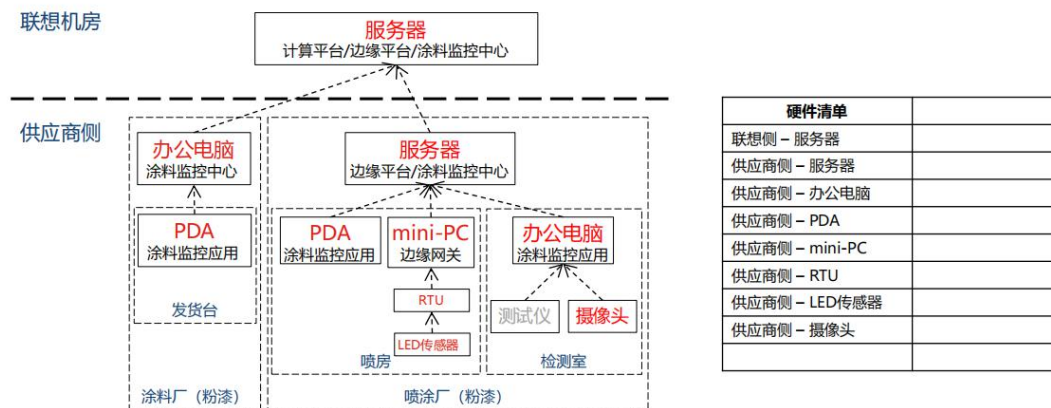# Coating monitoring in Dangerous Areas

Program Introduction:

This scheme is made by Beijing Dorland System Control Technology Co., Ltd. to undertake lenovo paint monitoring project. General paint coatings are flammable and explosive chemicals, especially in the painting construction, a large number of combustible gas volatilized into the air, very prone to combustion or explosion accidents.

Through the combination of the software and hardware of the explosion-proof intelligent terminal equipment and the coating monitoring application system, it can safely carry out the operation, inventory check, paint allocation, and monitor the safety of the coating site operation environment. The scheme has been successfully implemented.
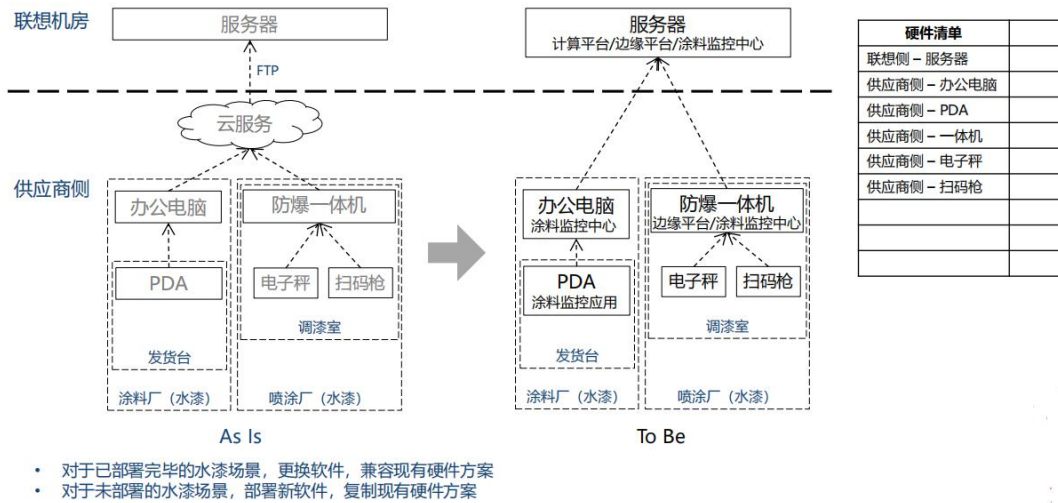

Background:

This program is made by Beijing Dorland System Control Technology Co., Ltd. to undertake lenovo paint monitoring project, and the program has been successfully implemented.

General paint coatings are flammable and explosive chemicals, especially in the painting construction, a large number of combustible gas volatilized into the air, very prone to combustion or explosion accidents.

So in order to be safe for operation and allocate stock of inventory, coating, it must be able to satisfy both to monitor the scene of the painting work environment is safe, and convenient to query and allocate water paint and powder paint in stock, and Intrinsic Safe intelligent terminal equipment combined with paint monitoring application system hardware and software is solved the problem.

硬件架构&软件部署 （水漆）

硬件清单	
联想侧 – 服务器	
供应商侧 – 办公电脑	
供应商侧 – PDA	
供应商侧 – 一体机	
供应商侧 – 电子秤	
供应商侧 – 扫码枪	

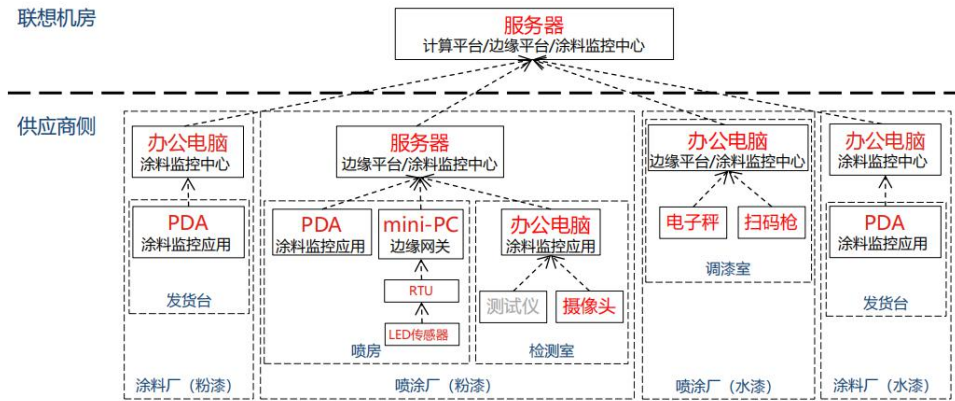- 对于已部署完毕的水漆场景，更换软件，兼容现有硬件方案
- 对于未部署的水漆场景，部署新软件，复制现有硬件方案

Solution:

In the coating factory with paint monitoring application of the PDA, the data collected by the PDA to the computer end, upload to the service period, so that the whole monitoring center to understand the paint inventory and other information, convenient for subsequent inventory allocation and other operations.

The paint mixing room of water paint spraying factory is equipped with electronic scale and scanning code gun to carry out the work of mixing water paint and scanning raw materials respectively. The monitoring room of the powder painting factory is equipped with a tester and a camera, which transmits the tested data and monitored images to the office computer and server. In the spraying room, PDA and sensors are used to transmit the data and environmental monitoring in the spraying room to the server.

The whole process can not only monitor the safety of the field operation environment, but also enable the entire monitoring center to understand the inventory of paint and other information.

硬件架构&软件部署（总体）

联想机房

服务器
计算平台/边缘平台/涂料监控中心

供应商侧

办公电脑
涂料监控中心

PDA
涂料监控应用

发货台

涂料厂（粉漆）

服务器
边缘平台/涂料监控中心

PDA
涂料监控应用

mini-PC
边缘网关

RTU

LED传感器

喷房

办公电脑
涂料监控应用

测试仪　**摄像头**

检测室

喷涂厂（粉漆）

办公电脑
边缘平台/涂料监控中心

电子秤　**扫码枪**

调漆室

喷涂厂（水漆）

办公电脑
涂料监控中心

PDA
涂料监控应用

发货台

涂料厂（水漆）

1. 粉漆的硬件方案（新建）
2. 水漆的硬件方案（兼容现有硬件）
3. 水漆的硬件方案（新建）

Final result:

The hardware solution of the coating monitoring system can be used safely in the working environment, and can timely monitor the working environment and collect the stock of the coating factory. In the case of software and server, the data collected and uploaded by hardware devices can be summarized and analyzed to ensure that the overall work is carried out in a safe environment and the possibility of risk is minimized.