

# Implementation of Success Scorecard/ Real Experience

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Enhance RFID Possibilities

# Company Profile



**“ Enhance RFID Possibilities ”**

**IE TECHNOLOGY COMPANY LIMITED (IET)**, a Thailand leading RFID solution provider, offers a complete one-stop RFID service ranging from consultation, system integration, hardware & software design to product customization. Together with our partners, world-class players in RFID industry, IET develops various products including handheld readers, stationery readers and long-range readers to fit all applications. ([www.iet.co.th](http://www.iet.co.th))

IET is a subsidiary of Industrial Electrical Company Limited (IE), a 60-year leading company in measuring instruments and automation. ([www.ie.co.th](http://www.ie.co.th))


















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# IET's Solution Partners

Tag & Reader	Automation	System
   	  	 
   	<h3 data-bbox="896 732 1153 786">Software</h3>  	<h3 data-bbox="1348 732 1791 786">Fleet Management</h3>   <p data-bbox="1410 1068 1696 1086">Joint Venture of LOXLEY &amp; NTT DoCoMo</p>

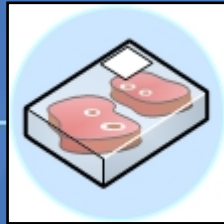


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## Animal Tagging

- Animal Tagging
- EID Reader
- Farm Management



## IET EasyTrace

- Food Traceability
- Food Safety
- Production Planning
- Quality Control



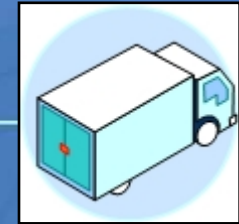
## IET Inventory

- Inventory Control
- Warehouse
- Asset Tracking/Management



## IET Logistics

- Shipment Confirmation
- Inbound-Outbound Logistics
- Pallet/Container Tracking



## IET Truck Management

- Truck Queue Management
- Truck Access Control

# INTEGRATED SUPPLY-CHAIN SOLUTION

Full-Range of RFID Equipment and Solution

# Agenda

## **RFID practical usage: learning from experience**

- Brush-up: some misunderstanding about RFID
  - RFID vs. anti-theft system
  - RFID vs. GPS
  - Why Tag + Reader  $\neq$  RFID system?
- Discover the true benefits of RFID: Real-time information, active decision making, business process change, etc.
- Failed RFID projects: What were they missing?

## **Success Criteria in RFID adoption**

- Criteria of success in Implementing RFID: lesson learn from real-experience
  - Support from top-level management
  - Focus on ROI (Tangible & Intangible Benefits)
  - Close loop (Reusable tag)
  - Consulting service, sometimes, is a must
- **5 Steps in RFID implementation (so called "Best practice"):**
  - Define problem(s)
  - Technology & partner selection
  - Pilot project: learning the first step to implement RFID
  - Evaluate result, re-adjust and roll-out
  - Continuous Improvement using RFID Technology



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# Agenda

## RFID practical usage: learning from experience

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# Some misunderstanding about RFID

## ➤ RFID is not magic!

## ➤ RFID is not easy!

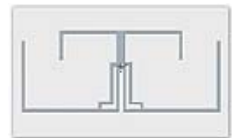
- Approximately 75% of RFID project failed in initial and pilot phase

## ➤ RFID and barcode are very different

- Approach RFID from a different mindset
- Different architecture

## ➤ RFID has limitation

- Read range & read orientation
- Limitation with environment e.g. metal, water and noise
- Ghost read, unintended read
- Automation is also a weakness of RFID
- Price!



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# Some misunderstanding about RFID

## ➤ RFID v.s. anti-theft system

- Not an anti-theft device

## ➤ RFID v.s. GPS

- RFID is not RTLS or GPS

## ➤ Why Tag + Reader $\neq$ RFID system?

- RFID is not just buying hardware
  - = H/W (analog + digital + RF)
  - + Software (Middleware)
  - + Implementation (installation, tuning)
  - + **Change management!!!**
- RFID is often an enterprise-level solution
- Sometimes including wireless network and barcode



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# Benefits of RFID

- Automation
- Robust and reliable
- Speed and accuracy
- Provides real-time information
- Integrated IT Solution
- Enhance active decision making
- Change business process, business mind etc.



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# Failed RFID projects: What were they missing?

- ขาดการสนับสนุนจากผู้บริหารระดับสูง  
policy → ความร่วมมือจากทุกฝ่าย
- ไม่ได้มีการประยุกต์การทำงานเข้ากับองค์กร
- ขาดความเข้าใจในปัญหาและกระบวนการในการทำงาน, ขาดความเข้าใจในเทคโนโลยี
- ขาด Resource ในการดำเนินงาน
- โฟกัสผิดที่
  - ส่วนประกอบของ RFID (Hardware software)



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# Agenda

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lesson learn from real-experience
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  - Focus on ROI  
(Tangible & Intangible Benefits)
  - Close loop (Reusable tag)
  - Consulting service, sometimes, is a must



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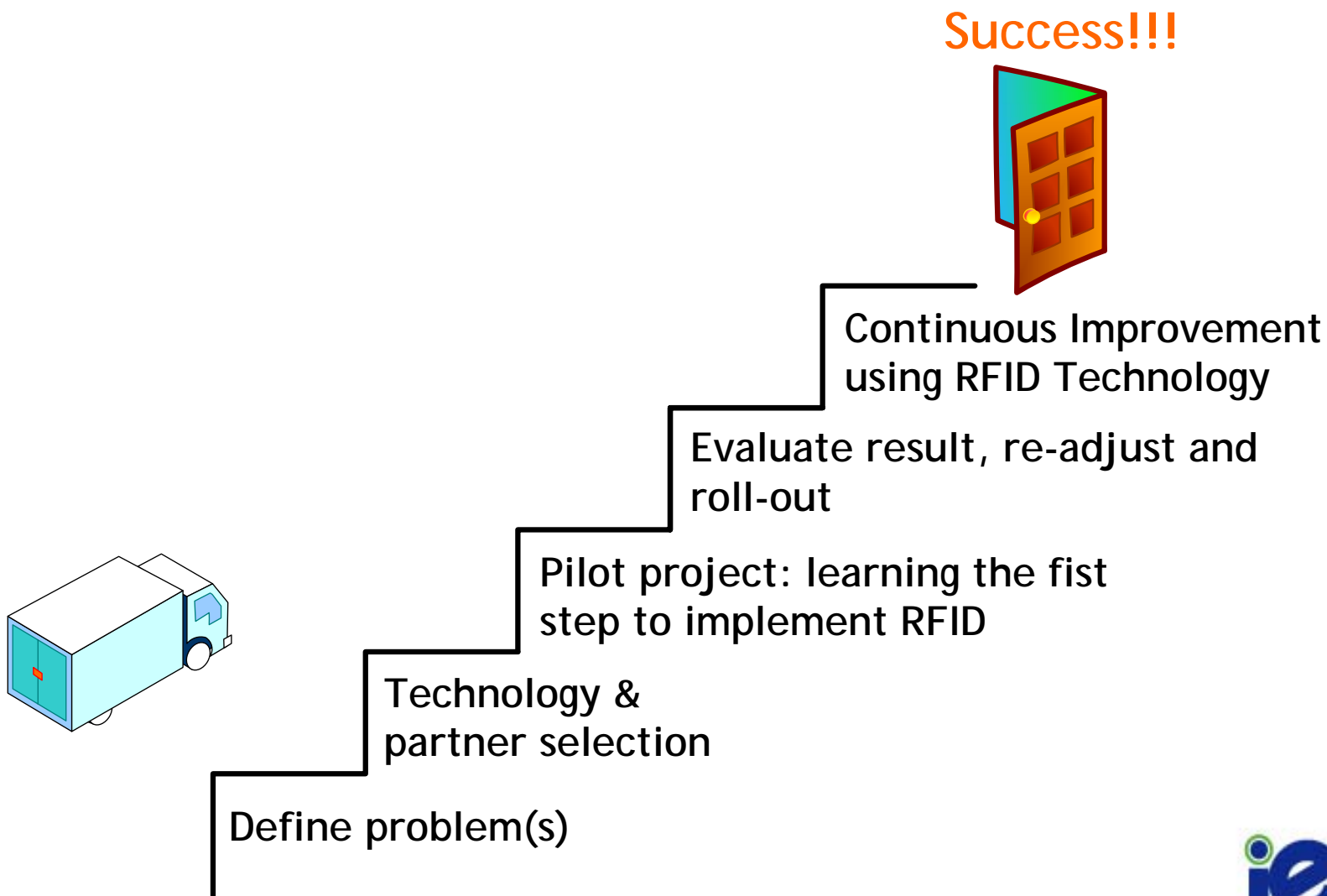
# For ALL Customers!

- Develop the Right Scope:
  - What, which, when, where, how to tag?
    - Container, pallet, case, item-level tagging
- What should be tagged?
  - valuable products
  - products or processes with existing problems
  - Products with the right amount of volumes
- Design system for expandability



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# 5 Steps in RFID implementation



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# 5 Steps in RFID implementation

## 1. Define problem(s)

- Scope & define problem
- Study Current Business Logic and Manufacturing Process
- Identify business use cases
- Understand business drivers/factors
- Secure top-management blessing, resources and funding.



# 5 Steps in RFID implementation



# Case Study: บริษัท วินีไทย จำกัด (มหาชน)



## Solution: Truck Queuing Management System using UHF RFID Technology

### Rational Problem:

- ต้องการเพิ่มประสิทธิภาพในการจัดคิวรถ ชั่งน้ำหนัก และจ่ายสินค้า
- ลดปัญหาในการรอคิว ปัญหาเรื่องที่จอดรถ
- เพิ่มขีดความสามารถในการแข่งขัน ความรวดเร็วในการจัดส่งสินค้า ลดต้นทุนในกระบวนการ Supply-Chain



### Concept:

- ใช้ Passive UHF RFID ในการบ่งชี้รหัสรถบรรทุก
- ต่อเชื่อมข้อมูลจากเครื่องชั่ง ระบบ RFID เข้ากับระบบการจัดคิวรถบรรทุกและการจัดส่งสินค้า เพื่อพัฒนาให้เป็นแบบ Paperless และเป็นแบบอัตโนมัติ



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# Case Study: บริษัท วินีไทย จำกัด (มหาชน)



**“RFID” เทคโนโลยีเพิ่มความเร็ว**  
ธุรกิจขนส่ง-ค้าปลีก-ดึงเสริมบริการ

**19 มีนาคม 2550**

**“...กรณีศึกษาใช้งาน RFID สปีดกว่าเดิม 10 เท่า...”**



....มีกรณีศึกษาของธุรกิจที่นำ RFID ไปใช้ ได้แก่ บริษัท บริษัท วินีไทย จำกัด (มหาชน) บริษัทผู้ผลิตโซดาไฟ และพีวีซีผง ที่ดำเนินธุรกิจในประเทศไทยมากกว่า 10 ปี เชนอีกหนึ่งกรณีตัวอย่างของบริษัทผู้นำเทคโนโลยีนี้ไปใช้ในการบริหารจัดการการทำงานของ บริษัท โดยติดตั้งในรถยนต์ที่ขนส่งสินค้ากว่า 200 คัน ...

..."เดิมรถคันหนึ่งใช้เวลาในการเช็คสินค้าคันละ 5 นาที แต่พอนำเทคโนโลยีมาช่วย พบว่าคันหนึ่งใช้เวลาเพียง 30 วินาที เท่านั้น" ...



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# 5 Steps in RFID implementation

## 2. Technology & partner selection

- Understand RFID technology & alternative technology
- Evaluate and **identify business processes** that could benefit from RFID
- Alternative technology assessment and evaluation
- Select the “right” **technology partner** with RFID implementation experience
- **Form partnerships** with partners and collaborate as working group (cross-functional team)



# 5 Steps in RFID implementation

## 3. Pilot project: learning the first step to implement RFID

- Develop a scalable pilot or trial to prove concepts
- Set targets, goals, key measurements and success criteria of the pilot
- Create and develop test scenarios derived from "real life"
- Develop communication plan/channel
- Conduct pilot project with all defined members
- **Get all stakeholders** (including operation and management) **involved** in the pilot and ensure all information is shared and distributed to everyone



# Case Study: การตรวจสอบย้อนกลับในอุตสาหกรรมกุ้ง

**RFID**  
**JOURNAL**

THE WORLD'S RFID AUTHORITY



## NEWS

### Thai Shrimp Exporters Use RFID for Automation, Traceability

The technology helps the companies reduce labor costs and improve the ability to trace the foods' origin and processing in the event of a product recall.

By Mary Catherine O'Connor

July 12, 2007—Two Thai shrimp exporters are using an RFID system to improve their ability to quickly and accurately trace the shrimp they sell, from the time the product arrives at processing plants, until it is exported to customers in Japan, European countries and the United States. The companies are employing the technology to reduce labor costs by replacing manual, paper-based shrimp-tracking systems with automated, electronic ones. Additionally, RFID will enable the firms to speed and improve their ability to trace the food's origin, processing and expiry data in the event of a product recall. The companies believe the technology will provide its customers—and, ultimately, consumers—confidence in the freshness of their products.

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# Case Study: การตรวจสอบย้อนกลับในอุตสาหกรรมกุ้ง



TH-520n:  
Traceability RFID Terminal



## \*National Innovation Award 2005\*

- Track and Trace Application
- Item-attendant data carrier
- Advance PID data matching framework (designed to use in Traceability application)
- Automatic data entry
- Flexible, design to be customized for all manufacturing processes
- many applications for Food Traceability, Inventory, and Asset Tracking
- Robust and Reliable (Hardware design to work in wet, humid, low temperature, saline environment)
- Completed solution from farm to manufacturing



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# 5 Steps in RFID implementation

## 4. Evaluate result, re-adjust and roll-out

- Monitor business process changes
- Measure and assess KPI and ROI
- **GAP Analysis and Implementation Plan**
- Get all partners (including internal staffs and external partners including technology partner and *\*supply chain partners*) involved to evaluate and re-adjust for future work



# 5 Steps in RFID implementation

## 5. Continuous Improvement using RFID Technology

- Create additional plans for continued roll out in other areas of the company
- Further collaborate with partners on deployment
- Continually improving business processes based on "continuous improvement cycle"



# Expansion & Deployment

- RFID is a moving target. Improvise accordingly.

2005-2006

- Substantial price drop
- EPC C1G2

2007-2008

- C2G2, C3G2, C4G2
- ALE, RP, EPCIS
- Item-level tagging (near-field UHF, EPC@HF)
- Enhanced security
- Better understanding of RoI

- Remove old systems by phases
- Be prepared to keep both system running



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# For the new Customer and RFID

- Start small, start simple, but start *NOW*
- The best way to learn is through practicing, not reading or talking
- According to Carolyn Walton (Wal-Mart's VP)
  - *"Stick your neck out"*
  - *"You can't leap-frog into RFID"*
  - *and launch a full deployment"*



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# RFID Forum 2008

Sirikitti National Convention Center

21-22 April 2008

**Where**

**“BENEFITS”** meets **“BUDGET”**

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