003-IssueA

Feb. 2018

Retail

Inventory management Application smaller retailers

- Reducing shrinkage of inventory
- Reducing operational costs
- Improving customer information
- Real time visibility of inventory

RFIDdirect own development

With support of the



Netherlands

Horticulture

Inventory management Growing Stock

21 million plants / year

1000 variations in type & colour

- Reducing shrinkage of inventory
- Reducing operational costs
- Improving customer information
- Real time visibility of inventory

Scoping

“Mogelijk gebruik van RFID in de productie”

Gebr. Alkemade

“Keeping track, adding value”



Ref: Alk-FvC-18-001-IssueA

Feb. 2018

Slovenia

Automotive Manufacturing

Smart Manufacturing

- Reducing rework
- Reducing operational costs
- Improving efficiency
- Improving customer information
- Real time visibility of inventory

Conducted: Scoping / Specification Design

Production scheduled Spring 2021

Deployment scheduled Summer 2021

Scoping

“Development Smart Production”

Kolektor Micro-Motor d.o.o.

“Keeping track, adding value”

Ref: Kolektor-FvC-18-004-IssueA

Feb. 2018



United Kingdom

Security

Crime Evidence

- Improving accountability
- Reducing operational costs
- Improving efficiency
- Improving customer information
- Real time visibility of inventory

Conducted: Scoping / Proof of Concept
Proposal for Budget

Scoping

“Tracing Crime Evidence”

South Wales Police

“Keeping track, adding value”



Ref: Heddlu-FvC-18-011-IssueA

Nov. 2018

Chemical Production

Smart Manufacturing

- Reverse traceability of products
- Reducing operational costs
- Improving efficiency
- Improving customer information
- Real time visibility of inventory

Conducted: Scoping

Deployment scheduled Nov. 2021

Scoping

“Analysing Data Capture, is RFID the way forward?”

Kemira Chemicals (UK) Limited

“Keeping track, adding value”



Ref: Kemira-FvC-18-005-IssueA

Apr. 2018

United Kingdom

Scoping

“Tracking Document Packs”

Defence

Smart Manufacturing

- Traceability of document sets
- Reducing operational costs
- Improving efficiency
- Real time visibility of inventory



“Keeping track, adding value”



Ref: RollsRoyce-FvC-18-014-IssueA

Nov. 2018

United Kingdom

Scoping

Industrial Waste bags

Full traceability cradle to grave

- Traceability of products
- Legal liability for products produced
- Cloud based data collection
- Real time visibility of products

Conducted: Scoping / Proof of Concept

Demonstration software

Deployment scheduled Sep. 2019

Imperial Polythene Products Ltd,

“Keeping track, adding value”



Ref: Imperial-PH-19-001-IssueB

Jan 2019

Keynote Speaker:

RFIDjournal Live 2017, USA

Logimat 2018, Germany

Empack 2018, Germany

Awards:



References

Sarabjeet Chhatwal - OATSystems, a division of Checkpoint, Inc

"My sincere thanks to you for your efforts on this challenging project. I think you contributed where we needed your help and to the extent possible."

Peter Egli - Tatwah SA

"Congratulations, you really did an excellent job and have extremely well consolidated this client with your visits in a crisis situation. This is very professional and reinforces our faith in your skills, both as an engineer and a sales person."

Mary Lou Bosco - COO AIM North America

"On behalf of AIM, thank you for being a sponsor of the Data Capture Workshop. Your support improved the attendee experience for all and increased your company's visibility as an industry leader. Thanks again for your support."

Mirko Konrad - Ragbit GmbH

"Es ist schön, wenn man so unbürokratische Unterstützung erfährt."

Mark Stothers - Store Performance Solutions, Tyco Retail Solutions Ltd

"Frits is without doubt one of the pre-eminent bodies of knowledge in the field of RFID, across all frequencies. He has an encyclopaedic knowledge of complex use cases and is the first person I turn to when I need detailed advice in the industry (bear in mind I have also been working with this technology for 20 plus years).

Without hesitation I would recommend any business or individual wanting to work with a "subject matter expert" should consider looking no further than Frits."

Happy to discuss your question(s).

Thank you

Please contact us at:

Tel.: 01352 752044

Email: info@RFIDdirect.eu

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