RFID Enterprise Asset Management

RFID solution expert

Shanghai Leanwo Technology Co., Ltd
Marketing Director Jeff Chen
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01 Company Profile

Company Introduction

Shanghai Leanwo Technology Co., Ltd.
(hereinafter referred to as: Leanwo)

Leanwo is a member of National High-tech Enterprise, and a member of Shanghai Intelligent Manufacturing Association.

Leanwo is committed to providing material information management systems and Internet of Things (RFID & 2D) related services.

Customer cooperation

We are serving the Fortune 500, enterprises and institutions, mold manufacturing, automobile manufacturing, aerospace manufacturing, luxury goods storage and other fields.

Customers: SIEMENS (Germany), ZF (Germany), Danfoss(Denmark), NTNU (Norway), VolksWagen(Germany), COMAC, CAS, Jiangsu Highway, Ningbo Hangkai Company, Hangzhou POP, Zhejiang ENTIVE, etc.

Fortune Global 500 and foreign companies

SIEMENS ZF Danfoss EHC GLOBAL

Scientific research institutes and schools

中国科学院 中国航天科技集团公司 上海交通大学 九年一贯制学校

Listed companies and industry leaders

ASE GROUP 上海纺织 SHANGTEX 美的 Midea 协鑫 GCL

Invisible champion and future stars

拓璞 TOPNC entive 亿田 COMAC

Government and public institutions

宁波公交 江苏公路 JIANGSU HIGHWAY SMQ 上海市浦东新区人民法院

02

Project Overview

Customer profile

Novozymes is the world leader in biological solutions. Together with customers, partners and the global community, we improve industrial performance while preserving the planet’ s resources and helping to build better lives.

Customer pain points & needs

Easy to lose

Multiple employees use the same batch of assets, which is easy to lose in the transfer hands.

Many materials

There are many types and quantities of assets. Up to 100+ categories and 8000+ items

On-site monitoring

Some Assets must be stored at constant temperature and humidity, so it is necessary to monitor whether the materials are in place in real time

Statistics are slow

The speed of asset counting is slow, and there are too many human interference factors.

Novozymes has a large number of assets (laptop, PC, printer, scanner, office furniture, etc.) and various equipments.
The core pain point of the material management of Novozymes is: how to conduct fast and accurate batch data collection and behavior analysis of assets. In-position management especially needs to ensure real-time monitoring and notification.

03 Solution & Realization

Solution & Realization

In order to solve the above-mentioned pain points, Novozymes can use Prodog® RFID digital full-cycle management software from Leanwo. The process is as follows:

3.1. Initialize and paste the RFID label

RFID tags are bound to each material and fixed asset, so that each material has a globally unique ID number, and tampering is not allowed.

Solution & Realization

After binding RFID tags to each asset, put it on the containers and store it normally. Distribute to employees.

If staff need to go out and use asset, he can use the toolbox to bring out batch and scanning at a short time. Due to the characteristics of RFID signals, you can get the data in the box without opening the box. The RFID material label contains electronic code (EPC), two-dimensional code and visual data to ensure multiple confirmation of data.

3.2. Quick and comprehensive inventory

Using RFID technology to achieve 50 times faster inventory

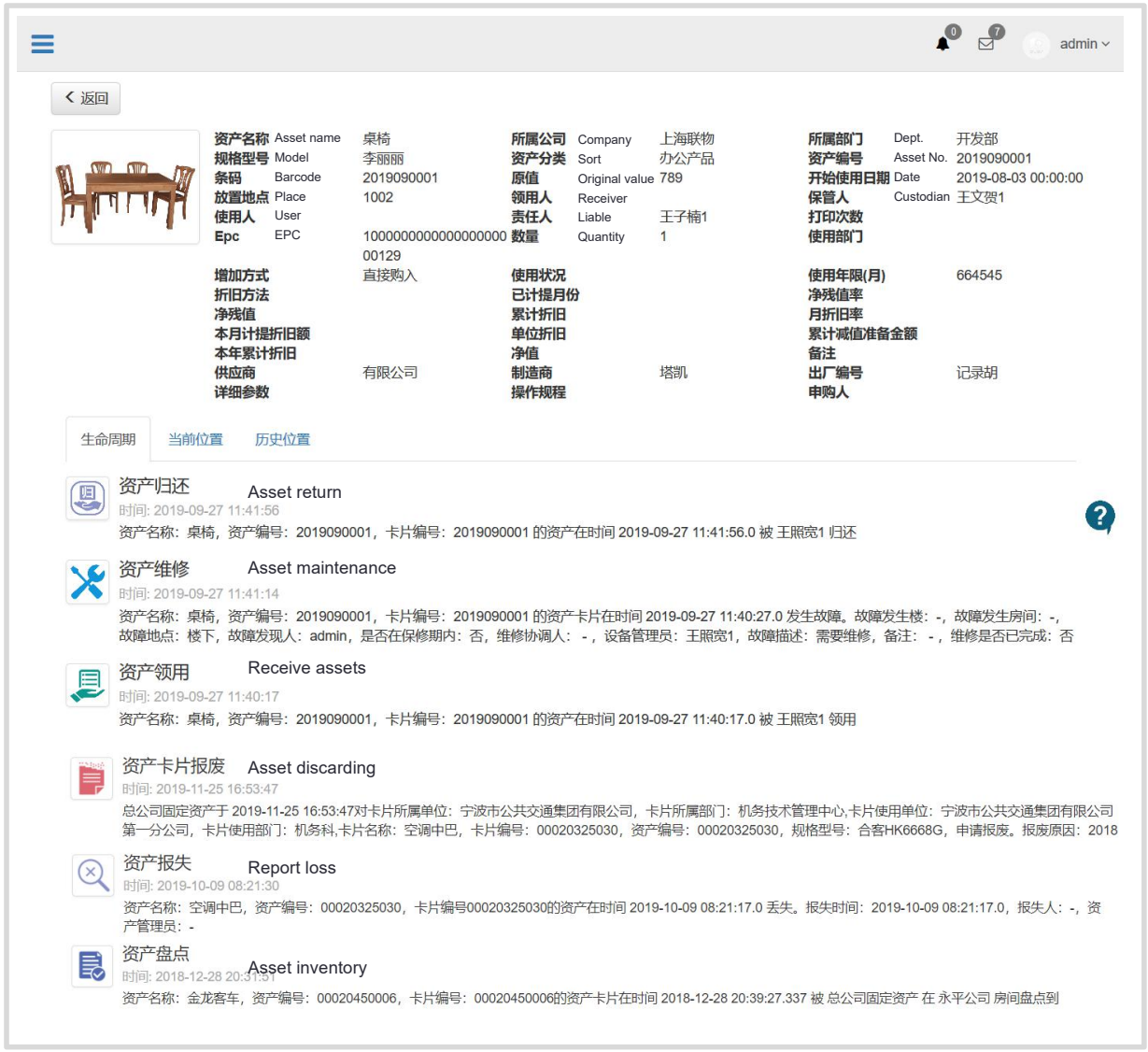
Solution & Realization

Click to play video

3.3. Full life cycle management of fixed assets

Leanwo Prodog supports digital management of assets throughout their full life cycle from purchase to retirement. Photos, attributes, usage records, repair records, maintenance records, collection and return records and usage records of each asset can be digitally recorded.

Solution & Realization



3.4. Self-service registration of RFID material loan and return

Material users can use the Propass for self-service registration of material collection and return. Just click a button, you can record the time of occurrence, bill of materials, requisition/return, and on-site photos at the same time, simple and fast.

Solution & Realization

Click to play video

3.5. RFID material and personnel behavior tracking

Leanwo Propass intelligent material data node automatically records the RFID tags of the materials carried by the personnel when they enter and exit the unit gate, and records the RFID tags attached to the personnel's employee card. At the same time, the camera can automatically capture several photos in and out of the scene.

Solution & Realization

Click to play video

3.6. RFID material in-place monitoring and push alarm with WeChat

Leanwo Prohad intelligent material in-place monitoring equipment automatically obtains the in-position status of various metered materials in drying cabinets, constant temperature and humidity cabinets, etc., and instantly summarizes them into Prodog.

Solution & Realization

Click to play video

04

Why UHF RFID?

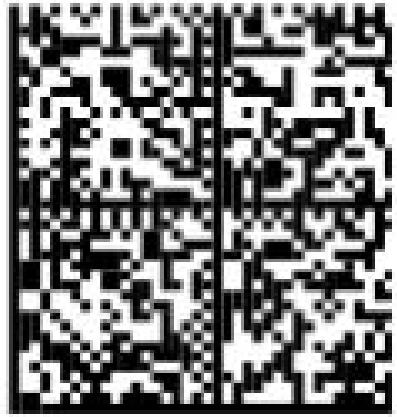
Why UHF RFID?

The development of article labeling is a process of gradual progress of technology and gradual automation of use.

According to the time sequence, it has gone through several stages: direct marking, bar code marking, QR code marking and RFID marking. The comparison of main features is shown in the figure below:

Lettering marking

Bar code marking



QR code marking

RFID marking

Why UHF RFID?

No.	Feature	UHF RFID	Bar/QR code
1	Reusable	Yes	No
2	Recognition speed	＞100pcs/s	＜2pcs/s
3	Distance	＞3m	＜50cm
4	The label is visible to the naked eye	No(Radio)	Yes
5	Information Encryption	Yes	No
6	Firmness	Not easily damaged	Easily damaged
7	Reading mode	Readable in motion	Inactive reading
8	Multi-label Read	Read multiple at once	Read one by one
9	Anti-forgery	Only one in the world	Copy freely
10	Price	Slightly expensive	Cheap

Why UHF RFID?

Estimate by managing 10,000 fixed assets, the cost as follow:

Name	Band	Distance	Features
Low frequency	125KHz133KHz	＜0.5m	Passive, not group reading, poor security, good penetration, close distance, slow communication speed, low price.
High frequency	13.56MHz	＜0.5m	Passive, group-readable (general performance), high security, good penetration, close distance, slow communication speed, low price.
Active UHF	433MHz	50~100m	Active, group-readable, distance, high price, not conducive to daily maintenance, high price.
UHF	915MHz	2~10m	Passive, group-readable, good security, penetration in general, moderate distance, cheap, in accordance with international standards (EPC Global C1G2), low price.
Microwave	2.45GHz	50m	Active, far distance, poor penetration, high price.

Why UHF RFID?

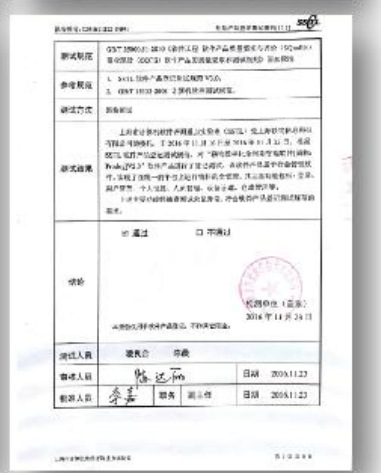
Estimate by managing 10,000 fixed assets, the cost as follow:

No.	Content	UHF RFID Cost	QR Code Cost
1	Label	100,000.00	10,000.00
2	Collector	10,000.00	8,000.00
3	Counting Time/Year	10 person days	60 person days
4	Counting Manpower Cost/Year	20,000.00	120,000.00
5	Daily Operation Time/year	20 person days	100 person days
6	Daily Operation Manpower Cost/Year	40,000.00	200,000.00
7	Total Cost/Year	170,000.00	338,000.00
0	More		Easily Full Life Cycle Recording

05 Why Leanwo?

Why Leanwo?

Leanwo attach great importance to R & D and continue to innovate. Authorized intellectual property and software testing: 42 items. Software test report: 1 item. Passed ISO9001 quality management system certification.



Why Leanwo?

Leanwo‘s continuous innovation has won many honors as follow:

Shanghai Jing'an District Kechuang Star Enterprise

National bronze award of entrepreneurship competition

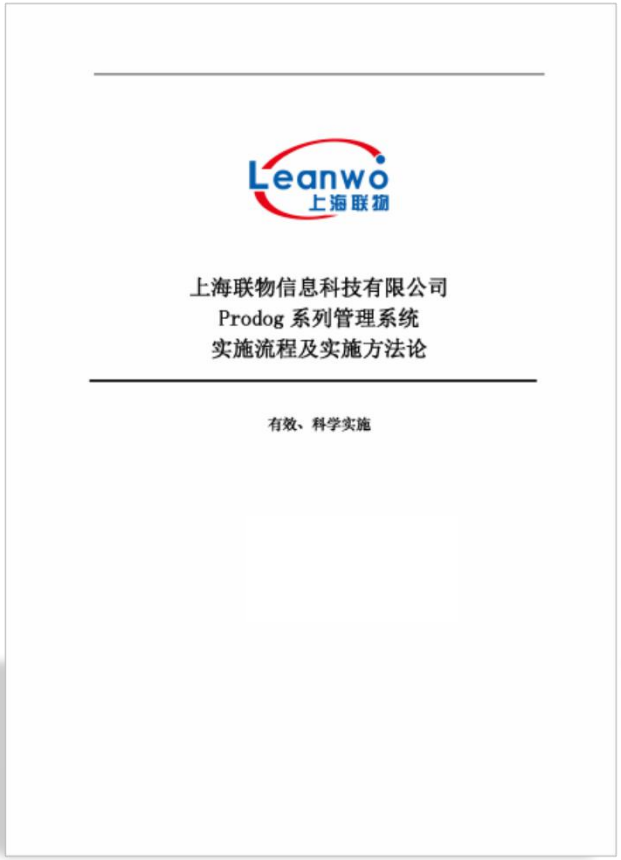
Impinj Si partner

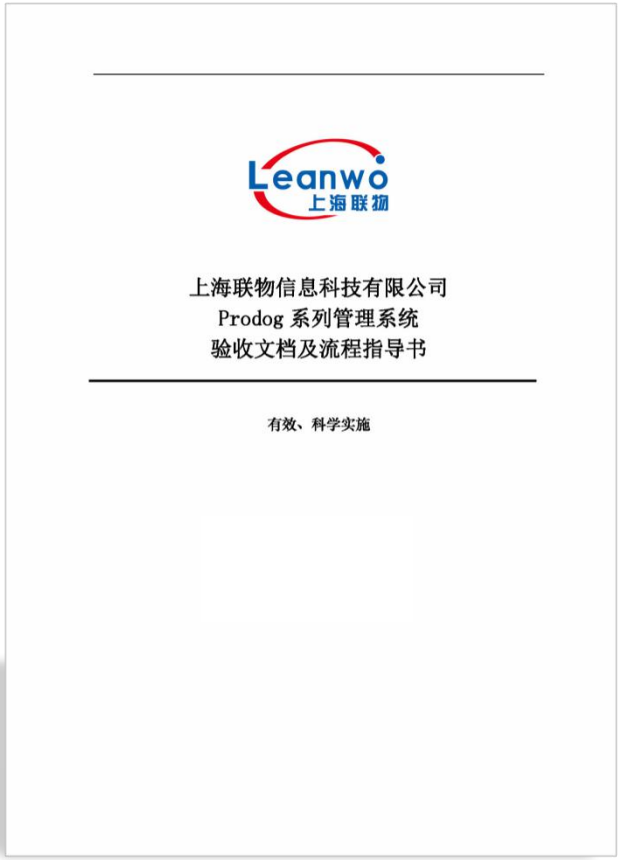
National high tech enterprise

Why Leanwo?

Perfect and reasonable project implementation methodology.

For the implementation of the management system project, Leanwo has formulated a strict project implementation methodology to ensure the reasonable and orderly implementation of the project.





Why Leanwo?

For the after-sales maintenance of the project, Leanwo made the after-sales commitment of long term cooperation agreement LTSA to the customer, and attached the agreement when the contract was signed. Fully protect every investment of customers and improve customer satisfaction.

The service timeliness of Leanwo can be achieved: 24-hour telephone hotline, 60 minute telephone response, 72-hour on-site service and solving all problems within 5 working day.

上海联物信息科技有限公司
PROdog 系统产品
长期服务（LTSA）协议书

联物@关爱

2013/3/15

上海联物信息科技有限公司

在拨打故障报修电话后，我公司售后服务工程师将在 30 分钟内与使用者电话联系，了解故障现象，确定解决方案，约定解决时间。

三、 现场故障处理服务

在接到用户单位报修要求后，我公司售后服务部工程师将在 30 分钟内与使用者取得联系，确定故障现象及初步分析原因。如需上门维修，则约定上门服务时间，并由技术工程师（如客户需要）上门维修。

现场工程师到达用户现场后将尽快进行系统整体测试，并出具故障诊断报告。硬件故障，在 4 小时内解决。系统故障，在 1 个工作日内给出故障解决方案并解决问题。解决流程如下图所示：

Leanwo 上海联物

联结万物